SOEP – The German Socio-Economic Panel Study at DIW Berlin


Janina Britzke, Jürgen Schupp (Editors)

# SOEP Wave Report

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# 2017

SOEP – The German Socio-Economic Panel Study at DIW Berlin

# Contents

# Editorial

**Jürgen Schupp**
Vice-Director of the Research Infrastructure SOEP
Professor of Sociology at Freie Universität Berlin

We are pleased to present the eighth SOEP Wave Report, offering a glimpse of our work over the past year. In 2017, we planned the 35th wave of the study for 2018, conducted interviews and data preparation for the 34th wave, and distributed 33 waves of SOEP data—26 of which included data on respondents in the former GDR—to over 500 researchers worldwide. The central focus of our work is the dataset we refer to as SOEP-Core. It consists of the original SOEP study and all of the subsamples and refresher samples that have been added to it over the years. When the study was launched in 1984, its aim was to provide a representative picture of private households in Germany from both a cross-sectional and a longitudinal perspective. This remains the objective of SOEP-Core to this day.

The SOEP-Core data are unique in a number of ways. The SOEP is the only survey in the world to cover a population that had been divided for 40 years and was unified politically during the course of the study in 1990. Furthermore, since 2001, the SOEP has been systematically collecting data on children and adolescents in participating households. As a result, we now have data on three and in some cases four generations of a single family for many SOEP-Core households.

An additional focus of our work is on some of the more recent studies to join the landscape of SOEP studies. The newest addition to this landscape is the IAB-BAMF-SOEP Survey of Refugees, which began in 2016. Some of the first results of the study, published in 2017, include the finding that nearly 60 percent of recent refugees had completed secondary school before coming to Germany. The study also shows that many of the children of refugees are currently attending school or day care—although there is a clear need in this group for more day care in the under-three age group.

Another addition to the broader landscape of SOEP studies—the Mentoring of Refugees (MORE) intervention study—is being carried out by the SOEP with funding from the Leibniz Competition. Its aim is to find out the extent to which volunteer initiatives are fostering the short- and long-term integration of refugees in Germany. Fieldwork on MORE began in 2017.

In 2017, journalists reporting on the SOEP showed considerable interest not only in the newer studies on refugees but also in an ongoing focal point of the study: the topic of income. On the one hand, reports focused on the high-income sample that the SOEP team is creating with funding from the Federal Ministry of Labor and Social Affairs. On the other hand, the newly introduced minimum wage made headlines: a study based on SOEP findings showed that around 1.8 million workers who are eligible to earn the minimum wage were still earning less in 2016.

Over 350 of the more than 7,900 total publications using SOEP data were published in 2017. This Wave Report contains the complete texts of a selection of recent DIW Wochenberichte and Economic Bulletins published in 2017 reflecting the wide range of SOEP-based research on subjects ranging from civil society support for refugees in Germany, lesbians, gays, and bisexuals in Germany, and the effects of the minimum wage reform. We also introduce several of the international researchers who are doing groundbreaking research with the SOEP data.

We hope you enjoy reading this year's Wave Report!

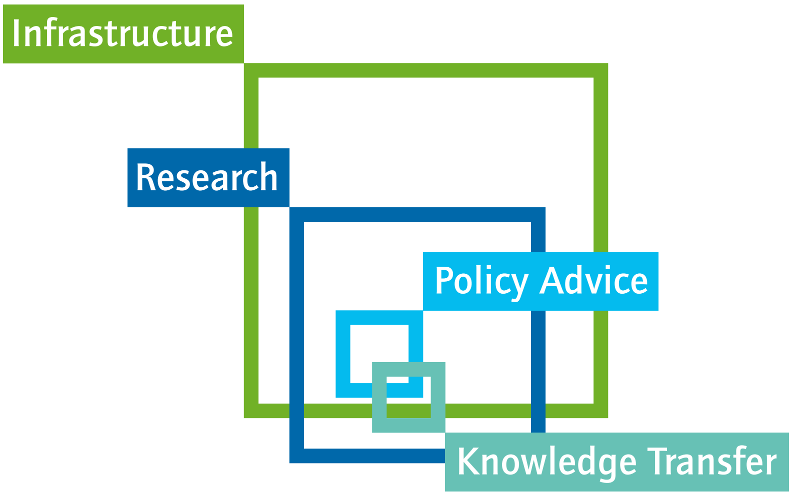
Best regards,

PART 1

# Overview of the SOEP Research Infrastructure at DIW Berlin

2017

# SOEP in a Nutshell




## Infrastructure

The Socio-Economic Panel (SOEP), based at the German Institute for Economic Research (DIW Berlin), is the longest-running and largest multidisciplinary survey in Germany. The data collected as part of the SOEP survey are not only used by the staff of DIW Berlin but are also distributed to researchers worldwide for use in their own studies. As such, the SOEP is one of the most important research infrastructures in the social, behavioral, and economic sciences worldwide, and it is also part of the German Federal Ministry for Education and Research (BMBF) National Roadmap for Infrastructures. As a member institute of the Leibniz Association, the SOEP receives federal and state funding. The SOEP Research Data Center offers researchers from outside DIW Berlin access to anonymized SOEP data, which are provided exclusively for scientific research purposes. SOEP experts offer guidance and advice to researchers who want to use the SOEP as a data source or control sample.

## Research

Over 500 researchers from a range of disciplines are currently using SOEP data for empirically oriented research in the social and economic sciences. Since the start of the SOEP study in 1984, the focus has been on "Living in Germany", as the study is known among its respondents: http://www.leben-in-deutschland.info (in German). Research based on the SOEP data examines processes of both continuity and change in our society. Some of the many studies using SOEP data explore the distribution of social resources—not just income and wealth but also access to education and work—and how this affects people's chances of social advancement. Other studies look at how social and economic living conditions affect people's life satisfaction and well-being—a question that has been a subject of SOEP research since the outset. In 2004, researchers in developmental psychology began to discover the SOEP's potential for use in psychological research. Since then, the SOEP data have been used to study personality development across the life course. The SOEP is also one of the largest repeat surveys of immigrants in Germany. In 2016, the SOEP conducted its first survey of refugees in Germany. More than 7,900 research papers and other publications have been published to date using the SOEP data.
http://www.diw.de/soeppapers_en
http://www.diw.de/soepsurveypapers_en
http://www.diw.de/soeprdc
http://www.diw.de/soeppeople

SOEP team

## Policy Advice

The SOEP is an independent, non-partisan research infrastructure. That means that the topics of the SOEP study are selected solely according to scientific criteria. At the same time, findings from the SOEP study make a substantive contribution to the social and economic policy debate. The results of research using SOEP data are published regularly in the DIW Berlin Wochenbericht (in German) and the Economic Bulletin (in English). These publications serve to promote the exchange of ideas between experts and representatives of important social groups, and thus provide an empirical foundation for public policy decisions both within Germany and at the European and international level.
http://www.diw.de/wochenbericht and
http://www.diw.de/econbull_en

## Knowledge Transfer

The SOEP is engaged in numerous activities aimed at informing the broader public about its research findings. SOEP staff members engage in diverse press and public relations activities. Members of the SOEP team regularly take part in the Long Night of Sciences in Berlin and are active on social media (facebook, youtube). The SOEP is also involved in the German Data Report, a joint project of the Federal Statistical Agency (Destatis), the Federal Agency for Civic Education (bpb), the Berlin Social Science Center (WZB), and the SOEP. The SOEP also supports universities and non-university research facilities in providing methodological training to SOEP data users. The workshops offered as part of the SOEPcampus program are oriented toward young researchers in the fields of sociology, economics, education, and psychology.
http://www.diw.de/soepcampus_en
https://www.destatis.de/DE/Publikationen/Datenreport/Datenreport.html

## The Future of the SOEP

Since the beginning of the study more than 35 years ago, the SOEP has been adapting constantly to changing social contexts. When the Berlin Wall fell in November 1989, the study quickly expanded to include households in the former GDR, with the first survey going out to this group in June 1990. Since 1994, the SOEP has included an additional sample of immigrants to Germany from the former Soviet Union. And in 2016, after hundreds of thousands of refugees came to Germany in 2015 seeking protection, the IAB-BAMF-SOEP Survey of Refugees was launched. The SOEP is constantly monitoring current social developments and expanding the range of topics that can be studied using SOEP data. The study is also constantly being refined methodologically—for instance, through the use of new survey technologies. Over time, the paper version of the SOEP questionnaire has gradually been replaced by computer-assisted personal interviews conducted on laptops. And with the SOEP Survey of Refugees, the survey institute uses a mobile phone app to stay in contact with respondents. For respondents who give written consent, SOEP data can be linked with data from other sources: Since 2013, SOEP survey data have been linked with administrative data for use in migration and integration research. The linked data are subject to special data protection requirements and are accessible to only a limited number of researchers. In 2012, the SOEP Innovation Survey was launched for use in addressing innovative new research questions. It now has around 6,500 respondents more than 3,500 households. The SOEP Innovation Survey allows researchers from institutes worldwide to contribute their own survey questions. It has already been used in research on happiness to test innovative methods for measuring life satisfaction and in economics for behavioral experiments on risk-taking in adults. The SOEP team is also working to facilitate linkages between the SOEP study and data from household panel studies in other countries. Numerous research groups from outside Germany are already using the SOEP data—from countries from Australia to the United States of America. Around 1,000 of the publications using SOEP data are internationally comparative studies. One of these studies has shown that in Germany as well as in Sweden and the USA, parental wealth plays a significant role in determining whether or not children manage to climb the social ladder. In the coming years, the SOEP will be working to promote increased use of the data by the international research community.

PART 1

# SOEP Structure

2017

# SOEP Administrative and Management Team

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Acting Head of the Division "Survey Methodology/Management"

**Dr. Jan Goebel**
Head of the Division "Data Operation/Research Data Center"

**Prof. Dr. Carsten Schröder**
Head of the Division "Applied Panel Data Analysis"

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Anja Bahr
Project Management

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Team Assistance (on leave)

Alisa Fränkel
Team Assistance

Prof. Dr. Martin Kroh
Visiting Senior Research Fellow

Prof. Dr. Gert G. Wagner
Visiting Senior Research Fellow

In 2017, the SOEP Administrative and Management team was responsible for around 65 staff members, as well as trainees, doctoral students, grant holders, and about 35 student assistants. The team provides a range of research and administrative support services as well as research and project management to the entire SOEP team. Management activities include acting as liaison for the SOEP Survey Committee and coordinating and facilitating administrative processes between the SOEP unit and DIW Berlin's financial and human resources units.
Since the beginning of 2018, the SOEP has a leadership team ("directorate") in which the director and the heads of the four divisions (Survey Methodology/Management, Data Operation/Research Data Center, Applied Panel Data Analysis, Knowledge Transfer/Training) are represented. The members of the directorate coordinate and decide on the diverse activities of the SOEP in the area of independent substantial research and infrastructure tasks and strategic goals for future development of SOEP.

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Patricia Axt, Jan Goebel, Stefan Liebig,
Jürgen Schupp, Anja Bahr, David Richter

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Documentation, Reporting, and Web Content

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Doctoral Student LIFE

Monika Wimmer
SOEP Communications Management

The Division of Knowledge Transfer and Training holds workshops and teaching events to facilitate and promote knowledge transfer to the next generation of researchers. It also makes SOEP-based research available to the broader public through the German and international media, conveying scientific findings in an understandable way to diverse audiences. Skill transfer to SOEP users is an increasingly important part of our work in the SOEP, as the complexity of the survey continues to increase from one year to the next. Our goal is to make the SOEP study as accessible as possible for both secondary data analysis and scientific research. Universities and non-university research institutes work with the SOEP to provide methodological training in use of the SOEP data. The diverse SOEPcampus workshops provided at German universities and research institutes since 2007 are aimed primarily at young researchers in the fields of sociology, economics, education, and psychology. In 2017, the SOEP-in-Residence visiting researcher program was expanded, particularly at the European level, to accommodate researchers in the InGRID2 infrastructure project.

An ongoing focus of our work is on the transfer of the SOEP's research results to policy makers, societal stakeholders, and the broader public, since scientific findings should shape political and social decision-making processes and provide insights to inform life choices. We regularly disseminate recent SOEP-based findings by researchers at DIW Berlin and elsewhere. And for several years, the SOEP has been managing its own press and public relations activities in cooperation with the DIW Berlin Department of Communication.

Last but not least, the knowledge transfer division is responsible for pooling the diverse feedback we receive from the scientific community, from surveys of our data users and ideas generated at conferences, all the way to the advice provided by our SOEP Survey Committee and the DIW Berlin Scientific Advisory Board. We use all this valuable feedback in the conceptual and strategic development of the SOEP as a nationally important research data infrastructure.

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Rainer Siegers
Sampling, Weighting, and Imputation

The Survey Methodology team is responsible for all aspects of data collection for the SOEP survey. Its central tasks include specifying the sampling design for the various SOEP samples, developing the SOEP questionnaires, and conducting survey research on selectivity and measurement errors in the data. The team carries out all these activities in close consultation with members of the SOEP Survey Committee and Kantar Public Germany in Munich, the survey research institute in charge of the SOEP fieldwork, which covers both interviews and all direct contact with respondents. The team also oversees the SOEP Innovation Sample, which provides a framework for the testing of new and innovative concepts, survey modules, and survey instruments for potential inclusion in the core SOEP survey.

The team is also responsible for conducting the externally funded projects known as “SOEP-Related Studies,” which are aimed primarily at building and improving the longitudinally oriented research data infrastructure.

The Survey Methodology team’s activities include research on the effectiveness of methods to increase willingness to participate in the survey and the provision of weighting variables to correct for selective response rates. Other key focal points of research are: differences between data collection methods (e.g., between personal and mail interviews), the role of interviewers in data quality, and the implementation of new survey instruments such as behavioral experiments, complex cognitive psychological tests, and non-invasive health measures in fieldwork on large-scale studies.

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Andreas Franken
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Stefan Zimmermann
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The Research Data Center of the SOEP, as part of the SOEP Department at DIW Berlin, offers a comprehensive range of support services and coordinates access to the SOEP data. In all of its work, the SOEP Research Data Center adheres closely to the Criteria of the German Data Forum for the accreditation of research data centers.

The team makes the anonymized SOEP data available to the research community. Interested researchers are invited to contact the SOEP to sign a data distribution contract. This is the precondition for use of the SOEP's scientific use files. The form of data access provided to users depends on the data protection regulations that apply to the data set in question. Access to the scientific use files is provided through a personal download link sent to users. More sensitive data, for instance, regional data, are made available to users by remote execution, remote access, or at a guest research workstation at DIW Berlin.

The team is responsible for processing the anonymized data sent to DIW Berlin by Kantar Public in Munich so that they can be used for both longitudinal and cross-sectional analysis. Data processing involves generation of user-friendly variables and preparation of the data for use with standard statistical software packages. Further focal points of the team's work include analysis of refusals to answer individual questions or entire questionnaires, development of methods of compensating for these refusals, and the provision of small-scale indicators. The team also produces comprehensive documentation on these activities and reports on key research findings, most of which can be found on the **SOEP Research Data Center website**. Members of the team have also developed a web-based tool (**paneldata.org**) following the DDI standard for documentation of scientific studies to present all of the SOEP and SOEP-Related Studies to our users. The SOEP Research Data Center also provides user support in the framework of methodological lectures and workshops at


universities. A guest program enables users to access the data on site at the SOEP Research Data Center. Guest visits are required for access to the sensitive regional data, which are subject to strict data protection provisions. As a special service to users, the SOEP Research Data Center also offers personal advice to researchers who want to use the SOEP as reference data or a control sample for their own studies. The team has a number of international research partnerships. These forms of cooperation make the SOEP a crucial part of the international data infrastructure. The overarching aim of the SOEP research infrastructure is to strengthen the empirical foundation for international comparative cross-sectional and longitudinal analysis. The SOEP data are used widely by researchers in Germany and abroad in international comparative analysis.

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The SOEP not only provides data infrastructure as a public good. We also carry out our own research on a wide range of topics using the SOEP and further international databases such as the Cross-National Equivalent File. This research is important for the SOEP for two reasons. First, our publications increase the visibility of the SOEP in the international research landscape. Second, the ongoing research guarantees in-depth, regular, and systematic discourse on the quality of the SOEP data and on the relevance of the modules and questions included each year in the SOEP surveys.

Key themes of the team's research are: distributional analysis, policy evaluations, youth and family research, education and competencies, living conditions and migration, and determinants of emotions (happiness, well-being, etc.). Our interdisciplinary team conducts research on all these themes in cooperation with researchers worldwide. The quality of this research is documented in publications in international refereed journals, successful supervision of doctoral dissertations, as well as a series of externally funded projects. Funding bodies include the German Research Foundation, the Leibniz Association, and various other foundations and federal ministries.

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**Louisa Schmitt**
**Tobias Silbermann**
**Maximilian Sprengholz**
**Milan Stille**
**Carolin Stolpe**
**Lisa Ulrich**
**Raphael Ziegler**

**Based at the SOEP but not part of its organizational structure**

* **BGSS:** Berlin Graduate School of Social Sciences at Humboldt Universität zu Berlin.
** **DIW Berlin GC:** DIW Berlin Graduate Center of Economic and Social Research.
*** **LIFE:** International Max Planck Research School "The Life Course: Evolutionary and Auto-genetic Dynamics (LIFE)".
**** **BGHS:** Bielefeld Graduate School in History and Sociology.
***** **Inequalities:** Public Economics & Inequality – Doctoral Program at Freie Universität Berlin.

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**Prof. James Heckman,** PhD (2010–2014)
**Prof. Dr. Karin Gottschall** (2010–2013)
**Prof. Dr. Rainer Winkelmann** (2010–2016, head)

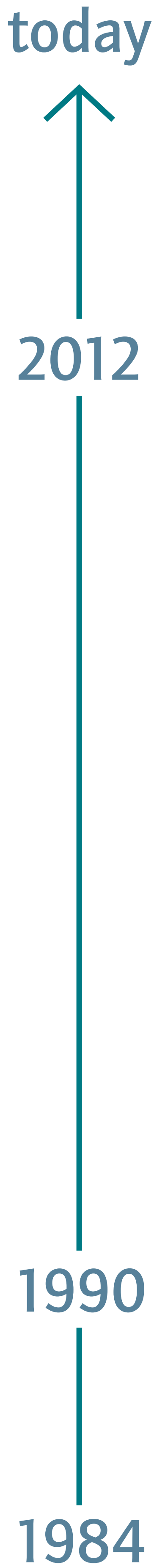
The SOEP Survey Committee is appointed by the DIW Berlin Board of Trustees. The nine members, all renowned international scholars, provide advice on the further development of the SOEP survey as well as SOEP service. We are very grateful that this impressive group of researchers is willing to work with us to further build and enhance the SOEP.

PART 2

# SOEP Data and Fieldwork

2017

# The Landscape of SOEP Studies




## SOEP-Core

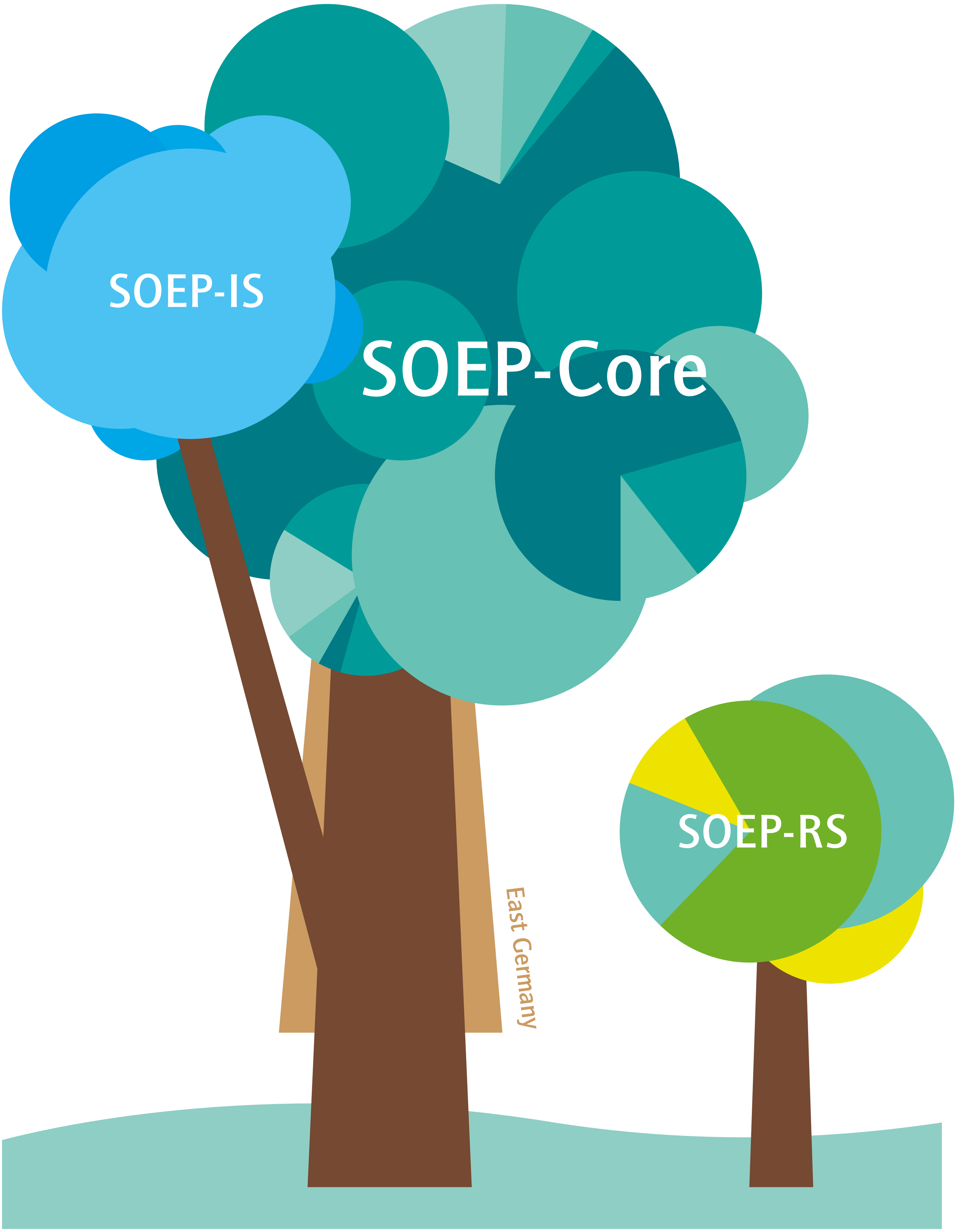
SOEP-Core is THE centerpiece of the wide-ranging representative longitudinal study of private households located at the German Institute for Economic Research, DIW Berlin. SOEP-Core was started in 1984 as a research project in an interdisciplinary Collaborative Research Center of the German Research Foundation. In 1990—just after German reunification—we enlarged the area covered by the SOEP study by adding a representative sample from East Germany. This feature makes the SOEP unique among other household panel surveys worldwide. Each year since 1984, around 14,000 households and about 30,000 individuals have been surveyed by the SOEP's fieldwork organization, Kantar Public Germany. The data provide information on every member of every household taking part in the survey. Respondents include Germans living in the states of both the former East and West Germany, foreign citizens residing in Germany, recent immigrants, and a new sample of refugees added in 2016. Some of the many topics include household composition, education, occupational biographies, employment, earnings, health, and satisfaction indicators.

## SOEP Innovation Sample (SOEP-IS)

The longitudinal SOEP Innovation Sample (SOEP-IS) was created in 2012 as a special sample for testing highly innovative research projects. It was designed primarily for methodical and thematic research questions that involve too great a risk of non-response to be included in the long-term SOEP study, whether because the instruments are not yet scientifically verified or because they deal with very specific research issues. Proposals approved for the SOEP-IS up to now include economic behavioral experiments, implicit association tests (IAT), and complex procedures for measuring time use (day reconstruction method DRM). Researchers at universities and research institutes worldwide are encouraged to submit innovative proposals to the SOEP-IS. An open call for proposals is made annually, with a submission deadline at the end of the year.

## SOEP-Related Studies (SOEP-RS)

There are now a number of studies in Germany that have incorporated questions from the SOEP questionnaire to validate their results on a representative sample of the German population ("SOEP as Reference Data"). The SOEP-Related Studies (SOEP-RS) are designed and implemented in close cooperation with the SOEP team and structured in a similar way to the SOEP. This makes it possible to link the SOEP-RS datasets either with the original SOEP questionnaire (SOEP-Core) or with the SOEP-IS questionnaires and to analyze the data together. Some examples of SOEP-Related Studies are: BASE-II (Berlin Aging Study II), FiD (Families in Germany), PIAAC-L, SOEP-ECEC Quality, SOEP-LEE (Employer-Employee Survey), the Bonn Intervention Study (BIP), and BRISE (The Bremen initiative for reinforcing early childhood development).


SOEP-IS
SOEP-Core
SOEP-RS
East Germany

# Kantar Public's Organization of SOEP Fieldwork

By Axel Glemser

## Kantar Public

Kantar Public, headquartered in Munich, is one of the most prestigious institutes for political and social research in Germany. Together with Kantar TNS, which serves commercial clients, Kantar Public is the German member of the Kantar Group, in which WPP (London) has bundled its research activities. As a member of a leading global network, the institute provides its clients research data of the highest quality, strategic knowledge, and scientific advice for business and policy decisions. Clients include major international corporations, medium-sized businesses in Germany and abroad, and numerous German ministries, agencies, and scientific institutions. Kantar uses systems for quality assurance and total quality management processes in all areas and at all levels of its organization. Kantar Public and its predecessor "Infratest" have been conducting political and social research since the 1950s. In the early 1980s, "Infratest Sozialforschung" (Infratest Social Research) was founded as a separate company that today is the leading commercial research institute in the field of social science surveys in Germany. In recent years, Kantar Public worked closely with the contracting institutes to design and conduct a number of empirical studies and project types that have made national and international scientific history. Foremost among these is the German Socio-Economic Panel Survey (SOEP), which is known to respondents under the name "Living in Germany" (LID). Kantar Public has been responsible for collecting data since the beginning of the SOEP in 1984. The range of tasks covers the entire process of data collection, from the conceptual design through the sampling, implementation of the survey instruments, to the cross-sectional weighting, data processing, and methodical field reporting. These activities are coordinated in a separate business area of Kantar Public.

## SOEP Team at Kantar Public

For the SOEP, Kantar Public has created a "tailor-made" business area that reflects the specific requirements of the project in terms of its composition and structure. The tasks of the SOEP team at Kantar can be divided into three areas: first, methodological, conceptual, science-based, and science-oriented advice and guidance; second, panel management; and third, comprehensive data processing, in particular data acquisition, verification, and editing.

The first area includes general project management and project control, analysis, and documentation for methodological field reports as well as consulting services for the SOEP group at DIW Berlin on issues of sample design, the design and implementation of data collection methods, and consulting for innovative survey methods as used in SOEP tests, pilots, and the SOEP Innovation Sample. With regard to panel management, several individual tasks are especially noteworthy: assignment and telecare of interviewers and coordination of the interface to the field organization. Further key tasks include organization and mailing of survey documents to interviewers and respondents, including ordering and handling of incentives, the "central administration" of households that participate exclusively in the survey in the mail mode, the coding of the response results in the panel database and the hotline for respondents on issues related to data collection and privacy information, etc. In the context of data processing, data from paper questionnaires are registered and comprehensive, and semi-automated data examination is carried out along with individual checkups including longitudinal consistency checks. Moreover, occupation and industry classifications of respondents' statements are coded.

Overall, the SOEP team at Kantar includes 20 permanent employees (some part-time) as well as several assistants. Further employees are involved in the ongoing processing of the project data from several of Kantar's data production units in Germany. These include the project managers responsible for organizing face-to-face fieldwork, questionnaire programmers, as well as experts from the department of statistics, who are responsible for sampling and cross-sectional weighting.

## Face-to-Face Capability

Kantar Public conducts all of the face-to-face interviews for ambitious surveys using interviewers who are trained and managed in-house by Kantar, and thus does not outsource parts of the fieldwork to third-party institutions as is common practice in other institutes. In the case of the SOEP, the reasons for the exclusive use of in-house expertise are particularly obvious. Kantar's trained interviewers are fundamental for (a) effective communication between project leader and interviewer during the fieldwork phase, (b) efficient fieldwork management with a view to response-oriented processing of the sample, and (c) effective quality control of the fieldwork. For panel studies, it is especially important to use the same interviewer each year to ensure continuity in processing the sample from a longitudinal perspective. At the household level, interviewer continuity has a favorable effect on the longitudinal response rate.

In Germany, Kantar has a total of approximately 1,400 interviewers, including several select groups of interviewers for special studies that do not use the modern touch-pen laptops otherwise used. Around 800 of Kantar's interviewers work with touch-pen laptops and about 550 of these interviewers are available for work on demanding surveys like the SOEP. These interviewers are experienced in the implementation of sophisticated social research projects in general and also in working with the SOEP. To provide additional support in data collection for the SOEP, there are around 120 interviewers on the "special staff" of "Living in Germany" (LID). Most of these special LID interviewers have extensive SOEP experience and work exclusively with the conventional paper-and-pencil method (PAPI).

The large number of interviewers on Kantar's various interviewer teams guarantees a nationwide infrastructure for face-to-face interviews in Germany. Through a rigorous selection process with requirements for a minimum length and a minimum volume of work on the interviewer staff, the recruitment and hiring of SOEP interviewers is managed professionally according to the highest standards.

The "Face-to-Face Line" also located in Munich is in charge of central management and organization of interviewer fieldwork for Kantar, and holds responsibility for the entire interviewer staff. Its work includes complex recruitment processes, establishing and maintaining database-driven information systems for the management and monitoring of the interviewer staff, monitoring and control of the samples in the fieldwork, and preparation of response statistics. In cooperation with project management, the Face-to-Face Line also coordinates interviewer payment through a range of fee and premium models. In addition, the Face-to Face Line works with project management to draft and create the fieldwork and training materials for the interviewers.

With the support of 25 "contact interviewers" responsible for specific regions of Germany, the Face-to-Face Line guarantees optimal coordination of the complete interviewer staff. The contact interviewers have extensive liaison experience and outstanding leadership abilities. Thus, each interviewer, in addition to having an in-house contact at Kantar Germany, also has a permanent local contact available to him or her. The contact interviewers play an important role in local recruitment and training processes. They regularly take part in the organization-wide events, (in-house or online) training or project-specific training, and thus serve as multipliers for the dissemination of important information and knowledge to interviewers.

## Quality Assurance and Supervision of Interviewers

Kantar has implemented total quality management at all levels of its organization. Quality management was introduced as part of a larger quality assurance system and served as the basis for Kantar's certification for ensuring the quality of data collection according to the international quality standard ISO 9001 (first acquired in 1995). In 2007, the institute received accreditation for the international quality standard ISO 20252 for organizations conducting market, opinion, and social research. This certificate covers the entire operational research process, including data collection, data processing, data evaluation, and reporting. Furthermore, it defines the requirements for total quality management and the cooperation with the client.

Monitoring of interviewers is of high importance at Kantar, and therefore, an ISO-certificated process has been put in place and is audited regularly. Kantar adheres to the German Business Association of Market and Social Research Institutes (ADM) standards for internal regulation and monitoring of all systems and procedures. This means that a minimum of 10 percent of Kantar's annual interviews are checked and every interviewer is monitored at least once a year. Besides these basic checks, additional checks of interview duration, date, and time are carried out in these cases. Inconsistencies in these routine monitoring procedures lead to a more detailed examination of the interviewer in question.

Moreover, for longitudinal household surveys like the SOEP, additional measures are in place to ensure high-quality fieldwork results and trustworthy data. First, the administration of the panel itself and the various motivational measures for the participants are inherent quality control procedures. Miscellaneous postal notes (invitation letters preceding new waves of data collection, motivational letters and brochures, letters of thanks), personal hotlines for interviewers and participants, and website contact forms ensure a high level of commitment to the survey and allow the fieldwork agency to interact directly with participants to receive feedback on the interviewers' performance. Second, the longitudinal data consistency checks are central in guaranteeing fieldwork quality.

On top of its existing quality control measures, Kantar will be enhancing control and quality check systems for the SOEP surveys in three ways starting in 2018.

1. Expanding the basic interviewer monitoring concept to a project-based full-control system for all SOEP refresher waves: Every participating household will be contacted shortly before fieldwork begins with a letter asking the household to confirm their participation in a regularly conducted interview. In case of inconsistencies and/or irregularities, Kantar will attempt to gain clarification through direct contact with respondents, primarily by telephone.
   For upcoming waves of the existing panel, the volume of households in the monitoring process is reduced by means of random sampling in order to limit the response burden for the participants. For example, in the SOEP-Core sample, approximately 20 percent of the households will be monitored in 2018.
2. Enhancing and intensifying checks of interview duration, date, time, and temporal distances using electronic contact documentation: In a first step, Kantar will conduct systematic analyses of these metadata sets on a project level. Our overall goal is to reconstruct each interviewer's workday—also across all interviewers in the entire study—taking a close look at interviewers with high numbers of working hours or particularly high success in interviews.
3. We are currently also examining procedures that might be able to uncover irregularities in the distribution of the interview data. Because these procedures are not yet able to fully address the problem of "false positive" cases, we have to interpret the identified cases as initial suspicion and on this basis initiate further clarification.

## Data Protection, Information Security Management, and Corporate Responsibility

We have a rigorous approach to maintaining data protection and information security that is underpinned by accreditation and adherence to relevant national and international codes, standards, and legislation. Kantar Germany maintains strict adherence to the regulations of the EU General Data Protection Regulation (EU-GDPR), the federal data protection act (BDSG) as well as other legal data protection regulations. Furthermore, we are a member of the working group of the German Business Association of Market and Social Research Institutes (ADM), which has released a self-regulatory framework for research activities determining how the demands of the data protection legislation and other regulations should be applied to the practices of market and social research. The EU-GDPR explicitly defines the possibility of codes of conduct in article 40. State-level supervisory authorities check to ensure observance of these legal regulations.

As required by law, survey results are processed, archived, and distributed exclusively in anonymous form. It is therefore impossible to identify respondents in any way in the data, and Kantar does not pass personal data on to third parties in any of our social research activities.

All employees of Kantar in Germany are contractually bound to strict provisions on data confidentiality according to article 53 BDSG and social confidentiality (article 35 SGB I). The obligation to maintain confidentiality extends beyond end of the activity in question, in this case the SOEP survey. Kantar Germany has implemented various technical and organizational measures to meet the respective legal requirements and also has appointed a data protection officer.

In 2012, we launched an extensive management system for information security (Information Security Management System: ISMS) according to the ISO 27001 standard. This was certified by the Technical Supervisory Association (TÜV) in November 2013.

Kantar public is part of the WPP group and complies with the group's social, ethical and environmental principles. Corporate responsibility and ethical behavior towards employees, customers, business partners, and government agencies play an integral part in our value system. Accordingly, Kantar has always been fully committed to the principle of adherence to laws and has implemented strict internal policies directed at the prevention of potential violations of law and their consequences.

# An Overview of the SOEP Samples

## Fieldwork Report 2017 from Kantar Public

By Anne Bohlender

The data set for a given SOEP wave is made available to users by the SOEP Research Data Center as an integrated "cross-sectional sample". To prepare the data for distribution to users, Kantar Public delivers the various data files (gross and net sample files, question-item-variable correspondence lists, and the complete documentation) to the SOEP group at DIW Berlin. The SOEP uses a complex sampling system comprised of various subsamples that have been integrated into the household panel at different times since the SOEP was launched in 1984. The various subsamples are based on different target populations and were therefore drawn using different random sampling techniques.

**Table 1** provides an overview of sizes of the various subsamples for the year 2017. **Tables 2 and 3** present the history and development of all major SOEP subsamples since 1984 in absolute sample sizes.

Table 1

### Sample sizes in the 2017 subsamples

| Sample | Households | Adults | Youths[1] | Children[2] | Total individual questionnaires |
|---|---|---|---|---|---|
| A+B | 1,729 | 2,899 | 41 | 207 | 3,147 |
| C | 997 | 1,611 | 11 | 134 | 1,756 |
| D | 165 | 270 | 5 | 20 | 295 |
| E | 67 | 102 | 2 | 9 | 113 |
| F | 1,968 | 3,192 | 27 | 205 | 3,424 |
| G | 561 | 974 | 3 | 37 | 1,014 |
| H | 594 | 987 | 6 | 60 | 1,053 |
| J | 1,776 | 2,898 | 44 | 250 | 3,192 |
| K | 987 | 1,592 | 13 | 104 | 1,709 |
| L1 | 1,055 | 1,958 | 30 | 966 | 2,954 |
| N | 2,314 | 3,720 | 50 | – | 3,770 |
| L2/3 | 1,769 | 3,279 | 224 | 732 | 4,235 |
| M1 | 1,350 | 2,478 | 61 | 478 | 3,017 |
| M2 | 559 | 930 | 12 | 222 | 1,164 |
| M3 | 1,102 | 1,562 | 30 | 576 | 2,168 |
| M4 | 1,263 | 1,907 | 78 | 1,143 | 3,128 |
| M5 | 1,519 | 2,252 | – | – | 2,252 |
| $I_E$ | 250 | 383 | – | 77 | 460 |
| $I_1$ | 690 | 1,091 | – | 196 | 1,287 |
| $I_2$ | 615 | 975 | – | 210 | 1,185 |
| $I_3$ | 716 | 1,115 | – | 211 | 1,326 |
| $I_4$ | 566 | 817 | – | 154 | 971 |
| $I_5$ | 746 | 1,084 | – | 241 | 1,325 |
| **Total** | **23,358** | **38,116** | **637** | **6,232** | **44,985** |

1 16-year-olds who completed the youth questionnaire.
2 Children under the age of 16 on whom a mother-child or parent questionnaire has been completed or who completed the pre-teen questionnaire

Table 2

## SOEP Sub-Samples 1984–2017 — Number of Waves

| Sample | Year/wave | 1984 | '90 | '95 | '98 | 2000 | '02 | '06 | '09 | '11 | '12 | '13 | '14 | '15 | '16 | '17 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A+B | "SOEP West" and main groups of foreign nationalities 1984 | 1 | 7 | 12 | 15 | 17 | 19 | 23 | 26 | 28 | 29 | 30 | 31 | 32 | 33 | 34 |
| C | "SOEP East" general population sample GDR 1990 | – | 1 | 6 | 9 | 11 | 13 | 17 | 20 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| D | Immigration sample 1995 | – | – | 1 | 4 | 6 | 8 | 12 | 15 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| E | Boost sample 1998 (general population) | – | – | – | 1 | 3 | 5 | 9 | 12 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| F | Boost sample 2000 (general population) | – | – | – | – | 1 | 3 | 7 | 10 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| G | High-income sample 2002 | – | – | – | – | – | 1 | 5 | 8 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| H | Boost sample 2006 (general population) | – | – | – | – | – | – | 1 | 4 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| J | Boost sample 2011 (general population) | – | – | – | – | – | – | – | – | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| K | Boost sample 2012 (general population) | – | – | – | – | – | – | – | – | – | 1 | 2 | 3 | 4 | 5 | 6 |
| L1 | Cohort samples: est. in 2010 (FiD) and integrated in 2014[1] | – | – | – | – | – | – | – | – | – | – | – | 1/5 | 2/6 | 3/7[1] | 4/8[1] |
| L2/3 | Screening samples: est. in 2010 (FiD) and integrated in 2014[1] | – | – | – | – | – | – | – | – | – | – | – | 1/5 | 2/6 | 3/7[1] | 4/8[1] |
| N | PIAAC sample: est. in 2011/12 (PIAAC) and integrated in 2017[2] | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 1/5[1] |
| M1 | Migration sample 2013 | – | – | – | – | – | – | – | – | – | – | 1 | 2 | 3 | 4 | 5 |
| M2 | Migration sample 2015 | – | – | – | – | – | – | – | – | – | – | – | – | 1 | 2 | 3 |
| M3 | Refugee sample 2016 | – | – | – | – | – | – | – | – | – | – | – | – | – | 1 | 2 |
| M4 | Refugee sample 2016 | – | – | – | – | – | – | – | – | – | – | – | – | – | 1 | 2 |
| M5 | Refugee sample 2017 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 1 |
| $I_E$ | Innovation sample 1998 (SOEP E)[3] | – | – | – | 1 | 3 | 5 | 9 | 12 | 14 | 1/5 | 2/16 | 3/17 | 4/18 | 5/19[2] | 6/20[3] |
| $I_2$ | Innovation sample 2009 | – | – | – | – | – | – | – | 1 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| $I_2$ | Innovation sample 2012 | – | – | – | – | – | – | – | – | – | 1 | 2 | 3 | 4 | 5 | 6 |
| $I_3$ | Innovation sample 2013 | – | – | – | – | – | – | – | – | – | – | 1 | 2 | 3 | 4 | 5 |
| $I_4$ | Innovation sample 2014 | – | – | – | – | – | – | – | – | – | – | – | 1 | 2 | 3 | 4 |
| $I_5$ | Innovation sample 2016 | – | – | – | – | – | – | – | – | – | – | – | – | – | 1 | 2 |

1 The households of the former FiD ("Families in Germany") samples were interviewed for the eighth time in 2017 but in SOEP-Core for the fourth time
2 The respondents of the former PIAAC study ("Programme for the International Assessment of Adult Competencies") were interviewed for the fifth time in 2017 but in SOEP-Core for the first time.
3 Households from SOEP sample E that were surveyed face to face were transferred into the SOEP-IS in 2012. In 2017, they were interviewed for the twentieth time using SOEP questionnaires.

Table 3

## SOEP subsamples 1984–2017 — number of households per sample

| Sample | Year/wave | 1984 | '90 | '95 | '98 | '00 | '02 | '06 | '09 | '11 | '12 | '13 | '14 | '15 | '16 | '17 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A+B | "SOEP West" and main groups of foreign nationalities 1984 | 5,921 | 4,640 | 4,508 | 4,285 | 4,060 | 3,889 | 3,476 | 2,923 | 2,538 | 2,379 | 2,270 | 2,176 | 2,028 | 1,857 | 1,729 |
| C | "SOEP East" general population sample GDR 1990 | – | 2,179 | 1,938 | 1,886 | 1,879 | 1,818 | 1,717 | 1,535 | 1,355 | 1,312 | 1,250 | 1,212 | 1,131 | 1,073 | 997 |
| D | Immigration sample 1995 | – | – | 522 | 441 | 425 | 402 | 360 | 306 | 266 | 251 | 232 | 213 | 193 | 173 | 165 |
| E | Boost sample 1998 (general population) | – | – | – | 1,056 | 842 | 773 | 686 | 574 | 546 | 92 | 82 | 78 | 70 | 68 | 67 |
| F | Boost sample 2000 (general population) | – | – | – | – | 6,043 | 4,586 | 3,895 | 3,033 | 2,885 | 2,702 | 2,567 | 2,414 | 2,273 | 2,094 | 1,968 |
| G | High-income sample 2002 | – | – | – | – | – | 1,224 | 859 | 757 | 706 | 687 | 677 | 641 | 606 | 590 | 561 |
| H | Boost sample 2006 (general population) | – | – | – | – | – | – | 1,506 | 996 | 858 | 818 | 783 | 732 | 684 | 639 | 594 |
| J | Boost sample 2011 (general population) | – | – | – | – | – | – | – | – | 3,136 | 2,555 | 2,305 | 2,110 | 1,983 | 1,883 | 1,776 |
| K | Boost sample 2012 (general population) | – | – | – | – | – | – | – | – | – | 1,526 | 1,281 | 1,187 | 1,108 | 1,046 | 987 |
| L1 | Cohort samples: est, in 2010 (FiD) and integrated in 2014[1] | – | – | – | – | – | – | – | – | – | – | – | 1,247 | 1,184 | 1,122 | 1,055 |
| L2/3 | Screening samples: est, in 2010 (FiD) and integrated in 2014[1] | – | – | – | – | – | – | – | – | – | – | – | 2,015 | 1,968 | 1,804 | 1,769 |
| N | PIAAC sample: est, in 2011/12 (PIAAC) and integrated in 2017[2] | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2314 |
| M1 | Migration sample 2013 | – | – | – | – | – | – | – | – | – | – | 2,723 | 2,012 | 1,667 | 1,493 | 1,350 |
| M2 | Migration sample 2015 | – | – | – | – | – | – | – | – | – | – | – | – | 1,096 | 660 | 559 |
| M3 | Refugee sample 2016 | – | – | – | – | – | – | – | – | – | – | – | – | – | 1,693 | 1,102 |
| M4 | Refugee sample 2016 | – | – | – | – | – | – | – | – | – | – | – | – | – | 1,628 | 1,263 |
| M5 | Refugee sample 2017 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 1,519 |
| $I_E$ | Innovation sample 1998 (SOEP E)[3] | | | | See sample E | | | | | | 339 | 311 | 298 | 282 | 266 | 250 |
| $I_2$ | Innovation sample 2009 | – | – | – | – | – | – | – | 1,531 | 1,040 | 928 | 863 | 798 | 741 | 721 | 690 |
| $I_2$ | Innovation sample 2012 | – | – | – | – | – | – | – | – | – | 1,010 | 833 | 772 | 710 | 669 | 615 |
| $I_3$ | Innovation sample 2013 | – | – | – | – | – | – | – | – | – | – | 1,166 | 929 | 840 | 770 | 716 |
| $I_4$ | Innovation sample 2014 | – | – | – | – | – | – | – | – | – | – | – | 924 | 672 | 623 | 566 |
| $I_5$ | Innovation sample 2016[4] | – | – | – | – | – | – | – | – | – | – | – | – | – | 1,050 | 746 |
| | **Total** | **5,921** | **6,819** | **6,968** | **7,668** | **13,249** | **12,692** | **12,499** | **11,655** | **13,330** | **14,599** | **17,343** | **19,758** | **19,236** | **21,922** | **23,358** |

1 The households of the former FiD ("Families in Germany") samples were interviewedin SOEP-Core for the fourth time.
2 The respondents of the former PIAAC study ("Programme for the International Assessment of Adult Competencies") were interviewed in SOEP-Core for the first time.
3 Households from SOEP sample E that were interviewed face to face were transferred to the SOEP-IS in 2012.

The households and individuals with the longest history of (continuous) panel participation took part for the 34th time in 2017 (samples A and B). Since 1984, various subsamples have been added to the core sample. The following samples have been added since the year 2009:

- **Sample $I_1$** started with more than 1,500 households in 2009 and served as the core sample of the SOEP Innovation Sample (SOEP-IS) when it was established in 2011. Since then, the SOEP- IS has been expanded with refresher samples in 2012 (sample $I_2$), 2013 (sample $I_3$), 2014 (sample $I_4$) and 2015 (sample I5). Additionally, a subset of households from sample E was transferred to the SOEP-IS in 2012 (sample $I_E$).
- **Sample J** is a general population refresher of more than 3,000 households that was integrated in 2011.
- **Sample K** is a general population refresher totaling 1,500 households that was integrated in 2012.
- **Samples L1** (cohort samples) and **L2/3** (screening samples) were established in 2010. They originated in the old "Families in Germany (FiD)" study, a longitudinal SOEP-equivalent sample system for the evaluation of German family polices on behalf of two German government ministries (the Federal Ministry of Finance (BMF) and Federal Ministry for Family Affairs, Senior Citizens, Women and Youth (BMFSFJ)). That evaluation ended in 2013. The FiD samples were transferred to the methodological and financial framework of SOEP-Core in 2014.
- **Sample $M_1$** was designed to improve the representation of migrants living in Germany. Established in 2013, over 2,700 households with at least one person with a migration background were interviewed to enhance the analytic potential for integration research and migration dynamics. A second migration sample (Sample **$M_2$**) of almost 1,100 households was integrated in 2015.
- **Samples $M_3$ and $M_4$** were designed to represent the rising number of refugees that have immigrated to Germany since 2013. Both samples were established in 2016 with a sample size of 1,769 households each. In 2017 sample **$M_5$** added another 1,519 households of refugees who have migrated to Germany since 2013 to the SOEP framework.
- **Sample N** integrated 2,314 households of former participants of the Programme for the International Assessment of Adult Competencies (PIAAC and PIAAC-L) in 2017. This is the most recent addition to the SOEP-Core samples.

# SOEP-Core Samples A-N

## Questionnaires and Survey Instruments

The primary interviewing method in the SOEP-Core samples is face-to-face with computer-assisted personal interviewing (CAPI) and/or paper-and-pencil interviewing (PAPI) as modes, depending on the subsample and the assigned interviewer. A small percentage of households in samples A to H are interviewed with the help of self-administered mail questionnaires that were introduced as a means of converting non-respondents into respondents.
In 2017, 14 different questionnaires were used in the households of the SOEP-Core samples. Most of them were processed with PAPI as well as CAPI:

1. **Household questionnaire** answered by the person living in the household who is most familiar with household matters overall.
2. **Individual questionnaire** answered by all adult household members (2017: born in 1999 or earlier).
3. Supplementary **"life history"** questionnaire answered by all new respondents joining a panel household (2017: born in 1999 or earlier).
4. **Youth questionnaire** answered by household members aged 16 or 17 (2017: born in 2000).
5. Additional **cognitive competency tests** for all persons with a completed youth questionnaire (age 16 or 17; interviewer-assisted modes only).
6. **Youth questionnaire** answered by household members aged 13 or 14 (2017: born in 2003).
7. **Youth questionnaire** answered by household members aged 11 or 12 (2017: born in 2005).
8. **Supplementary questionnaire** answered by mothers of newborn children (2017: born in 2017 or 2016 if the child was born after the previous year's fieldwork was completed).
9. **Supplementary questionnaire** answered by mothers (or fathers) of children aged two or three (2017: born in 2014).
10. **Supplementary questionnaire** answered by mothers (or fathers) of children aged five or six (2017: born in 2011).
11. **Supplementary questionnaire** answered by mothers and fathers of children aged seven or eight (2017: born in 2009).
12. **Supplementary questionnaire** answered by mothers (or fathers) of children aged nine or ten (2017: born in 2007).

Table 4

**Questionnaire volumes and response rates – samples A–L1**

| | Gross sample/reference value[1] | Number of interviews[1] | Response rate/coverage rate |
|---|---|---|---|
| Individual questionnaire[2] | 17,945 | 16,468 | 91.8% |
| Youth questionnaire: age 16 or 17 | 214 | 182 | 85.0% |
| Cognitive competency tests[3] | 156 | 134 | 85.9% |
| Youth questionnaire: age 13 or 14 | 262 | 247 | 94.3% |
| Youth questionnaire: age 11 or 12 | 282 | 262 | 92.9% |
| Mother and child questionnaire: newborn | 163 | 153 | 93.9% |
| Mother and child questionnaire: age 2 or 3 | 204 | 199 | 97.5% |
| Mother and child questionnaire: age 5 or 6 | 243 | 236 | 97.1% |
| Questionnaire for parents[4]: age 7 or 8 | 425/850 | 417/738 | 98.1%/86.8% |
| Mother and child questionnaire: age 9 or 10 | 486 | 473 | 97.3% |

1 The numbers refer to the respective target population in participating households. For the child-related questionnaires, the reference value is the number of children in the respective age group living in participating households. Therefore the response rate for these questionnaires indicates the number of children for whom a questionnaire has been completed by one parent (in most cases by the mother).
2 There are 15 additional individual questionnaires conducted in household that are coded as non-partcipating households as there is no houshold questionnaire for 2017.
3 The tests can be implemented only if the fieldwork is administered by an interviewer and the youth questionnaire is completed. Therefore the gross sample for the tests (n=156) is different from the sample for the youth questionnaire (n=214).
4 In contrast to the other child-related questionnaires, this questionnaire is supposed to be completed not by just one but by both parents. For 417 (98.1%) of 425 children born 2009 and living in households that participated in 2017, at least one questionnaire has been completed. In total, 738 questionnaires were completed.

13. **Supplementary questionnaire** answered by temporary dropouts from the previous wave to minimize “gaps” in longitudinal data on panel members. This questionnaire is a short version of the previous year’s questionnaire.
14. **Supplementary questionnaire** answered by panel members who experienced a death in their household or family in 2016 or 2017.

**Table 4** provides an overview of the number of interviews provided for the various questionnaires types and the corresponding response or coverage rates.

The respondents in ample N were asked to complete a slightly shorter set of questionnaires. In addition to the household, individual, and the life history questionnaires, which are designed for adults, only household members aged 16 or 17 were asked to complete a youth questionnaire. All other questionnaires are scheduled to be used for the first time in 2018. The mean face-to-face interview length for the main questionnaires in 2017 was 15 minutes for the household questionnaire and 37 minutes for the individual questionnaire. The time taken for a model household consisting of two adults was therefore 89 minutes plus the time needed for any supplementary questionnaires. The total length of the interview was therefore considerably shorter than in the previous wave, when total interview time in a model household amounted to 109 minutes.

In addition to the questionnaires, respondents and interviewers are provided with several other survey instruments. In terms of data provision, the most important is the household grid. It provides basic information about every household member and allows us to track whether anyone entered or left the household since the previous wave. Since 2014, an electronic version of this grid has been employed in all households whose interviewers are equipped with a laptop.

At the end of January, all households received a letter announcing the beginning of the new wave. The former respondents of the PIAAC study who gave consent to being contacted by the SOEP were invited to join the panel with a letter that was sent out in March. In almost all households from samples A–H, the letter included a lottery ticket as an incentive that was not conditional on their actual participation. Participants in the newer samples, J–N, and some households from A–H receive a cash incentive. The cash incentive for the individual questionnaire is €10 and participants receive €5 for the shorter household questionnaire. Teenagers and children receive a small gift for completing their respective questionnaires. Interviewers also bring a small gift to the household as a whole and present this upon arrival. The interviewer usually also presents a 4-page brochure on the project and an information sheet on data protection and security. In 2017, the respondents received a 60-page booklet produced by SOEP at DIW Berlin presenting scientific findings based on the SOEP survey data and short interviews with researchers. In addition, interviewers had a flyer that

Table 5

**Interviewing modes by subsamples (as a percentage of all individual interviews)**

| | Interviewer-based | | | Centrally administered |
|---|---|---|---|---|
| | CAPI | PAPI | SELF | MAIL |
| A–D | 26.8 | 10.1 | 34.5 | 28.6 |
| E[1] | 0.0 | 0.0 | 0.0 | 100.0 |
| F | 39.3 | 10.3 | 32.1 | 18.4 |
| G | 35.9 | 5.9 | 40.1 | 18.1 |
| H | 65.1 | 2.1 | 23.2 | 9.6 |
| A–H | 35.1 | 8.9 | 32.8 | 23.2 |
| J/K | 99.6 | 0.0 | 0.0 | 0.0 |
| L1 | 99.8 | 0.0 | 0.0 | 0.0 |
| N | 100.0 | 0.0 | 0.0 | 0.0 |
| **Total** | **67.8** | **4.4** | **16.3** | **11.5** |

1 All households with interviewer-administered questionnaires from sample E were transferred to the SOEP-IS in 2012.

they could give to respondents in households where there were difficulties obtaining participation from all adult household members discussing the issue of partial unit non-response in households. The flyer was part of a focused effort in 2017 to stop the slight increase in partial unit non-response that had taken place in the previous few waves.

# Fieldwork Characteristics and Key Fieldwork Indicators 2017

## Interview Modes

Since the SOEP was launched in 1984, face-to-face interviewing has been the primary method of data collection. Up to 2000, all face-to-face interviews were conducted using paper-and-pencil interviews (PAPI). Since then, SOEP interviewers have gradually starting using laptops to conduct interviews in CAPI (computer-assisted personal interviewing). Since sample J in 2011, CAPI has been used exclusively to interview the respondents from refresher samples. However, PAPI is still used to collect data from the respondents in samples A–H if they prefer or if their interviewer does not yet have a laptop. The second type of fieldwork processing used exclusively in core samples A–H is known as “central administration of fieldwork,” in which respondents complete their questionnaires at home and return them by mail. This was first used as a refusal conversion process in the second wave of the SOEP in 1985 and is focused on households that did not agree to any further visits from an interviewer or could not be convinced by the interviewers to participate for other reasons. As part of this process, households are contacted by telephone and urged to keep participating in the study. If this “conversion” is successful, basic household information is collected and the questionnaires are sent by mail. Thus, in these households, questionnaires are fully self-administered. This mode shift often leads to a conversion of soft refusals, in turn improving the stability of the long-term samples A–H.

Another method of interviewing is used in multi-person households from samples A–H. Individuals who were unable to provide an interview while the interviewer was present are offered the option to self-complete a paper questionnaire as a means of reducing partial unit non-response (PUNR). The option of interviewing more than one person simultaneously with the help of paper questionnaires can be useful for reducing the overall length of interviewer visits to households with many members, thereby increasing acceptance. This method is a mixture of face-to-face interviewing and self-administered interviewing. Although this option is actually an exception, the longer a sample exists, the more frequently it is used to ensure low PUNR in larger households.

**Table 5** shows the distribution of interview modes by subsample in 2017. In general, a distinct pattern is evident across the various SOEP samples when using a multi-mode design: the “older” the sample, the higher the share of mail- or self-interviews. In the recent samples (J, K, $L_1$ and N), the options of

Table 6

Fieldwork progress by month: processing of household interviews[1]

| | 2016 | | 2017 | |
|---|---|---|---|---|
| | Gross Sample | Net Sample | Gross Sample | Net Sample |
| January[2] | 2.9% | 0.0% | 0.6% | 0.1% |
| February | 40.6% | 42.9% | 41.0% | 43.0% |
| March | 67.8% | 70.9% | 71.8% | 75.2% |
| April | 83.9% | 87.1% | 85.2% | 88.6% |
| May | 95.8% | 97.9% | 95.6% | 97.2% |
| June | 98.7% | 99.6% | 99.0% | 99.5% |
| July | 99.8% | 99.9% | 99.9% | 100.0% |
| August | 100.0% | 100.0% | 100.0% | 100.0% |
| September | – | – | 100.0% | 100.0% |

1 Cumulative percentages based on the month of the last household contact.
2 Includes households that refused to take part in the survey prior to start of fieldwork.

a mail questionnaire as part of "central administration" or a self-completed paper questionnaire in the interviewer-assisted mode are no longer available. This serves one of our main objectives in improving the quality of the SOEP: we aim to increase the CAPI rate to improve data quality and provide a larger pool of respondents for questionnaire modules that are not viable with paper-based questionnaire administration: cognitive tests and behavioral experiments, for example. With the addition of sample N, the CAPI rate was boosted from 59 percent in 2016 to 68 percent in 2017.

## Fieldwork Progress

Data collection in the samples A-L1 covered a period of six months starting at the beginning of February and ending when the refusal conversion processes were completed in summer. As indicated by the figures in **Table 6**, which shows fieldwork progress by month, almost 90 percent of the households were interviewed within the first three months. The vast majority of interviews are conducted within a comparatively short fieldwork period. The remaining months are dedicated almost exclusively to contacting difficult-to-reach households, households whose new address needs to be tracked, or households where various refusal conversion strategies have to be used. Fieldwork in sample N was conducted between Mid-March and Mid-August and thus slightly later than the majority of samples A–$L_1$.

## Composition of the Gross Sample

**Table 7** presents the composition of the gross sample 2017 by type of fieldwork procedures and type of household, as well as the response rates and partial unit non-response for samples A–H, J, K, and $L_1$. The SOEP households from each wave are differentiated into three types of households: previous wave respondents (93.1 percent of gross sample in 2017), previous wave dropouts that were re-contacted (4.2 percent), and "new" households that split off from established panel households (2.7 percent). Interviewers make every effort to contact the households personally. However, for the reasons stated above, there are alternative ways of surveying the households in samples A–H. In 2017, 72.8 percent of households in the gross sample in A–H were interviewed personally by interviewers and 25.6 percent completed their interviews at home without an interviewer present and returned them by mail. The remaining 1.6 percent were households that are considered dropouts based on information from the period between waves (e.g., final dropouts; entire household moved abroad or is deceased).

## Response Rates and Panel Stability

The field results of a longitudinal survey can be measured in different ways. Two sets of indicators appear to be most relevant: response rates and panel stability rates. Response rates reflect the simple relation between input (gross sample) and output (net sample) and therefore are an indicator of cross-sectional fieldwork success. The response rate in the group of respondents from the previous wave processed by interviewers, which is the most important response rate, was 92.3 percent. The response rate for the "centrally administered" households, those that complete their survey without an interviewer present, is usually slightly lower than the rate of households processed by interviewers because they have a history of refusing further participation in the study. For this reason, the response rate of 91.3 percent among previous wave respondents the "centrally administered" fieldwork mode is remarkable. The response rates for dropouts from the previous wave and new households are significantly lower than for households that took part in the study the year before. Nevertheless, a response rate of 41.1 percent among dropouts from the previous wave that were processed by interviewers shows that contacting these households again is useful in two out of five cases. Furthermore, interviewers are able to con-

Table 7

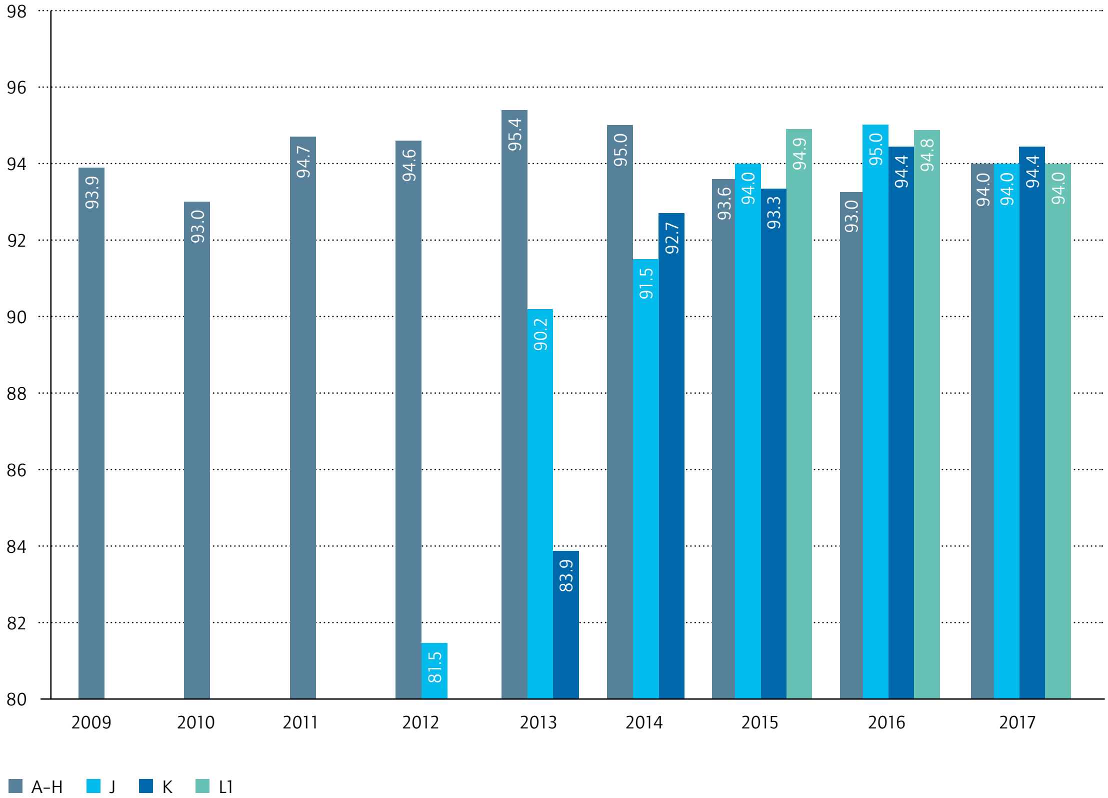
## Composition of gross sample and response rates by type of fieldwork

| | Total | | Samples A–H | | Sample J | | Sample K | | Sample L1 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Abs. | In % | Abs. | In % | Abs. | In % | Abs. | In % | Abs. | In % |
| **(1) Gross sample compositions by types of HH** | 11,340 | 100.0 | 6.982 | 100.0 | 2.031 | 100.0 | 1.114 | 100.0 | 1.213 | 100.0 |
| Respondents in previous wave | 10,558 | 93.1 | 6.505 | 93.2 | 1.884 | 92.8 | 1.046 | 93.9 | 1.123 | 92.6 |
| Drop-outs in previous wave | 479 | 4.2 | 299 | 4.3 | 84 | 4.1 | 36 | 3.2 | 60 | 4.9 |
| New households (split-off HH.s) | 303 | 2.7 | 178 | 2.5 | 63 | 3.1 | 32 | 2.9 | 30 | 2.5 |
| **(2) Gross sample composition by type of fieldwork** | | | | | | | | | | |
| **No fieldwork**[1] | 128 | 1.1 | 111 | 1.6 | 7 | 0.3 | 6 | 0.5 | 4 | 0.3 |
| **Interviewer-based** | 9,422 | 83.1 | 5,081 | 72.8 | 2,024 | 99.7 | 1,108 | 99.5 | 1,209 | 99.7 |
| Respondents in previous wave | 8,844 | 78.0 | 4,807 | 68.8 | 1,877 | 92.4 | 1,041 | 93.4 | 1,119 | 92.3 |
| Drop-outs in previous wave | 321 | 2.8 | 142 | 2.0 | 84 | 4.1 | 35 | 3.1 | 60 | 4.9 |
| New households | 257 | 2.3 | 132 | 1.9 | 63 | 3.1 | 32 | 2.9 | 30 | 2.5 |
| **Centrally administered (mail)** | 1,790 | 15.8 | 1,790 | 25.6 | – | – | – | – | – | – |
| Respondents in previous wave | 1,489 | 13.1 | 1,489 | 21.3 | – | – | – | – | – | – |
| Drop-outs in previous wave | 149 | 1.3 | 149 | 2.1 | – | – | – | – | – | – |
| Drop-outs during F2F. further processed by mail | 106 | 0.9 | 106 | 1.5 | – | – | – | – | – | – |
| New households | 46 | 0.4 | 46 | 0.7 | – | – | – | – | – | – |
| **(3) Response rates by type of fieldwork** | | | | | | | | | | |
| **Interviewer-based** | 8,436 | 89.5 | 4,618 | 90.9 | 1,776 | 87.7 | 987 | 89.1 | 1,055 | 87.3 |
| Respondents in previous wave | 8,160 | 92.3 | 4,483 | 93.3 | 1,704 | 90.8 | 953 | 91.5 | 1,020 | 91.2 |
| Drop-outs in previous wave | 132 | 41.1 | 60 | 42.3 | 38 | 45.2 | 13 | 37.1 | 21 | 35.0 |
| New households | 144 | 56.0 | 75 | 56.8 | 34 | 54.0 | 21 | 65.6 | 14 | 46.7 |
| **Centrally administered** | 1,463 | 81.7 | 1,463 | 81.7 | – | – | – | – | – | – |
| Respondents in previous wave | 1,359 | 91.3 | 1,359 | 91.3 | – | – | – | – | – | – |
| Drop-outs in previous wave | 53 | 35.6 | 53 | 35.6 | – | – | – | – | – | – |
| Drop-outs during F2F. further processed by mail | 34 | 32.1 | 34 | 32.1 | – | – | – | – | – | – |
| New households | 17 | 37.0 | 17 | 37.0 | – | -- | – | – | – | – |
| **(4) Panel stability**[2] | | 93.9 | | 93.6 | | 94.3 | | 94.4 | | 94.0 |
| **(5) Partial unit non-response**[3] | | 20.3 | | 21.9 | | 21.4 | | 19.7 | | 12.3 |

1 Between waves reported final dropouts, deceased, moved abroad
2 Number of participating households divided by previous wave's net sample
3 Share of households (number of household members >1) with at least one missing individual questionnaire.

Figure 1

**Panel stability in SOEP samples from 2009 to 2017 (as a percentage of participation in previous year's survey)**




vince about half of the new households that joined the sample when members of panel households formed a new household to participate in the study (56.0 percent).

From a long-term perspective, panel stability can serve as a decisive indicator when monitoring and predicting a longitudinal sample's development in terms of overall size. Panel stability is calculated as the number of households participating in the current year compared to the number from the previous year. It reflects the net total effects of panel mortality on the one hand and panel growth on the other. This approach is particularly helpful in household surveys where split-off households are tracked: if an individual from a participating household moves into a new household, Kantar Public will attempt to track the address change and conduct interviews with the new household. In the context of a panel survey, a second group of households can contribute to the stabilization of the sample: "temporary dropouts," i.e., households that could not be interviewed in the previous wave(s) for various reasons but that "re-joined" the panel in a given panel wave.

In order to meaningfully assess panel stability rates over the years, the various subsamples should be processed for at least five consecutive waves. After this period of time, the panel stability rates of samples are usually consolidated and therefore comparable. The mean panel stability across established SOEP samples A–H was 93.6 percent in 2017, (see **Figure 1**). This is a slight increase from the previous wave (93.0 percent). Panel stabilities in the last two refresher samples J (seventh wave in 2017) and K (sixth wave in 2017) were slightly higher, at 94.3 and 94.4 percent, respectively. The cohort samples L1 performed very similarly at 94.0 percent panel stability in 2017.

One indicator of the success of the fieldwork process on an individual level is the rate of partial unit nonresponse (PUNR). As noted above, the SOEP targets every adult member of the household, so the issue of PUNR is critical to observe, along with response rates and overall panel stability. In 2017, the share was 20.3 percent in the samples A–$L_1$, which can be seen as a slight improvement compared to the previous wave (21.2 percent; **Table 7**). We see this result as an indication that the additional measures to diminish partial unit non-response that were taken

Table 8

**Fieldwork results sample N**

| | Absolute | In % gross sample |
|---|---|---|
| **Gross sample for fieldwork** | **2807** | **100.0** |
| **Eligible, non-interview** | | |
| – Unable to reach during fieldwork period | 78 | 2.8 |
| – Anchor person deceased or permanently living abroad | 11 | 0.4 |
| – Permanently physically or mentally unable/incompetent | 4 | 0.1 |
| – "Soft refusal" (currently not willing/capable) | 145 | 5.2 |
| – Permanent refusals | 244 | 8.7 |
| – Anchor person moved and unable to obtain address | 11 | 0.4 |
| **Interview** | | |
| – Household interviewed | **2314** | **82.4** |

in 2017 (adjusted interviewer incentives, additional flyer for households, intensified interviewer training and monitoring regarding this aspect) had some positive effect.

Since the households in sample N took part in the SOEP for the first time in 2017, response rates have to be looked at slightly differently than the well-established, "older" samples. **Table 8** shows the fieldwork results for the 2,807 households in the gross sample. A total of 2,314 households agreed to participate, amounting to a response rate of 82.4 percent. The vast majority of the sample therefore seems to be responding well to the transition from PIAAC-L to SOEP. Nevertheless, a significant number of persons could not be convinced to join the new study for the time being. There are several possible reasons for this: Some might have been particularly interested in the specific topic of PIAAC , but less interested in a more general survey like SOEP, and might have taken the change of topic or interviewer as an opportunity to opt out. For others who were mainly motivated by the higher level of monetary incentives in PIAAC-L, the change to the considerably less generous incentives in the SOEP might have been the reason to stop participating.

Partial unit non-response was 39.3 percent in the first wave of fieldwork for sample N. This relatively high rate compared to the established SOEP samples shows that the transformation of a person-centric study into a household context can be quite challenging and requires patience. For the first year in the SOEP, the interviewers were instructed to prioritize recruiting anchor-persons for the new study over getting interviews with as many household members as possible. But reducing partial unit non-response will be one of the main focal points in the upcoming waves of this sample.

# The SOEP Screening Samples (L2/3)

## Fieldwork Report 2017 from Kantar Public

By Simon Huber

### Interviewing Modes

Along with SOEP sample L1 (cohort samples), screening samples (L2/3) were established in 2010 as part of the study "Families in Germany (FiD)", a longitudinal SOEP-equivalent sample system for the evaluation of German family polices. In 2014, both samples were transferred to the core sample system of the Socio-Economic Panel. Doing so switched the screening samples—which consisted of the subgroups: single parents, households with three or more children, and low-income households—from an exclusively interviewer-assisted mode to a CATI/CAWI hybrid approach, followed by CAPI. Since 2015, the screening samples have remained in this innovative multi-mode design. The aim in every wave is, on the one hand, to recruit as many households as possible for participation by Internet, and on the other, to maintain a high panel stability rate. The gross sample is thus divided into various subgroups depending on the mode of participation in previous years. Households that participated online at least once since 2014 were processed online in 2017. This includes households that participated in CAPI in 2016 but did not explicitly refuse to do the interviews online. A CAPI interviewer was immediately sent to households that rejected the CAWI mode in previous waves. Households that did not answer the CAWI questionnaires during the first three months of CAWI fieldwork were sent a CAPI interviewer.

In order to reduce both potential qualitative disadvantages and negative response rate effects of using CAWI instead of CAPI, CATI interviewers contacted each household in the CAWI population to encourage online participation. They also made a list of all household members to ensure that the right set of CAWI questionnaires would be provided. The CATI interviewers further acted as contacts for respondents' questions or problems. If a household did not have Internet access or could not be motivated to participate online, the telephone staff then offered them CAPI.

Table 9

**Sample L2/3: Fieldwork progress by month and interviewing mode**

| | CAWI interviews | | CAPI interviews | | Total | |
|---|---|---|---|---|---|---|
| | Abs. | In %[1] | Abs. | In %[1] | Abs. | In %[1] |
| July | 343 | 46.2 | 347 | 33.8 | 690 | 39.0 |
| August | 326 | 90.0 | 293 | 62.4 | 619 | 74.0 |
| September | 34 | 94.6 | 110 | 73.1 | 144 | 82.1 |
| October | 26 | 98.1 | 156 | 88.3 | 182 | 92.4 |
| November | 14 | 100.0 | 117 | 99.7 | 131 | 99.8 |
| December | 0 | 100.0 | 3 | 100.0 | 3 | 100.0 |
| **Total** | **743** | | **1.026** | | **1.769** | |

1 Cumulative percentages based on the month of the household interview.

Table 10

### Questionnaires: Volume and response rates — sample L2/3

| | Gross sample/reference value[1] | Number of interviews | Response rate/coverage rate |
|---|---|---|---|
| Household questionnaire | 2,280 | 1,769 | 77.6 |
| Individual questionnaire | 3,627 | 3,231 | 89.1 |
| Youth questionnaire: age 16 or 17 | 239 | 220 | 92.1 |
| Youth questionnaire: age 13 or 14 | 231 | 217 | 93.9 |
| Youth questionnaire: age 11 or 12 | 179 | 171 | 95.5 |
| Mother and child questionnaire: newborn | 27 | 23 | 85.2 |
| Mother and child questionnaire: age 2 or 3 | 27 | 27 | 100.0 |
| Mother and child questionnaire: age 5 or 6 | 33 | 32 | 97.0 |
| Questionnaire for parents[2]: age 7 or 8 | 89/178 | 88/141 | 98.9/79.2 |
| Mother and child questionnaire: age 9 or 10 | 167 | 162 | 97.0 |

1 The numbers refer to the respective target population in participating households. For the child-related questionnaires, the reference value is the number of children in the respective age group living in participating households. Therefore the response rate for these questionnaires indicates the number of children for whom a questionnaire has been completed by one parent (in most cases by the mother).
2 In contrast to the other child-related questionnaires, this questionnaire is supposed to be completed not by just one but by both parents. For 88 (98,9%) of 89 children born 2009 and living in households that participated in 2017, at least one questionnaire has been completed. In total, 141 questionnaires were completed.

Table 11

### Sample L2/3: Gross and net samples and response rates by mode

| | Gross sample | Net sample | Response rate |
|---|---|---|---|
| CAWI[1] | 1,359 | 743 | 54.7% |
| **CAPI**[2] | 1,409 | 1,026 | 72.8% |
| **Total**[3] | 2.280 | 1,769 | 77.6% |

1 Temporary dropouts previous wave, CAWI-participation previous wave, CAPI-participation previous wave but did not refuse to participate online.
2 No Internet access or declined to use CAWI in previous wave, could not be reached during CATI fieldwork and did not participate online, could be reached during CATI fieldwork and insisted on CAPI, willingness to participate online but did not do so until early October, households that were formed during the CAPI fieldwork process (split-off households).
3 The CAWI and CAPI gross samples are not distinct; one household could be processed in both modes.

Fieldwork with CAWI—assisted by CATI—started in July 2017, and the online questionnaires remained available to respondents until November 2017. Additionally, letters were sent to remind respondents about the study or to ask for missing individual CAWI questionnaires.

Fieldwork with CAPI also began in July with households that either had no Internet connection or had refused to participate in CAWI. Households that had stated a preference for CAPI in their phone conversations with CATI interviewers were subsequently added to the CAPI fieldwork process, followed by those who had said they wanted to complete the questionnaires online but had not done so by early October. **Table 9** shows the fieldwork progress for both interviewing modes by month.

## Questionnaires and Survey Instruments

Regarding data collection, all questionnaires from samples A–$L_1$ were used with the exception of the cognitive competence test, which can only be carried out with an interviewer present. Minor changes in CAWI programming were mode-specific and only pertained to design and layout. The CATI process did not include the various questionnaires. It only captured the mode that the household planned to use and recorded the household composition for those households that wanted to or already had completed the questionnaires online. **Table 10** provides the volumes and response rates of all distributed questionnaires.

All households received a letter and a brochure announcing the new wave of the study. The letter was sent to respondents in CAWI along with an online access code to a personal page containing links to every questionnaire the respondent was expected to fill out. For every questionnaire, a household received five euros. It received an additional bonus of 10 euros if all questionnaires required of the household were completed. For CAWI, the incentives were sent as vouchers in letters or e-mails depending on the respondent's preference. For CAPI, the incentive was paid in cash by the interviewer.

## Fieldwork Results

The study design of sample L2/3 consisted of two interviewing modes that were flanked by telephone interviewer. **Table 11** lists the gross and net samples of both the CAWI and CAPI population. These gross samples are not distinct; one household could be processed in both modes through the end of fieldwork. The overall gross sample consisted of 2,280 households, 1,359 of which were given the online access data (gross sample CAWI). The overall CAPI gross sample consisted of 1,409 households. In total, 1,769 households were interviewed, 743 with CAWI and 1,026 with CAPI. The overall response rate was 77.6 percent. The CAWI response rate was 54.7 percent; with CAPI it was 72.8 percent.

**Table 12** shows the composition of the gross sample by type of household and the respective response rates. The response rate for the screening samples was 87.4 percent in households that participated in the previous wave, 38.9 percent in households that did not participate in 2016, and 43.8 percent in split-off households that took part for the first time in 2017. Panel stability was very high, at 98.1 percent in 2017. One reason for this outstanding outcome might have been the longer fieldwork period. Another fieldwork indicator is the rate of PUNR. As expected, due to the implementation in CAWI, PUNR was comparatively high at 24.7 percent.

**Table 13** displays the results of the CATI fieldwork process. 68.3 percent (757 households) of the CATI gross sample, which consisted of households in the CAWI population with a functional telephone number, could be contacted by phone. 3.4 percent of these households declined to participate further in the study, whether online or face-to-face. Only 1.8 percent was only willing to participate through face-to-face interviews. A relatively high proportion of households contacted (89.6 percent) stated willingness to participate online. Although the households were reminded by mail to fill out the questionnaires, only 68.4 percent of those who had intended to participate online actually did so (see **Table 14**). Households that had not filled out the online questionnaires by early October were transferred to CAPI, in which 16.2 percent (110 households) of the households that had stated their intention to participate online actually took part in the study.

Table 12

## Sample L2/3: Composition of gross sample and response rates by type of household

| | Total | |
|---|---|---|
| | Absolute | In % |
| **(1) Gross sample compositions by types of HH** | **2,280** | **100.0** |
| Respondents in previous wave | 1,804 | 79.1 |
| Drop-outs in previous wave | 339 | 14.9 |
| New households (split-off HHs) | 137 | 6.0 |
| **(2) Net sample composition by type of HH** | **1,769** | **100.0** |
| Respondents previous wave | 1,577 | 89.1 |
| Temporary drop-outs prev. wave(s) | 132 | 7.5 |
| New households (split-off HHs) | 60 | 3.4 |
| **(3) Response rates by type of HH** | | |
| Respondents previous wave | | 87.4 |
| Drop-outs previous wave | | 38.9 |
| New households | | 43.8 |
| **(4) Panel stability**[1] | | **98.1** |
| **(5) Partial unit non-response**[2] | | **24.7** |

1 Number of participating households divided by previous wave net sample.
2 Share of households (number of household members >1) with at least one missing individual questionnaire.

Table 13

## Sample L2/3: Fieldwork results of the CATI process

| | Absolute | In % of gross sample | In % of contacted households |
|---|---|---|---|
| CATI gross sample | 1,109 | 100.0 | |
| Households that could not be contacted | 352 | 31.7 | |
| **Contacted households** | **757** | **68.3** | **100.0** |
| Permanent refusal (Both CAWI and CAPI) | 26 | 2.3 | 3.4 |
| Household undecided whether to participate | 39 | 3.5 | 5.2 |
| Household insisted on CAPI participation (no Internet or other reasons) | 14 | 1.3 | 1.8 |
| **Household stated intention to participate online** | **678** | **61.1** | **89.6** |

Table 14

## Sample SC: Sample L2/3: Resulting net interviews of the CATI process

| | Respondents (Abs.) | In % |
|---|---|---|
| **Household stated intention to participate online** | **678** | **100.0** |
| – participated in CAWI | 464 | 68.4 |
| – participated in CAPI | 110 | 16.2 |
| – did not participate at all | 104 | 15.4 |

# The SOEP Migration and Refugee Samples (M1–M5)

## Report from the SOEP

By Martin Kroh and Jürgen Schupp

### SOEP Migration Boosts in 2013–2017 (M1–M5)

The increased influx of refugees to Germany in 2015 not only poses a challenge to the German government, policy makers, and administrative agencies, but makes it all the more urgent for empirical social researchers, official statistical agencies, and research institutions to produce empirical data for studying the social processes surrounding immigration. This challenge was already beginning to emerge in the years before 2015, when gross immigration was above one million persons per year, due primarily to immigration from Central and Eastern as well as Southern Europe.

In the SOEP longitudinal study, we are meeting this challenge by building, adapting, and expanding our survey and the range of services we provide. As part of this endeavor, the Institute for Employment Research (IAB) in Nuremberg and the Socio-Economic Panel (SOEP) research infrastructure at DIW Berlin have partnered to survey migrants to Germany in 2013 (M1) and 2015 (M2) that mainly included EU migrants who arrived in recent years in Germany. In 2016, the Federal Office of Migration and Refugees (BAMF) joined the collaborative project to gather a large representative sample of refugees. The first refugee sample in 2016 focused on refugees who arrived in Germany between January 2013 and January 2016 (M3). A second sample uses the same immigration period but focuses on families with underage children (M4). Finally, a larger number of recent refugee migrants between January and December 2016 were interviewed for the first time in 2017 (M5).

**Table 14** provides an overview of the number of active adult respondents as well as children in the SOEP in 2016, distinguishing between persons with and without a migration background[1] in the different subsamples. We distinguish between the existing "old" samples A through J (A/J)[2], the samples of the "Families in Germany Project" (L1, L2, L3),[3][3] the 2013 and 2015 migration boosts (M1, M2), and the 2016 refugee boosts (M3, M4). Please note that the 2013 migration boost almost doubled the number of adult respondents with a migration background. In 2013, integrating the samples L1, L2, and L3 as well as samples M1 and M2 already increased the total number of children with a migration background from fewer than 1,000 in the old samples A through J to more than 3,000 in total. Finally, in 2016, in the IAB-BAMF-SOEP-Survey of Refugees, we augmented the SOEP data on migrants to include another 4,816 adult respondents who arrived in Germany as refugees. The number of children in these households amounted to 5,674. The 2017 data including sample M5, which was first interviewed in 2017, will be released to the scientific community for secondary data analysis in late 2018 (soepV.34).

1 According to the official German statistics, persons are considered to have a migration background if they migrated to Germany themselves, if they hold non-German citizenship, or if their parents migrated to Germany.

2 The old samples also contained migration boosts, namely Sample B from 1984, targeting what were then known as "guest worker" households, and Sample D from 1994, which focused on ethnic German migration to Germany between 1984 and 1994.

3 Samples L1, L2, and L3 were first interviewed in 2010 and 2011 and integrated into the SOEP retrospectively in 2014 (soepV.31). Sample L1 targeted families with newborn children from the 2007–2010 birth cohort. L2 sampled families with low-income single parents as well as large families, and sample L3 targeted single parents and large families.

Table 15

### The number of active respondents and children in 2016/2017 by sample (SOEPv33.beta)

| 2017 (Wave BG) | Samples | | |
|---|---|---|---|
| | No migration background | Migration background | Total |
| **Adults (18+)<br>Year 2016 (v33.beta)** | | | |
| A/J | 13,311 | 2,196 | 15,507 |
| (Families) L1, L2, L3 | 4,125 | 1,187 | 5,312 |
| (EU migrants) M1, M2 | 277 | 3,555 | 3,832 |
| (Refugees) M3, M4 | – | 4,816 | 4,816 |
| **Total** | **17,713** | **11,754** | **29,467** |
| | | | |
| **Children (–17)<br>Year 2016 (v33.beta)** | | | |
| A/J | 2,344 | 603 | 2,947 |
| (Families) L1, L2, L3 | 3,681 | 1,199 | 4,880 |
| (EU migrants) M1, M2 | 89 | 1,883 | 1,972 |
| (Refugees) M3, M4 | 49 | 5,674 | 5,723 |
| **Total** | **6,163** | **9,359** | **15,522** |

Table 16

### Migration boosts of the SOEP

| First Wave | | Target Population | |
|---|---|---|---|
| 1984 | Sample B | Migration to (West) Germany up to 1983 | "Guest Workers" |
| 1994 | Sample D | Migration to (West) Germany 1984/1994 | Ethnic German |
| 2013 | Sample M1 | Migration to Germany 1995/2010 | Mainly EU migrants |
| 2015 | Sample M2 | Migration to Germany 2010/2013 | Mainly EU migrants |
| 2016 | Sample M3 | Migration to Germany 2013/2015 | Refugees |
| 2016 | Sample M4 | Migration to Germany 2013/2015 | Refugee families |
| 2017 | Sample M5 | Migration to Germany 2016 | Refugees |

The three SOEP migration boosts not only increase the total number of observations on persons with a migration background but also function as a necessary expansion to the SOEP's prospective design, compensating for migration-based changes in the underlying German population. Since existing longitudinal samples cannot represent these changes in the underlying population, we need to supplement the existing samples with new ones, focusing the recent migration influx in particular (see **Table 15 and 16**). Therefore, the target population of M1 in 2013 was households migrating to Germany between 1995 and 2010; M2 in 2015 targeted households migrating to Germany between 2009 and 2013; M3 and M4 targeted households of refugees to Germany between 2013 and 01/2016, and finally M5 between 02/2016 and 12/2016.

The sampling frame for the refugee boosts M3/5 is the Central Register of Foreign Nationals (AZR, https://www.diw.de/documents/publikationen/73/diw_01.c.572346.de/diw_ssp0477.pdf). Samples M1 and M2 were innovative insofar as they were the first migration samples in Germany drawn from the Integrated Employment Biographies Sample of the IAB (http://panel.gsoep.de/soep-docs/surveypapers/diw_ssp0271.pdf). The administrative register file comprises all individuals who have been employed at least once in Germany, are registered as unemployed or seeking employment, or who received benefits such as unemployment benefit I or II or other similar forms of government assistance.

We link the survey data—after obtaining consent from the individuals affected—in samples M1/5 with information from the Integrated Employment Biographies. This will create a new database for scientific use that combines the comprehensive information of a household survey with precise labor market information from the social insurance data. In adherence to strict data protection and privacy regulations, this unique new database will provide the labor market information from the social insurance system in fully anonymized form. Linked data will be made available by the Research Data Centre (FDZ) of the Federal Employment Agency at the Institute for Employment Research. The linked data on samples M1 and M2 are available under the acronym IAB-SOEP-MIG-ADIAB (IAB-SOEP Migration Sample linked to administrative data of the IAB).
Questionnaires in the migration boost samples include questions that have been part of SOEP-Core for the last three decades. In addition, the survey covers each respondent's complete migration history, education, training, and employment history in Germany and abroad, and numerous aspects of cultural and living environments relevant to the social integration of migrants. Also in the case of the 2016/7 refugee boosts, we asked questions specific to this population about the situation in their country of origin as well as their asylum application procedure and public housing. We are convinced that with this data—along with our standard indicators on concerns about migration to Germany and xenophobia—the SOEP will soon offer a rich, diverse, and robust database for research on the impact of the refugee influx into Germany, one that will undoubtedly be of great interest to social scientists and economists worldwide.

# Fieldwork Report 2017 from Kantar Public

By Simon Huber

## Fieldwork Results: Migration Sample M1+M2

The two subsamples that constitute the SOEP migration survey, which was designed to improve the representation of migrants living in Germany, were established in 2013 (sample M1) and 2015 (sample M2). Fieldwork started in April and lasted until August (see **Table 17**).

**Table 18** displays the fieldwork results by subsample and type of household. In total, 2,760 addresses comprised the gross sample. 78.0 percent of all households were respondents in the previous wave; 19.0 percent were dropouts in the previous wave; and 2.9 percent were split-off households. In total 1,909 households were interviewed, 1,350 in M1 and 559 in M2. The comparatively low response rates of 74.7 percent in M1 and 58.1 percent in M2—with the relatively high PUNR rate of 28.5 percent overall and the relatively low response rate of 86.8 percent for the individual questionnaire (see Table 19)—reflect the difficulties in processing migrant households since the first wave of M1 in 2013. In a migration sample, the effort required by interviewers to contact households successfully on the one hand and to mo

Table 17

**Fieldwork progress by month: processing household interviews**[1]

| | Gross sample | Net sample |
|---|---|---|
| April[2] | 22.8% | 27.0% |
| May | 54.3% | 62.8% |
| June | 79.2% | 87.0% |
| July | 92.0% | 97.2% |
| August | 100.0% | 100.0% |

1 Cumulative percentages based on the month of the last household contact.
2 Including households that refused to take part in the survey prior to start of fieldwork.

Table 18

**Sample M1 and M2: Composition of gross and net sample and outcome rates by type of household (HH)**

| | Sample M1 | | Sample M2 | | Total | |
|---|---|---|---|---|---|---|
| | Absolute | In % | Absolute | In % | Absolute | In % |
| (1) Gross sample compositions by types of HH | 1,808 | 100.0 | 952 | 100.0 | 2,760 | 100.0 |
| **Respondents from previous wave** | 1,494 | 82.6 | 660 | 69.3 | 2,154 | 78.0 |
| Drop-outs from previous wave | 251 | 13.9 | 274 | 28.8 | 525 | 19.0 |
| New households (split-off HHs) | 63 | 3.5 | 18 | 1.9 | 81 | 2.9 |
| (2) Net sample composition by type of HH | 1,350 | 100.0 | 559 | 100.0 | 1,909 | 100.0 |
| **Respondents from previous wave** | 1,245 | 92.2 | 482 | 86.2 | 1,727 | 90.5 |
| Drop-outs from previous wave | 75 | 5.6 | 70 | 12.5 | 145 | 7.6 |
| New households (split-off HH) | 30 | 2.2 | 7 | 1.3 | 37 | 1.9 |
| (3) Response rates by type of HH | | 74.7 | | 58.7 | | 6.2 |
| **Respondents from previous wave** | | 83.3 | | 73.0 | | 80.2 |
| Drop-outs from previous wave | | 29.9 | | 25.5 | | 27.6 |
| New households | | 47.6 | | 38.9 | | 45.7 |
| (4) Panel stability[1] | | 90.4 | | 84.7 | | 88.7 |
| (5) Partial unit non-response[2] | | 28.2 | | 29.4 | | 28.5 |

1 Number of participating households divided by previous wave's net sample.
2 Share of households (number of household members >1) with at least one missing individual questionnaire.

tivate every individual to take part in an interview on the other hand is obviously greater than in surveys of the general population. The contact process and the interviewing situation are more complicated and delicate as well (e.g., language problems, cultural specifics, level of education, etc.). But it appears that sample size is stabilizing with each wave, with M1 reaching a panel stability of 90.4 percent in 2017 and M2 making a major leap from 60.2 percent to 84.7 percent.

## Questionnaires and Survey Instruments

For data collection in the SOEP migration samples in 2017, all of the questionnaires from SOEP-Core were used. However, a specific biographical questionnaire covering the migration history and other additional questions about migration and integration was used for adult household members who were participating in the study for the first time. Table 3 shows the gross samples and net volumes of the various individual questionnaires. All questionnaires were conducted using CAPI, with the exception of the cognitive competence test, which is a paper questionnaire. The mean interview length for the main questionnaires was 14 minutes for the household questionnaire and 38 minutes for the individual questionnaire.

As the target population consists of people of (mostly) foreign origin, the main questionnaires (household and individual) were translated into five languages: English, Russian, Turkish, Romanian, and Polish. With the exception of English, these are the languages of the nationalities that were overrepresented in the first wave's gross sample. The translated versions were not implemented in CAPI but printed on paper and given to the interviewer as an additional support tool to overcome language problems. **Table 20** displays different kinds of aids the interviewers used if language problems arose during the interview situation.

A special feature of the migration sample's survey design is the linkage of respondents' survey data to register data from the Integrated Employment Biographies Sample (IEBS). As in the previous waves, in 2017, a portion of the sample of M1 and M2 was asked to give their written consent to the record linkage at the end of the individual interview. In 2017, the target group designated for record linkage consisted of 181 participants, of whom 44.2 percent consented to data linkage.

Table 19

## Questionnaire volumes and response rates — samples M1+M2

| | Gross sample/reference value[1] | Number of interviews[1] | Response rate/coverage rate |
|---|---|---|---|
| Individual questionnaire[2] | 3.916 | 3.401 | 86.8% |
| Youth questionnaire: age 16–17 | 89 | 73 | 82.0% |
| Cognitive competence test | 73 | 67 | 91.8% |
| Youth questionnaire: age 13–14 | 86 | 78 | 90.7% |
| Youth questionnaire: age 11–12 | 93 | 83 | 89.2% |
| Mother and child questionnaire: newborn | 124 | 110 | 88.7% |
| Mother and child questionnaire: age 2–3 | 113 | 111 | 98.2% |
| Mother and child questionnaire: age 5–6 | 120 | 112 | 93.3% |
| Questionnaire for parents[3]: age 7–8 | 102/204 | 99/159 | 97.1%/77.9% |
| Mother and child questionnaire: age 9–10 | 109 | 105 | 96.3% |

1 The numbers refer to the respective target population in participating households. For the child-related questionnaires, the reference value is the number of children in the respective age group living in participating households. Therefore the response rate for these questionnaires indicates the number of children for whom a questionnaire has been completed by one parent (in most cases by the mother).
2 There are two additional individual questionnaires conducted in households that are coded as non-partcipating households as there is no houshold questionnaire for 2016. 129 of the 3,830 respondents were first-time respondents and therefore answered the additional biographical questions.
3 In contrast to the other child-related questionnaires, this questionnaire is supposed to be completed not by just one but by both parents. For 497 (99.0%) of 502 children born in 2008 and living in households that participated in 2016, at least one questionnaire has been completed. In total, 853 questionnaires were completed.

Table 20

## Language problems and usage of translated paper questionnaires in M1+M2

| | Total[1] | Net sample in % |
|---|---|---|
| Net sample (individual questionnaire) | 3.408 | 100.0 |
| No language problems occurred/no need for assistance with language problems | 2.854 | 83.7 |
| Assistance with language problems needed | 554 | 16.3 |
| *Of that number:* | | |
| German-speaking person in the same household | 217 | 6.4 |
| German-speaking person from outside the household | 63 | 1.8 |
| Professional interpreter[2] | 6 | 0.2 |
| Translated paper questionnaire[2] | 269 | 7.9 |
| *Of that number:* | | |
| Russian | 107 | 3.1 |
| Turkish | 30 | 0.9 |
| Romanian | 42 | 1.2 |
| Polish | 46 | 1.3 |
| English | 44 | 1.3 |

1 Including all individual questionnaires even if the households in which they are conducted are classified as non-participating households.
2 One respondent needed a professional interpreter as well as a translated questionnaire.

## The SOEP Refugee Samples (M3/M4+M5)

To implement an innovative sampling procedure for mapping recent migration and integration dynamics, the SOEP partnered with the Institute for Employment Research (IAB Nuremberg) and the Research Centre of the Federal Office for Migration and Refugees (BAMF-FZ) in 2016. M3 is the acronym for the first top-up sample of households that represents adult refugees who entered Germany from January 1, 2013, to January 31, 2016 and applied for asylum in Germany. M4 is the acronym for the second refugee top-up sample. It consists of two tranches. The first one is a household boost of the M3 sample. For the second tranche, underage children of refugee families were sampled as key informants, but only the adults in the respective households were invited to participate. In 2017, the second wave of the samples M3 and M4 was fielded. M5 is the acronym for the third top-up sample of refugee households. The population of M5 covers adult refugees who have applied for asylum in Germany since January 1, 2013, and are currently living in Germany. The first wave of M5 was conducted in 2017.

## Sampling Design of the IAB-BAMF-SOEP Refugee Sample M5

As with the previous refugee samples M3 and M4, the Central Register of Foreign Nationals (Ausländerzentralregister—AZR) was utilized as sampling frame in M5.[4] The sample consists of two tranches. The first one is a household boost that represents adult refugees who entered Germany from January 1, 2013 until January 31, 2016 in order to compensate for the undercoverage that occurred during the sampling of M3 and M4 due to registration lags in the AZR. The second tranche represents adult refugees who entered Germany from February 1, 2016, to December 31, 2016.

The sampling frame of the Central Register of Foreign Nationals provides only basic information about foreigners in Germany, including: nationality, name, date of birth, and a registration number linked to the local recordkeeping authority. Thus, the BAMF-FZ was in charge of contacting those local recordkeeping authorities to obtain actual addresses of the refugees. As experts in the SOEP group at DIW Berlin drew the gross samples, we will provide some general information on the sampling procedure. A stratified multistage approach was used to draw the gross sample.

- The sampling design provided some general specifications:
  - Oversampling of refugees with higher probability of being granted a residency permit.
  - Oversampling of women.
  - Exclusion of refugees living in temporary mass accommodations.
- The local recordkeeping authorities were the primary sampling units (PSU) in accordance with strata based on the information of the Central Register of Foreign Nationals. Local recordkeeping authorities with a smaller number of refugees have been integrated into synthetic PSUs.
- The sampling of 99 PSUs (with overall 158 local data-keeping authorities), stratification by federal state and administrative district are based on the Central Register of Foreign Nationals. Only refugees registered in those PSUs belong to the sampling population.
- Segmentation of the 99 PSUs into 130 Sample Points. The number of Sample Points per PSU varied according to the weight of a certain PSU and ranges between one and three.
- The gross overall sampling of eligible registration numbers to be supplied with addresses by the local recordkeeping authority included 45 addresses per Sample Point.
- This procedure should have led to N=5,850 addresses in the overall sample. Due to cases of low cooperation by local recordkeeping authorities (e.g., late provision of requested information) or refugees leaving their local recordkeeping authorities' designated area before registering their address, this resulted in 5,390 addresses that were provided to Kantar Public by BAMF-FZ.
- Finally, Kantar Public drew a gross sample of 2,984 addresses for fieldwork, i.e., 23 addresses per PSU[5].

4 The sampling design of the refugee samples M3 and M4 is described in: SOEP Wave Report 2016.

5 In one PSU, only 17 addresses were available for fieldwork, as the address information provided by the local recordkeeping authority was not sufficient.

Table 21

## Distribution of sample points by federal state for M5

| Federal state | Number of sample points | Percentage of households in gross sample for fieldwork of M5 | Percentage of households in net sample of M5 |
|---|---|---|---|
| Schleswig-Holstein | 4 | 3.9% | 3.3% |
| Hamburg | 2 | 2.0% | 2.1% |
| Lower Saxony | 13 | 13.1% | 13.9% |
| Bremen | 0 | 0.0% | 0.0% |
| North Rhine-Westphalia | 27 | 30.7% | 32.0% |
| Hesse | 11 | 12.0% | 13.0% |
| Rhineland Palatinate | 6 | 7.2% | 5.4% |
| Saarland | 0 | 0.0% | 0.0% |
| Baden-Wuerttemberg | 13 | 10.4% | 9.2% |
| Bavaria | 13 | 10.3% | 11.7% |
| Berlin | 1 | 1.9% | 2.0% |
| Brandenburg | 2 | 1.6% | 1.6% |
| Mecklenburg-Western Pomerania | 1 | 1.5% | 0.8% |
| Saxony | 3 | 2.4% | 2.2% |
| Saxony-Anhalt | 1 | 0.5% | 0.7% |
| Thuringia | 3 | 2.4% | 2.2% |

Table 22

## Distribution of sample points by community type (BIK) for M5

| BIK Type | Share of households in gross sample for fieldwork of M5 | Share of households in net sample of M5 |
|---|---|---|
| **0** (more than 500,000 inhabitants/center) | 22.8% | 25.4% |
| **1** (more than 500,000 inhabitants/periphery) | 10.4% | 10.1% |
| **2** (100,000 to 499,999 inhabitants/center) | 20.5% | 19.8% |
| **3** (100,000 to 499,999 inhabitants/periphery) | 14.8% | 14.4% |
| **4** (50,000 to 99,999 inhabitants/center) | 2.7% | 2.6% |
| **5** (50,000 to 99,999 inhabitants/periphery) | 6.5% | 6.3% |
| **6** (20,000 to 49,999 inhabitants) | 12.3% | 11.3% |
| **7** (5,000 to 19,999 inhabitants) | 7.3% | 7.6% |
| **8** (2,000 to 4,999 inhabitants) | 2.1% | 2.0% |
| **9** (less than 2,000 inhabitants) | 0.7% | 0.6% |

**Table 21** shows the distribution of the gross and net samples by federal state; **Table 22** shows the distribution with respect to community type and spatial interlocking (BIK-Types). The net proportions of households reflect the gross proportions accurately.

With regard to the gross proportions of households, one should bear in mind that refugees in Germany are distributed among and within federal states by an official allocation procedure (“Königsteiner Schlüssel”).

Table 23

**Cumulative fieldwork progress by month**

| | M5 | | M3/M4 | |
|---|---|---|---|---|
| | In % of gross sample | In % of net sample | In % of gross sample | In % of net sample |
| June 2017 | 3.9% | 3.8% | | |
| July 2017 | 41.9% | 49.2% | | |
| August 2017 | 77.7% | 83.9% | | |
| September 2017 | 97.4% | 99.7% | | |
| October 2017 | 100.0% | 100.0% | 17.0% | 12.8% |
| November 2017 | | | 33.5% | 36.1% |
| December 2017 | | | 52.5% | 58.3% |
| January 2018 | | | 81.4% | 85.6% |
| February 2018 | | | 98.2% | 99.0% |
| March 2018 | | | 100.0% | 100.0% |

## Fieldwork Progress of Refugee Samples M3/M4, and M5

**Table 23** shows the progress of the fieldwork for the three refugee samples. Face-to-face interviewing for M5 started in mid-June 2017 and ended at the first weekend of October 2017. Fieldwork for the samples M3/M4, which were consolidated for processing in wave two, started subsequently in October 2017 and ended at the beginning of March 2018. Originally, fieldwork was scheduled to end in December 2017 but for several reasons it has to be expanded: many first wave addresses were no longer accurate for second-wave fieldwork and required further research; it was more difficult to find times when respondents could meet with interviewers than in wave one, and many appointments had to be rescheduled.

## Fieldwork Results for the First Wave of Refugee Sample M5

**Table 24** shows the fieldwork results for sample M5. About one-third of the addresses were either clearly invalid, or their validity was questionable. About 18 percent of the addresses were valid, but an interview could not be obtained. The main reasons for non-interviews were soft and permanent refusals (9.1% of gross sample) and language problems (3.4% of gross sample). 1,519 households could be interviewed, i.e., about 50 percent of the gross sample. As the SOEP standard procedural preference of interviewing all household members was not a major objective for the first wave of this refugee sample, the number of households that were partially interviewed (i.e., at least one individual questionnaire was missing) is comparably high (14.5% of gross sample respectively 28.6% of all interviewed households). However, in addition to the 1,519 key informants interviewed (i.e., persons drawn from the AZR), 733 additional people were interviewed, resulting in 2,252 individual interviews.

Table 24

### Fieldwork results M5

| | M5 | |
|---|---|---|
| | **Abs.** | **In % of gross sample** |
| **Gross sample for fieldwork** | 2.984 | 100.0 |
| **Unknown eligibilty** | 828 | 27.7 |
| – Unable to reach during fieldwork period | 196 | 6.6 |
| – Key respondent moved and unable to obtain address | 591 | 19.8 |
| – Address not processed | 41 | 1.4 |
| **Not eligible (e.g.. business address. address does not exist)** | 98 | 3.3 |
| **Eligible. non-interview** | 539 | 18.1 |
| – Key respondent deceased or permanently living abroad | 70 | 2.3 |
| – Permanently physically or mentally unable / incompetent | 28 | 0.9 |
| – Language problems | 102 | 3.4 |
| – "Soft refusal" (currently not willing / capable) | 128 | 4.3 |
| – Permanent refusals | 144 | 4.8 |
| – Other (e.g., detained. "in hiding." refusal by refugee housing. dropout during interview) | 67 | 2.2 |
| **Interview (of key respondent)** | 1.519 | 50.9 |
| – Household completely interviewed (including single households) | 1.085 | 36.4 |
| – Household partially interviewed | 434 | 14.5 |

Table 25

### Fieldwork results M5 in different gross samples

| | M5 | | |
|---|---|---|---|
| | **Absolute** | **In % of gross sample** | **In % of gross sample II** |
| Gross sample I (total gross number of addresses for fieldwork) | 2,984 | 100.0 | |
| Non-processable addresses (not attempted; key respondent moved / unable to obtain new address; QNDs) | 730 | 24.5 | |
| Gross sample II (processable addresses) | 2,254 | 75.5 | |
| Deceased or moved abroad | 70 | 2.3 | |
| Gross sample II adjusted | 2,184 | 73.2 | 100.0 |
| Unable to reach during fieldwork period | 196 | 6.6 | 9.0 |
| Contacted processable addresses | 1,988 | 66.6 | 91.0 |
| Non-cooperation (permanently unable / incompetent; language problems; soft and permanent refusals) | 469 | 15.7 | 21.5 |
| Valid Interviews | 1,519 | 50.9 | 69.6 |

**Table 25** shows the fieldwork results in different gross samples and table 6 the different outcome rates for sample M5. One quarter of the sampled addresses (i.e., gross sample I) were not processable, mainly because the key informants had moved and their new addresses could not be obtained. This defines gross sample II as containing 2,254 viable addresses. After adjusting for deceased key informants and those who had moved abroad, 2,184 addresses remained (73.2 percent of gross sample I). Overall, interviewers were able to contact 1,988 key informants, 66.6 percent of gross sample I. The response rate, defined as the number of interviews divided by adjusted gross sample II, is 69.6 percent. Compared to the recent general refresher samples in the SOEP, and even to the first waves of the refugee samples M3 and M4, this outcome rate is relatively high.

Table 26

Outcome rates M5

| | M5 | |
|---|---|---|
| | Absolute | In % of gross sample |
| Contact rate (contacted addresses / gross sample) | **66.6** | **91.0** |
| Response rate (interviews / gross sample) | 50.9 | 69.6 |

## Fieldwork Results for the Second Wave of Refugee Samples M3/M4

**Table 27** displays the fieldwork results by subsample and type of household of samples M3 and M4. In total, 3,713 addresses comprised the gross sample. 89.4 percent of all households were respondents in the previous wave; 6.3 percent were dropouts in the previous wave; and 4.3 percent were split-off households. In total 2,365 households were interviewed, 1,102 in M3 and 1,263 in M4. Whereas the fieldwork results in the first wave of all three refugee samples were quite positive and resulted in surprisingly high response rates, the second wave of M3 and M4 proved to be very challenging. Fieldwork progress had been delayed due to address problems and the high mobility of the target population (1,650 addresses had to be rechecked, 80 percent of which were successfully confirmed). Further, the effort required by interviewers to contact households successfully on the one hand and to motivate every individual to take part in an interview on the other hand increased in comparison to the first waves. According to the reports given by our interviewers, the availability of the key informants and their household members for an interview was lower because of increasing time being spent on other activities (e.g., looking for work, participating in language and integration courses, going to official appointments, etc.). That led to comparatively low response rates of 60.9 percent in M3 and 69.7 percent in M4—with a very high PUNR of 51.2 percent overall and the relatively low response rate of 76.8 percent for the individual questionnaire. This again reflects the difficulties in processing refugee households, where the contact process and the interviewing situation are, as noted above, more complicated and sensitive.

Table 27

Sample M3 and M4: Composition of gross and net sample and outcome rates by type of household (HH)

| | Sample M3 | | Sample M4 | | Total | |
|---|---|---|---|---|---|---|
| | Absolute | In % | Absolute | In % | Absolute | In % |
| (1) Gross sample compositions by types of HH | 1,853 | 100.0 | 1,860 | 100.0 | 3,713 | 100.0 |
| **Respondents from previous wave** | 1,693 | 91.4 | 1,628 | 87.5 | 3,321 | 89.4 |
| Drop-outs from previous wave | 82 | 4.4 | 152 | 8.2 | 234 | 6.3 |
| New households (split-off HHs) | 78 | 4.2 | 80 | 4.3 | 158 | 4.3 |
| (2) Net sample composition by type of HH | 1,102 | 100.0 | 1,263 | 100.0 | 2,365 | 100.0 |
| **Respondents from previous wave** | 1,031 | 93.6 | 1,135 | 89.9 | 2,166 | 91.6 |
| Drop-outs from previous wave | 44 | 4.0 | 82 | 6.5 | 126 | 5.3 |
| New households (split-off HH) | 27 | 2.5 | 46 | 3.6 | 73 | 3.1 |
| (3) Response rates by type of HH | | 59.5 | | 67.9 | | 63.7 |
| **Respondents from previous wave** | | 60.9 | | 69.7 | | 65.2 |
| Drop-outs from previous wave | | 53.7 | | 53.9 | | 53.8 |
| New households | | 34.6 | | 57.5 | | 46.2 |
| (4) Panel stability[1] | | 65.1 | | 77.6 | | 71.2 |
| (5) Partial unit non-response[2] | | 52.6 | | 50.2 | | 51.2 |

1 Number of participating households divided by previous wave's net sample.
2 Share of households (number of household members >1) with at least one missing individual questionnaire.

Table 28

Utilization of specific language version[1]

| | M3/M4 | | M5 | |
|---|---|---|---|---|
| | Abs. | In % of interviews | Abs. | In % of interviews |
| Total | 3,445 | 100.0 | 2,252 | 100.0 |
| German / English | 402 | 11.7% | 228 | 10.1 |
| German / Arabic | 2,492 | 72.3% | 1,505 | 66.8 |
| German / Farsi | 399 | 11.6% | 392 | 17.4 |
| German / Pashto | 31 | 0.9% | 17 | 0.8 |
| German / Urdu | 52 | 1.5% | 46 | 2.0 |
| German / Kurmanji | 69 | 2.0% | 64 | 2.8 |

1 M3/M4: Individual questionnaires for wave II respondents and individual questionnaire for new respondents; M5: Individual questionnaire for new respondents

## Fieldwork Approach to Foreign Languages

With refugees who entered Germany very recently, language problems were expected to pose a major challenge in the interviewing process. Although some of the 30 interviewers in M5 and some of the 45 interviewers in M3/M4 speak Arabic, Farsi, or Pashtu, it is generally not feasible to match interviewers with special language skills with respondents in such a large, nationwide survey. As implemented successfully in the first wave of samples M3 and M4, a bilingual CAPI program was used for all three refugee samples in 2017. The translation was scripted into the CAPI such that German and another language were shown on the screen at the same time. The language was selected at the beginning of the interview. Moreover, a foreign-language hotline was set up to help interviewer and interviewee agree on the language for their interview and to help with all other issues and concerns regarding the nature and scope of the interview. If interviewees could not read or write well enough in their respective language, audio files were available on screen for interviewees to listen to each question and answer in their language. The languages offered besides German were English, Arabic, Farsi, Pashto, Urdu, and Kurmanji. Use of the different language versions is shown in **Table 28**.

## Questionnaires and Survey Instruments

**Table 29** displays the types and volumes of the questionnaires implemented in the three refugee samples. In the first wave of M5, two questionnaires were fielded: the individual questionnaire for all adult first-time respondents (including additional biographical questions) and the household questionnaire for the key informant. In the second wave of M3/M4, a set of questionnaires were fielded, most of them in line with the longitudinal SOEP standard. In order to simplify the interviewing process for both the interviewers and the respondents, there was one youth instrument (including the three questionnaires and the competence tests for underage respondents) and one child-related instrument (including the five mother and child questionnaires), in each case determined according to birth cohort.

Table 29

### Questionnaires types and volumes for the refugee samples

| | | Number of interviews |
|---|---|---|
| M5 | Household questionnaire | 1,519 |
| | Individual questionnaire for first-time respondents | 2,252 |
| M3/M4 | Household questionnaire | 2,365 |
| | Individual questionnaire for previous wave's respondents ("refugees") | 2,747 |
| | Individual questionnaire for first-time respondents ("refugees") | 698 |
| | Indivdual questionnaire for additional household members (born in Germany or migrated a longer time ago) | 24 |
| | Youth questionnaire: age 16 or 17 | 108 |
| | Youth questionnaire: age 13 or 14 | 109 |
| | Youth questionnaire: age 11 or 12 | 128 |
| | Cognitive competence test for respondents of the three youth questionnaires | 309 |
| | Mother and child questionnaire: newborn | 484 |
| | Mother and child questionnaire: age 2 or 3 | 230 |
| | Mother and child questionnaire: age 5 or 6 | 269 |
| | Mother and child questionnaire: age 7 or 8 | 231 |
| | Mother and child questionnaire: age 9 or 10 | 268 |

Table 30

### Consent to record linkage: Consent rates

| | M3/M4 | | M5 | |
|---|---|---|---|---|
| | Absolute[1] | In % | Absolute[2] | In % |
| Consented | 520 | 72.0 | 1,766 | 78.4 |
| Declined | 86 | 11.9 | 178 | 7.9 |
| Didn't understand the issue | 116 | 16.1 | 308 | 13.7 |
| Total | 722 | 100.0 | 2,252 | 100.0 |

1 M3/M4: Only first-time respondents were asked to give their consent to record linkage.
2 M5: All respondents were asked to give their consent to record linkage.

As with every previous subsample of the migration population in the SOEP, questionnaire content is based on the SOEP-Core questionnaires. However, there are several deviations from SOEP standard to reflect the special characteristics of the target group, which include several additional questions on migration and integration.

The mean interview length for key informants in sample 5 was about 100 minutes (including the household questions). In many cases, the interview lasted three hours or more. The mean interview length for other household members who completed the individual questionnaire without the household section was about 66 minutes. The mean interview length in samples M3/M4 was about 58 minutes for the individual questionnaire among previous wave respondents, 65 minutes for the individual questionnaire among first-time respondents, and 17 minutes for the household questionnaire.

In recent years, it has become fairly standard in the SOEP to link respondents' survey data in the with registry data from the Integrated Employment Biographies Sample (IEBS). In M5, all interviewees were asked to give their written consent to record linkage at the end of the individual interview. In M3/M4 only first-time respondents were asked to give their consent. **Table 30** shows the results for approval or rejection.

# Report on MORE – Mentoring of Refugees

By Nicolas Legewie, Lea-Maria Löbel, and Magdalena Krieger

The scientific study MORE is designed to deliver first results on the role of civic engagement in integration of refugees in Germany. The intervention is carried out by the SOEP in cooperation with the Institute for Employment Research (IAB) and the Institute on Behavior and Inequality (briq) in Bonn. It is funded by the Leibniz Competition funding scheme (funding line: innovative research).

## Understanding and Improving Civic Engagement in the German Refugee Context

Since 2015, two major phenomena have been the subject of increasing public and academic interest in Germany: the influx of refugees to the country, and the commitment of large numbers of volunteers to helping these newcomers upon their arrival.

Many refugees will be unable to return to their home countries in the foreseeable future. This raises questions of how to best integrate them into the German educational system and labor market, as well as how to facilitate their participation in other aspects of social life. One of the main questions the MORE study seeks to answer is whether active support from a mentor plays a causal role in expanding refugees' social network, improving language use, or aiding in the search for education or employment.

For the purpose of this study, MORE partners collaborate with the social start-up Start with a Friend e.V., which has created more than 2500 mentor-like relationships (known in German as "Tandems") between refugees and "locals" (i.e., people who are German or have been living in Germany for some time) since 2014. Compared to many other civic initiatives for refugees, Start with a Friend aims at creating friendships between refugees and locals, providing emotional as well as practical support. Locals who are interested in participating in the program can register on the Start with a Friend website.

## Design of the Study

The MORE study is carrying out a randomized controlled trial with participants in the IAB-BAMF-SOEP Survey of Refugees in 2017 and 2018. SOEP participants who are interested in participating in MORE are assigned to either a group of participants (the treatment group) or a group of non-participants (the control group). All participants will be matched with a "local" by Start with a Friend, starting a mentoring relationship for a period of at least six months. Both the treatment and the control group will be interviewed annually as part of the IAB-BAMF-SOEP Survey of Refugees.

Computer-assisted personal interviews (CAPI) allow for pre-selection of participants. A first pre-selection takes place because Start with a Friend is present in 14 cities in which the SOEP sample has participants.[6] A second restriction for participation is the prior self-selection in similar programs. Refugees who state during the interview that they already receive help in a mentoring-like relationship are not included in the random allocation of treatment and control.

6 Participating city chapters of Start with a Friend e.V. are Berlin, Hamburg, Oldenburg, Dresden, Leipzig, Potsdam, Aachen, Bonn, Düsseldorf, Frankfurt a.M., Köln, Freiburg, Stuttgart, Landau und Mannheim.

A third selection criterion is whether refugees are actually interested in participating in a mentoring relationship. Only those interested in participating are randomly assigned to the treatment and control groups by means of a CAPI program. There is a 50% chance of being selected into the treatment group.

## The MORE Partners

Refugees are assigned to treatment and control in the course of the annual panel study of the IAB-BAMF-SOEP refugee sample 2017. The annual interviews with the refugees are managed and conducted by Kantar Public. In the MORE study, Kantar Public is not only in charge of interviewing and selecting treatment and control cases from the refugee sample, but also receives documentation from Start with a Friend that includes information on the matching process. Start with a Friend generates a specific ID for every local. By combining the IDs generated for the refugee and the local, an individual mentoring ID is created. The ID can be used to combine data provided by the refugees with data provided by the locals.

The merging of data becomes possible as locals participate in a three-wave online survey. The survey includes questions on locals' expectations and their perspectives on the mentoring program. The first wave of the survey is a short form of the SOEP core questionnaire and includes questions on living conditions, socio-economic status, beliefs, and social networks. After eight weeks and four months, a second and third questionnaire are sent to the local participants. These two questionnaires focus on the mentoring relationship and allow for longitudinal analysis on how the tandem evolved. The investigation focuses on the intensity of the mentoring relationship, shared activities, and the dynamics of the relationship over the course of the program. All questionnaires were developed at the German Institute for Economic Research. Programming and distribution of the local questionnaire data is managed by the Centre for Empirical Social Studies at the Humboldt University Berlin (ZeS). After data collection among the group of locals has ended, the data will be linked to the refugee data by Kantar Public, anonymized, and transferred to the SOEP.

All data and analyses will be made available by the SOEP. A first evaluation of participation in the mentoring relationship among locals and refugees will be possible following the data release in 2019. The second wave, allowing for panel analysis, will be available in 2020. If the refugee has given consent, his or her IAB-BAMF-SOEP survey data can be combined with the Integrated Employment Biographies sample (IE) of the IAB.

# The SOEP Innovation Sample (SOEP-IS)

By David Richter

The SOEP Innovation Sample (SOEP-IS) is a service provided by the SOEP to researchers worldwide for their research projects. The SOEP-IS is well suited to short-term experiments, but it is especially useful for testing long-term instruments that are not suited to SOEP-Core, whether because the instruments have not yet been scientifically verified, or because the questions deal with very specific research issues. Since 2013, the SOEP has accepted users' proposals for the SOEP-IS and assessed these submissions in an annual competitive refereed process to identify the "best" research questions and operationalization processes. In 2017, almost 7,000 individual respondents in more than 3,500 households participated in the SOEP-IS survey. Many of these women and men have been part of a boost sample in SOEP-Core since 1998, while others joined in 2009. These individuals provide a wealth of longitudinal data to the SOEP-IS. Additional samples were added to the SOEP-IS in 2012, 2013, 2014, 2015, 2016, and 2017 (see **Table 31**).

## Data Access

To protect the confidentiality of respondents' data, the SOEP adheres to strict security standards in distributing the SOEP-IS data. The data are reserved exclusively for research and provided only to members of the scientific community. The SOEP Research Data Center distributes the SOEP-IS data to users as an independent dataset. Individuals and institutions that have signed a SOEP data distribution contract can submit an informal application (in the form of a letter or e-mail), requesting a supplemental contract allowing use of the SOEP-IS data. After signing the required contracts with the SOEP, users receive the SOEP-IS dataset by personalized encrypted download. Users can also access small-scale regional data, which can be linked to the SOEP-IS data, on site at the SOEP Research Data Center.

### Access to SOEP-IS Data from 2011, 2012, 2013, 2014, 2015, 2016, and 2017

The latest SOEP-IS data were released in late March 2018. The data release contained the core SOEP questions and additional SOEP modules included in the SOEP-IS in 2016, user-friendly generated SOEP variables for 2016, as well as all of the previous SOEP-IS data going back to the first subsample in 1998. Also included were the innovative modules from 2011, 2012, 2013, 2014, and 2015, which are released after a 12-month embargo during which the data are available exclusively to the researcher who submitted the questions. The data from the 2016 SOEP-IS modules will be under embargo until April 2019 and not available to users until then.

### Innovative Modules Surveyed in 2011

- Internalized Gender Stereotypes Vary Across Socioeconomic Indicators (Dietrich, Eagly, Garcia-Retamero, Holst, Kröger, Ortner, Schnabel)
- Justice Sensitivity (Liebig)
- Pension Claims (Grabka)

### Innovative Modules Surveyed in 2012

- Adaptive Test of Environmental Behavior Scale (Otto & Kaiser)
- Control Strivings (Gerstorf & Heckhausen)
- Day Reconstruction Method (DRM; Lucas & Donnellan)
- The Big Two Psychological Content Dimensions: Agency and Communion (Gebauer, Asendorpf & Bruder)
- Implicit Association Test of Self-Esteem (Gebauer, Asendorpf & Bruder)
- Dementia Worry (Kessler)

Table 31

### The SOEP Innovation Sample (SOEP-IS)

| Sample/Survey Year | 1998–2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Sample E (IE)** (started in 1998 with 373 households and 963 individuals) | 373 (963) in the SOEP | 447 (934) in the SOEP | 453 (936) in the SOEP | 464 (944) in the SOEP | 339 (649) in the SOEP-IS | 310 (603) in the SOEP-IS | 298 (570) in the SOEP-IS | 282 (540) in the SOEP-IS | 266 (506) in the SOEP-IS | 250 (460) in the SOEP-IS |
| **Sample I (I1)** (started in 2009 with 1,495 households and 3,052 individuals) | | 1495 (3,052) in the SOEP | 1175 (2,450) in the SOEP | 1040 (2,113) in the SOEP-IS | 928 (1,845) in the SOEP-IS | 846 (1,740) in the SOEP-IS | 798 (1,562) in the SOEP-IS | 741 (4,141) in the SOEP-IS | 721 (1,380) in the SOEP-IS | 688 (1,287) in the SOEP-IS |
| **Supplementary sample 2012 (I2)** (started in 2012 with 1,010 households and 2,005 individuals) | | | | | 1,010 (2,035) | 833 (1,698) | 772 (1,550) | 710 (1,399) | 669 (1,313) | 616 (1,185) in the SOEP-IS |
| **Supplementary sample 2013 (I3)** (started in 2013 with 1,166 households and 2,256 individuals) | | | | | | 1,166 (2,256) | 929 (1,788) | 840 (1,617) | 770 (1,458) | 717 (1,326) in the SOEP-IS |
| **Supplementary sample 2014 (I4)** (started in 2014 with 924 households and 1,667 individuals) | | | | | | | 924 (1,667) | 672 (1,226) | 623 (1,123) | 566 (971) in the SOEP-IS |
| **Supplementary sample 2016 (I5)** (started in 2016 with 1,057 households and 1,935 individuals) | | | | | | | | | 1,057 (1,935) | 746 (1,325) in the SOEP-IS |
| **Households total (individuals total)** | 373 (963) | 1,942 (3,986) | 1,628 (3,386) | 1,504 (3,057) | 2,277 (4,529) | 3,173 (6,297) | 3,721 (7,137) | 3,245 (6,196) | 4,106 (7,715) | 3,583 (6,594) |

- GeNECA (Just Sustainable Development Based on the Capability Approach; Gutwald, Krause, Leßmann, Masson, Mock, Omann, Rauschmayer, Volkert)
- Anxiety & Depression (Brähler & Zenger)

## Innovative Modules Surveyed in 2013

- Conspiracy Mentality (Haffke)
- Day Reconstruction Method (DRM; Lucas & Donnellan)
- Job Preferences and Willingness to Accept Job Offer (Auspurg & Hinz)
- Job Task Survey (Görlich)
- Regional Identification (Neyer, Zimmermann, & Schubach)
- Narcissistic Admiration and Rivalry Questionnaire (NARQ-S) (Küffner, Hutteman, & Back)
- Sleep Characteristics (Stang & Zinkhan)
- Socio-Economic Effects of Physical Activity (Lechner & Pawlowski)

## Innovative Modules Surveyed in 2014

- Cross-Cultural Study of Happiness (Uchida & Trommsdorff)
- Day Reconstruction Method (DRM; Lucas & Donnellan)
- Determinants of Attitudes to Income Redistribution (Poutvaara, Kauppinen, & Fong)
- Determinants of Not Wanting to Know (Hertwig)Expected Financial Market Earnings (Huck & Weizsäcker)
- Comparing Measures of Experimential and Evaluative Well-Being (ESM; Lucas & Donnellan)
- Computer-Assisted Measurement and Coding of Educational Qualifications in Surveys (CAMCES) (Herzing & Schneider)
- Flourishing Scale (Mangelsdorf & Schwarzer)
- Inattentional Blindness (Conley, Chabris, & Simons)
- Decisions from Description and Experience (Mata, Richter, Josef, Frey, & Hertwig)

- Justice Sensitivity (Baumert, Schlösser, Beierlein, Liebig, Rammstedt, & Schmitt)
- Lottery Play: Expenditure, Frequency, and Explanatory Variables (Beckert & Lutter + Oswald)
- Future Life Events (Luhmann & Zimmermann)
- Self-Evaluation and Overconfidence in Different Life Domains (Ziebarth, Arni, & Goette
- Separating Systematic Measurement Error Components Using MTMM (Cernat & Obersky)
- Confusion, Hubbub, and Order Scale (CHAOS) (Rauch)

## Innovative Modules in 2015

- Attitude Inferences and Interviewer Effects (Kühne)Comparing Measures of Experimential and Evaluative Well-Being (Lucas & Donnellan)
- Couples' Prediction Accuracy for Food Preferences (Scheibehenne)
- Diversity of Living-Apart-Together-Couples (Schmiade)
- Emotion Regulation (Romppel & Schulz)
- Epigenetic Markers of Stress (Helms & Weierstall)
- Fiscal Crisis in the EU and European Solidarity (Lengfeld)
- Future Life Events (Luhmann & Zimmermann)
- Grit and Entrepreneurship (Dupuy & Kritikos)
- Happiness Analyser Smartphone Application (Ludwigs, Lucas, & Veenhoven)
- Impostor Phenomenon and Career Development (Neureiter)
- Narcissistic Admiration and Rivalry Questionnaire (NARQ-S) (Küffner, Hutteman, & Back)
- Ostracism Short Scale (Rudert & Greifeneder)
- Preference for Leisure (Borghans & Collewet)
- Private or Public Health Care: Evaluation, Attitudes, and Social Solidarity (Immergut, Burlacu, Ainsaar, & Oskarson)
- Self-Regulated Personality Development (Specht & Hennecke)
- Separating Systematic Measurement Error Components Using MTMM (Cernat & Obersky)
- Sickness Presenteeism (Steidelmüller & Breitsohl)
- Smartphone Usage (Wrzus)
- Socio-Economic Effects of Physical Activity (Lechner & Pawlowski)

## Innovative Modules in 2016

- Adaptation in Very Old Age (Gerstorf, Hoppmann & Ram)
- Adaptation to Major Life Events (Brose)
- Ageing in a Changing Society (Pavlova, Rothermund & Silbereisen)
- Collective vs. Individual Risk Attitudes (Gorelkina)
- Fiscal Crisis in the EU and European Solidarity (Lengfeld)

- Happiness Analyzer Smartphone Application (Ludwigs, Lucas, & Veenhoven)
- Informal Care Outside the Household (Ehrlich & Kelle)
- Internet Based Psychotherapy (Apolinário-Hagen)
- Language Skills, Income and Employment (Gazzola, Templin & Wickström)
- Perceived Discrimination (Schlenzka & Stocker)
- Personal and Economic Relations (Hommelhoff)
- Physical Attractiveness (Schunk)
- Representations of Scientific Information (Brandt, Kimmig, Cress, Kimmerle & Hofer)
- Resilient Behavior in the Workplace (Soucek)
- Separating Systematic Measurement Error Components Using MTMM (Cernat & Obersky)
- Status Confidence & Anxiety (Delhey, Schneikert & Steckermeier)
- Subjective Social Status (Süssenbach & Euteneuer)

### Innovative Modules in 2017

- Assessment of Contextualized Emotions (Hess & Gerstorf)
- Determinants of Ambiguity Aversion (Leuker, Pleskac & Hertwig)
- Future Time Perspective (Korff)
- Inequality and Other-Regarding Preferences and Risk Taking (Fehr)
- Inequality Attitudes (Mau, Gülzau & Lux)
- Justice Sensitivity (Baumert, Schlösser, Beierlein, Liebig, Rammstedt, & Schmitt)
- Multilingualism, Language Attitudes and Their Socioeconomic Reflection (Plewnia & Adler)
- Private or Public Health Care: Evaluation, Attitudes, and Social Solidarity (Immergut, Burlacu, Ainsaar, & Oskarson)
- Representations of Scientific Information (Brandt, Kimmig, Cress, Kimmerle & Hofer)
- Self-Control (Cobb-Clark & Schildberg-Hörisch)
- Socio-Economic Effects of Physical Activity (Lechner & Pawlowski)
- Temporal Self-Continuity (Löckenhoff)
- Working Time Preferences (Matiaske & Beermann)

## Data Collection in 2017

Thirty-two proposals were submitted for the 2017 wave of SOEP-IS data collection. We received eleven proposals from the field of economics, eight from the field of sociology, ten from psychology, and three from medical and health sciences. Thirteen of these were accepted. Due to the limited testing time available, the remaining 19 proposals had to be rejected. We also replicated innovative modules in 2017: the module on the representations of scientific information from 2016, the module on private or public health care from 2015, the module on justice sensitivity from 2014 as well as the module on the socio-economic effects of physical activity from 2013.

# Fieldwork Report 2017 from Kantar Public

By Bettina Zweck

## Overview

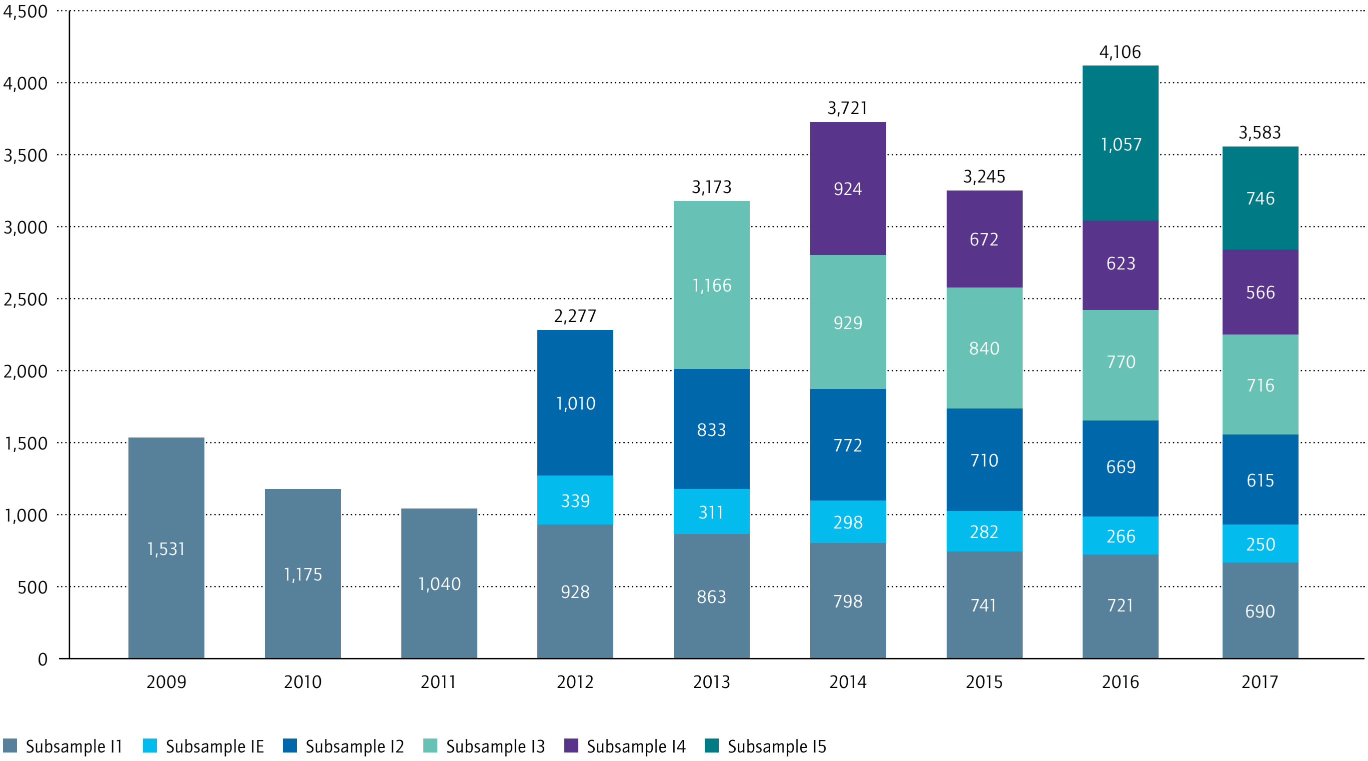
The SOEP-IS (SOEP Innovation Sample) is a longitudinal household survey with a special design that allows for conducting highly innovative and ambitious research projects across many disciplines. Important features of the sample design and core fieldwork procedures are consistent with the SOEP-Core samples. But, in adherence to the original intention underlying the establishment of the SOEP-IS in 2009, it also offers a unique framework that facilitates the piloting and testing of innovative survey modules. As the new SOEP innovation survey drew increasing interest from the scientific community and research institutions, a number of new questionnaire modules found their way into the survey until it was officially institutionalized in 2011. Modules incorporated into the SOEP-IS deal with issues of scientific interest that are too specific for inclusion in SOEP-Core surveys, such as in-depth questions about personal opinions and attitudes, questions about changes following major life course events, and even short behavioral experiments. The Innovation Sample has been expanded regularly with refresher samples in 2012 (Subsample I2), 2013 (I3), 2014 (I4) and most recently in 2016, when Subsample I5 was established. Figure 2 provides more details about the development of sample size since 2009.

## Questionnaire

The recurrent framework for SOEP-IS data collection consists of an integrated core questionnaire based on elements from the SOEP-Core household and individual questionnaires. Further, it includes core questions from the biography questionnaire for new panel members and three mother-child modules. In contrast to the other SOEP samples with their multiple separate questionnaires, the SOEP-IS has a single questionnaire for each respondent with an integrated CAPI script. In order to provide a smooth and efficient interview situation, the script automatically routes to all the question modules the subject is intended to answer in the present survey.

Figure 2

Development of the SOEP-IS Subsample since 2009




The SOEP-IS core questionnaire that was used in 2017 included the following modules:

- Core elements from the SOEP-CORE household questionnaire to be completed by one member of the household (preferably the one who is best informed about household members and overall matters)
- Core elements from the SOEP-CORE individual questionnaire to be completed by each household member aged 17 and over.
- Core elements from the SOEP-Core Biography questionnaire for new panel members (new respondents as well as young people born in 2000 who participated in the panel for the first time as an adult)
- Three mother-child modules to be completed by:
  - Mothers of children up to 23 months old (mother-child module A)
  - Mothers of children between 24 and 47 months old (mother-child module B)
  - Mothers of children older than 48 months old (mother-child module C)

**Table 32** shows the gross samples and net volumes of the different questionnaire modules.

The rationale behind the integration of household and individual questionnaires into one shorter interview is to allow more time for innovative modules and tests. Thus on top of the core elements, 25 different innovative modules were integrated into the SOEP-IS questionnaire in 2017. This high number of different innovative modules results from the fact that the second wave of the subsample I5 conducted in 2017 includes different modules than the modules of the IE/I1–I4 subsamples. To be able to consider as many different research interests as possible, given the limited interview time, the members of the different subsamples received different sets of innovative modules. In **Table 33** an overview of the distribution of the innovation modules over the subsamples IE/I1–I4 is presented whereas the modules subsample I5 has received are shown in **Table 34**.

Table 32

## Questionnaires: Completion and response rates SOEP-IS 2017

| | Gross sample/ reference value[1] | Interviews | Response/response rate |
|---|---|---|---|
| Individual questionnaire | 6,268 | 5,463 | 87.2% |
| Mother and child module: children up to the age of 23 months | 139 | 139 | 100.0% |
| Mother and child module: children between the ages of 24 and 47 months | 105 | 105 | 100.0% |
| Mother and child module: children older than 48 months | 899 | 899 | 100.0% |

1 The numbers refer to the respective target population in participating households. For the child-related questionnaires, the reference value is the number of children in the respective age group living in participating households. Therefore the response rate for these questionnaires indicates the number of children for whom a questionnaire has been completed by one parent (in most cases by the mother).

Table 33

## Distribution of the innovative modules of subsamples IE/I1–I4

| | IE /I1 | I2 | I3 | I4 |
|---|---|---|---|---|
| Income Distribution | ✓ | | | |
| Financial Decisions | | | ✓ | |
| Vase to Happiness | | | ✓ | ✓ |
| Foxes | ✓ | ✓ | | |
| Emotion Recognition | | ✓ | | |
| Language I | ✓ | ✓ | ✓ | ✓ |
| Past and Future Self | | ✓ | | ✓ |
| Sports | | ✓ | ✓ | |
| Justice | ✓ | | | |
| Healthcare Politics | ✓ | | | |
| Expectations about the Future | | ✓ | | ✓ |
| Attitudes towards Inequality | | ✓ | | ✓ |
| Working Time Preferences | | ✓ | | ✓ |
| Self-Control | | ✓ | ✓ | |
| Basic Income | ✓ | ✓ | ✓ | ✓ |
| Risk Disposition | | | ✓ | ✓ |

Table 34

## Distribution of the innovative modules of subsample I5

| | I5 |
|---|---|
| Immovables | ✓ |
| Full Time/Part Time | ✓ |
| Expectations about the Financial Market | ✓ |
| Language II | ✓ |
| Numeracy II | ✓ |
| Risk | ✓ |
| Persistence | ✓ |
| Self-Description | ✓ |
| Finance/Credit | ✓ |

In the following section, these modules are described in varying detail. First, we will look at three modules where the respondents were able to win real money. In addition to this "winning" focus, language was one of the key topics in the survey: Subsamples IE/I1-I4 and subsample I5 were asked about different language aspects, followed by an additional online survey with language as a central topic. This additional online survey is described in more detail in a section at the end of the chapter.
The other modules, including modules that are replicas of previous years, such as the "foxes" module, are presented at a glance.

## Modules with Incentives

As mentioned earlier, the 2017 Innovation Survey was characterized by the high number of modules in which respondents were able to win money. These modules can have a unique influence on respondents' actions, as the possible outcomes—namely money—make reference to everyday life. Due to the large amount of money that the respondents were able to win in total, interviewers paid out profits only up to 30 euros. If a respondent won more than 30 euros, he or she received a check from Kantar Public by mail.

One "incentive module" is the module Vase to Happiness. First, respondents had to decide whether they were willing to take part in the game and draw an imaginary marble with an initial stake of 2 euros. If the imaginary marble was red, the respondent could win up to 125 euros. In sum, there were 4 marble games which differed with regard to the distributions of red and black marbles which were known for two marble games and unknown for the other two marble games. A computer algorithm decided at the end whether the respondent had won and if so, which one of the four marble games would be paid out. In total, ten percent of all respondents were chosen as "winners". But there was a limitation: the winners only received the money if they had decided to participate in the marble game for a stake of an imaginary 2 euros. If a person had decided not to play and therefore had not invested these 2 euros, she or he did not win anything, even if she or he was chosen as a "winner" by the computer algorithm. The researchers behind this module are interested in determinants of "ambiguity aversion". This term describes the phenomenon that most people prefer the choice option in which they know the probabilities. As numeracy is discussed in the literature as being correlated with ambiguity aversion, numeracy was assessed in this module as well.

Another incentive module is called Income Distribution. This module consists of several parts that were positioned in different places throughout the questionnaire. The first part evaluated the opinions of respondents regarding important aspects that contribute to success. In addition, respondents were asked to estimate their gross household income in comparison to other households in Germany and worldwide. The second part provided respondents with information about the actual financial position of their households. If the respondent's previous estimation was correct, then he or she received up to 40 euros after completing this module. According to the estimate, respondents were asked to answer a general question about the distribution and how the respondents themselves would distribute 50 euros. They had the choice to keep (a part of) the money, to donate it to a household in Kenya/Uganda or another household in the SOEP Innovation Sample. The decision of 15 percent of the respondents was taken into account and the chosen action (donating/keeping the money themselves) was put into practice.

The researchers behind the third incentive module, Financial Decision, are interested in risk tolerance. To measure this, respondents had to choose one out of six boxes. The boxes differed in the amount of money to be won, combined with different probabilities of winning. The lottery was self-administrated by the respondent without the interviewer being aware of the choice. The potential winning range reached from 0 to 200 euros. In this module, 10 percent of all respondents received their actual winnings. Besides the lottery game, respondents had to answer questions concerning their assets, their opinions on taxes, and relevant aspects of success (happiness vs. personal effort).

The decision regarding gain/loss, which was made by a computer algorithm, came at the end of the respective modules in order not to influence response behavior.

### Language as Topic Within and Beyond the SOEP Innovation Study

As previously mentioned, language aspects were assessed in all subsamples. Respondents with Internet access were invited to participate in an online survey that was conducted after the regular SOEP Innovation Study. As this is the first SOEP Innovation study conducted in CAWI mode, this is of special interest and is reported on in a separate section at the end of the SOEP Innovation Study chapter.

The language modules which are part of the SOEP Innovation Study are called "Language I" (subsample IE/I1–I4) and "Language II" (subsample I5).

- In the module Language I (subsample IE/I1–I4), respondents were asked questions about how different languages sound and whether respondents consider them appealing or unappealing. In addition, questions on German dialects were asked, such as which dialect they speak, appealing/unappealing dialects, and whether respondents' parents speak or spoke a dialect.

- One of the main topics of interest of the module Language II (subsample I5) is the assessment of the respondents' language by the interviewer. The interviewer estimated the "purity" of the respondents' language—meaning that the interviewer evaluated whether or not the respondent's language use shows evidence of a regional dialects. One group of interviewers did so at the beginning of the interview, and the other group at the end of the personal questionnaire.

After these two language modules, respondents with Internet access were informed about an additional online survey and the form in which they were asked to give consent to participate in it. In addition, respondents' e-mail addresses were collected in order to invite those interested to participate in the online survey. See the "Additional online survey" section for more information.

## Overview of the Modules without Incentives and Language Aspects: IE/I1–I4 and I5

In the following section, modules without incentives and language aspects are divided into the modules of the subsamples IE/I1–I4 and the modules of subsample I5. Furthermore, the modules described in the following sections are differentiated into the so-called repetition modules (modules which had been part of previous surveys of the SOEP Innovation Study), and new modules.

### Modules of the Subsamples IE/I1-I4 at a Glance

In subsample IE/I1–I4, the following modules are repetition modules:

- The module "Foxes" was part of the SOEP Innovation Study in 2016. The scientists who created the module are interested in the mechanisms of knowledge transfer and how factual knowledge acquisition is influenced by various ways of presenting scientific facts. The main part of the module (subjects included: knowledge about and attitude towards foxes) did not differ from the one in 2016. By contrast, in 2017 respondents were divided into nine groups before fieldwork started: eight groups had received a flyer with different information about foxes within the invitation letter to the SOEP Innovation Study (treatment groups). The ninth group did not receive any flyer (control group). At the beginning of the module Foxes, several control questions were asked. These dealt with aspects like how well the information on the flyers was read (relevant for the eight treatment groups) and to what extent the respondents were informed about foxes after the last survey had ended. All groups were asked these information behavior questions.
- The repetition module Sports, which was surveyed previously in 2013 and 2015, collects information about general physical activities and sports in the narrower sense. Within this module, questions about the kind of sports, frequencies of sports and participation in sports competitions were asked. This set of questions was included in the questionnaire to be able to examine determinants and consequences of physical activity in various areas of life. Particularly the following contexts are of interest to the researchers who initiated this module: physical activity and its effects on health, the causal direction of the relationship between physical activity and educational achievement, and physical activity and its influence on personal labor market opportunities.
- Justice: This repetition module gathers information regarding reactions to disadvantages. It is distinguished to the one hand between reactions to own disadvantages and reactions of the respondents if others experience disadvantages. To the other hand, the respondents should state their feelings in situations that are in the respondents' favor and to the detriment of other. Additionally, feelings in situations in which the respondents exploit others are of interest. Thus, the scientists are interested in the sensitivity of the respondents as victim, observer, beneficiary and perpetrator.

In summary, the subsamples IE/I1 – I4 received nine new modules:

- Researchers working with the new module Emotion Recognition are interested in emotion decoding accuracy. The module is completely self-administrated by respondents. During this module, respondents saw twelve pictures of one or three people. For each picture, they had to rate as spontaneously as possible the intensity of the emotions of the person shown in the photos. If three people were displayed, respondents should assess the emotion of the person in the middle. Assessed emotions were sadness, anger, disgust and fear. Respondents were asked to rate emotions on a six-point scale ranging from "not at all" to "very strong".

- Respondents in the module Past and Future Self compared their present self with their past and future self. To assess the comparison, respondents were told to think about traits, attitudes, values, and life goals. The scientists behind this module are interested in self-continuity, which is interesting for a variety of research areas.

- In the module Healthcare Politics, the topic of interest is satisfaction with the German welfare and health care system. It also includes questions on respondents' opinions about the state's responsibility for offering sufficient health care.

- Researchers working on the module Expectations about the Future are interested in subjective perceptions about individuals' future. The module captures individuals' subjectively experienced idea of the amount of time left in their lives and the influence of this perspective on their present behavior. Questions about perceived opportunities and the remaining lifetime are asked in this module.

- The module Inequality Attitudes addresses attitudes toward socioeconomic inequalities, such as income differences as a consequence of migration, and attitudes towards issues of diversity and identity, such as same-sex marriage. The research topic of the module is of high current social and political relevance. While interest in economic inequalities has again taken a central place in political discussions, new inequalities are also on the rise. Little is known thus far, however, about the correlation between inequality-related attitudes and their determinants.

- Working time discrepancies can have detrimental effects on employee welfare. Therefore, the module Working Time Preferences asks questions about work values, working time, working time preferences, and workload/stress. While the first part addresses the importance of different job characteristics such as high income, the second and third deal with working time, both per week and on average, and with respondents' preferences to maintain, increase, or reduce their working hours. The last part of the module assesses the workload of the respondents and resulting stress, due, for example, to time pressure.

- Self-Control is a module in which the respondents judge their own self-control. There are three different parts of this module, whose questions can be found at different places in the questionnaire. The first part deals with aspects like resistance to temptation, bad habits, or laziness. The second part addresses self-discipline, and the third contains general questions about current weight, predicted weight next year, and ideal weight next year. The researchers behind this module are interested in self-control because it is fundamental for understanding human behavior.

- In the module Basic Income, respondents were asked what they would do if they received an unconditional basic income. Would they stop working or keep working, would they maintain, increase, or reduce their working hours, and would they be willing to participate in a field experiment similar to the current Finnish experiment? Within this field experiment, unemployed people receive 560 euros a month unconditionally.

- Risk Disposition: The main object of interest in this new module is the disposition toward risk-taking in life. Respondents were asked to rate their risk-taking propensity on an 11-point scale. After that, they were asked to specify the reasons for their personal risk evaluation. In addition, they were asked to report on experienced risky situations within the last 12 months and to name aspects that are important to them in personal life. Half of the respondents received this question at the beginning of the module, while the other half of the respondents were asked this question at the end of the module.

Subsample I5 has only one repetition module. This module, Risk, was already surveyed in 2016, when the respondents in I5 took part in the SOEP Innovation Study for the first time.

- The repetition module Risk addresses the issue of how willing a person is to take risks. A question on risk disposition is already included in the core questionnaire where respondents evaluate their risk-taking behavior on a scale. This module adds to the question by proposing different decision scenarios. In each scenario, respondents had to choose between the chances of winning 300 euros, with a 50 percent likelihood of winning, or receiving a smaller amount of money, with a 100 percent likelihood. The amount of "safe" money varied from question to question and depended on the answers given in the previous question. All in all, respondents were presented with five different risk scenarios. The results reveal the extent to which people are willing to take risks and at what point a person prefers a safe amount of money over the risk of ending up with no money at all.

Some of the other modules in I5 are similar to the ones in I5 in 2016, but also differ in some respects and are thus referred to in the following as "new modules":

- The module Real Estate ascertained whether the respondent is renting on a temporary or permanent rental contract. Furthermore, the respondents had to estimate how rent and property prices will develop over the next 2, 10, and 30 years. Before answering the questions, half of the respondents were shown the property price development of residential properties in 14 different countries.

- Full time/Part time is a module that deals with respondents' future wage expectations if they work full-time or part-time, and how their wages would change if their working time changes. Beforehand, the average development of the gross wages of 25 randomly chosen respondents to the SOEP-Core survey was shown to the SOEP-IS respondents.

- Expectations about the financial market: At the beginning of this module, respondents were informed about the profit or loss of the DAX in two randomly chosen years between 1951 and 2016 based on real numbers (the years were chosen by a computer algorithm). Afterwards, half of the respondents had to choose whether to invest 50,000 euros in a federal bond or in an investment at the DAX. This task was self-administered. Subsequently, all respondents had to answer opinion questions about the current and future development of the DAX in 1, 2, 10, and 30 years.

- In the module Numeracy II (in 2016 there was a similar module called Numeracy I), respondents were first asked to rate their math skills and knowledge about nature in comparison to others. Afterwards, they were asked to complete different tasks as a test of their self-evaluations, for example, by continuing a numerical series or by naming as many animal species as possible within 20 seconds.

- Persistence is a new module resulting from scientific interest in issues like purposefulness, diligence, and discouragement from setbacks.

- The new module Self-Description assesses the willingness to give up something positive to achieve a larger benefit in the future, as well as the willingness to reciprocate a favor from someone else. Furthermore, the willingness to punish someone in reaction to unfair treatment, even if this would have negative consequences, and the willingness to support a good cause without receiving any personal benefit were surveyed.

- The module Finances/Credits consists of different questions on financial credits, leasing, and the possibility to overdraw accounts.

## Fieldwork Results

Data collection for the main fieldwork wave of the SOEP-IS usually lasts from September until the end of December or the beginning of January and is then followed by an additional fieldwork period at the beginning of the next year. Households are assigned to the second fieldwork stage if they could not be contacted successfully in the main fieldwork wave, if they were unable or unwilling to participate (for example, due to time constraints), or if interviews were missing for individual household members. As is indicated by the figures in **Table 35**, fieldwork for 88.2 percent of the households that participated in the study was completed by the end of December 2017. In the remaining households, some or all interviews were conducted by the beginning of March 2018.

**Table 36** presents the composition of the gross and net sample and response rates at the household level. The total gross sample consisted of 4,362 households. This includes previous wave respondents as well as temporary drop-outs from the previous wave and new households. Overall, 3,583 households took part in the SOEP-IS in 2017, which means that at least one person in the household answered the individual and the household-related questions.

Combining all subsamples, 4,107 (94.2 percent) households in the gross sample were respondents in the previous wave. There were 159 households (3.6 percent) that were temporary drop-outs from the previous wave. The last group, "new households", emerged during the fieldwork period: split-off households are created, for example, when children move out of their parents' home and establish new households. In 2017, 96 new households were integrated into the gross sample (2.2 percent).

The fieldwork results of longitudinal samples can be measured using two basic parameters. The first is panel stability, which is the decisive indicator of a household panel survey's successful development from a long-term perspective. Since panel stability is calculated as the number of participating households in the current wave divided by the corresponding number from the previous wave, panel mortality and panel growth (split-off households) or "regrowth" (dropouts from the previous wave who "rejoined" the sample) are taken into account. The second parameter for measuring fieldwork results is the longitudinal response rate. Response rates indicate the ratio between the number of interviews—in this case household interviews—and the number of units in the gross sample.

In **Table 36**, the overall panel stability and response rates for all relevant subsamples are listed.

The overall panel stability of all samples has decreased since the last wave (2017: 87.3 percent; 2016: 94.0 percent). This is mainly caused by the fact that subsample I5, which is on its second wave, has an expectedly lower panel stability than the "older" samples. The panel stability of I5 is 70.6 percent in 2017, which is substantially lower than those of the other subsamples in 2017, which have panel stabilities around 90 percent. As in 2016, the highest panel stability was achieved by the oldest subsample IE/I1, which was in its sixth panel wave (2017: 95.2 percent). Compared to 2016, panel stability in 2017 decreased slightly (2016: 96.5 percent). The panel stability of subsample I2 was lower in 2017 than in 2016 as well (2017: 91.9 percent; 2016: 94.2 percent). The same observation holds for subsample I4. Its panel stability declined slightly from 92.7 percent in 2016 to 90.9 percent in 2017. By contrast, the panel stability of subsample I3 has increased slightly from 91.7 percent in 2016 to 93.0 percent in 2017.

Table 35

**Fieldwork progress by month: Processing of household interviews[1]**

| | 2016 | | 2017 | |
|---|---|---|---|---|
| | Gross sample | Net sample (in %) | Gross sample | Net sample (in %) |
| September[2] | 23.8 | 25.1 | 20.3 | 21.9 |
| October | 56.3 | 60.5 | 52.5 | 57.9 |
| November | 76.2 | 81.5 | 72.3 | 79.4 |
| December | 84.7 | 90.0 | 81.0 | 88.2 |
| January | 92.6 | 96.2 | 89.7 | 94.9 |
| February | 100.0 | 100.0 | 98.7 | 99.6 |
| March | | | 100.0 | 100.0 |

1 Cumulative percentages based on the month of the last household contact.
2 Including households who refused to take part in the survey prior to start of fieldwork.

Table 36

## Composition of gross sample and response rates

| | Total | | Sample $I_{1/E}$ | | Sample $I_2$ | | Sample $I_3$ | | Sample $I_4$ | | Sample $I_5$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Num. | In % | Num. | In % | Num. | In % | Num. | In % | Num. | In % | Num. | In % |
| **(1) Gross sample composition by type of HH** | 4,362 | 100.0 | 1,058 | 100.0 | 714 | 100.0 | 838 | 100.0 | 673 | 100.0 | 1,079 | 100.0 |
| Respondents in previous wave | 4,107 | 94.2 | 988 | 93.4 | 669 | 93.7 | 770 | 91.9 | 623 | 92.6 | 1,057 | 98.0 |
| Dropouts in previous wave | 159 | 3.6 | 39 | 3.7 | 34 | 4.8 | 52 | 6.2 | 34 | 5.1 | 0 | 0.0 |
| New households | 96 | 2.2 | 31 | 2.9 | 11 | 1.5 | 16 | 1.9 | 16 | 2.4 | 22 | 2.0 |
| **(2) Net sample composition by type of HH** | 3,583 | 100.0 | 940 | 100.0 | 615 | 100.0 | 716 | 100.0 | 566 | 100.0 | 746 | 100.0 |
| Respondents in previous wave | 3,466 | 96.7 | 904 | 96.2 | 594 | 96.6 | 687 | 95.9 | 546 | 96.5 | 735 | 98.5 |
| Dropouts in previous wave | 61 | 1.7 | 17 | 1.8 | 13 | 2.1 | 19 | 2.7 | 12 | 2.1 | 0 | 0.0 |
| New households | 56 | 1.6 | 19 | 2.0 | 8 | 1.3 | 10 | 1.4 | 8 | 1.4 | 11 | 1.5 |
| **(3) Response rates by type of HH**[1] | | | | | | | | | | | | |
| Respondents in previous wave | 3,466 | 84.4 | 904 | 91.5 | 594 | 88.8 | 687 | 89.2 | 546 | 87.6 | 735 | 69.5 |
| Dropouts in previous wave | 61 | 38.4 | 17 | 43.6 | 13 | 38.2 | 19 | 36.5 | 12 | 35.3 | 0 | 0.0 |
| New households | 56 | 58.3 | 19 | 61.3 | 8 | 72.7 | 10 | 62.5 | 8 | 50.0 | 11 | 50.0 |
| **(4) Panel stability**[2] | | 87.3 | | 95.2 | | 91.9 | | 93.0 | | 90.9 | | 70.6 |
| **(5) Partial unit-non-response**[3] | | 31.5 | | 25.9 | | 32.5 | | 27.5 | | 31.4 | | 41.5 |

1 Adjusted by deceased persons and expatriates.
2 Number of participating households divided by net sample from previous wave.
3 Share of households (number of household members >1) with at least one missing individual questionnaire.

A similar pattern can be observed in response rates. Due to the challenging process of converting subsample I5 into a longitudinal sample, the response rate is lowest for this subsample (relative to respondents in previous waves: 69.5 percent) and highest for the oldest subsample IE/I1 (relative to respondents in previous waves: 91.5 percent). Due to the comparatively low response rate of I5, the overall response rate for respondents in previous waves decreased from 89.9 percent (2016) to 84.4 percent (2017).
In household surveys, a commonly used indicator to measure the success of fieldwork processes on an individual level is, as noted above, partial unit non-response (PUNR). As in the standard SOEP-Survey, the Innovation Study attempts to target every adult household member. The share of multi-person households in which at least one person did not complete the individual interview increased by nearly 5 percent to 31.5 percent in 2017. The reason for this is similar to the reason for decreasing panel stability: As subsample I5 is a relatively new subsample not used to the annual survey routines, it is much more difficult to conduct interviews, and to obtain all interviews for each household. Therefore, the PUNR is highest for the subsample I5, at 41.5%, whereas the lowest PUNR can be observed in subsample IE/I1, which has the longest history in the SOEP Innovation Sample.

## Additional Online Survey

As mentioned above, an online survey was conducted in 2017/2018 in addition to the language modules of the SOEP Innovation Study. With this complementary online module, researchers attempted to find out more about use of the German language, e.g., attitudes towards different dialects.

### Procedure

The online survey was announced during the interview of the SOEP Innovation Study. After the language modules (language I, language II), respondents were informed about the additional online survey, which also deals with language. First, respondents were asked if they had Internet access, a requirement for the participation in the online survey. Then, every respondent with Internet access was given more detailed information about the survey, including the survey length of 15 minutes and the incentives of €5 that respondents were allowed to either keep or donate. Moreover, an information sheet about the online survey was given to respondents by the interviewers. Those who were interested in participating received a consent form. Afterwards, the e-mail addresses were collected from respondents who signed the consent form. After this procedure, the “normal” SOEP Innovation Sample interview continued.

Overall, four waves were conducted. Every respondent who provided his or her e-mail address was invited by e-mail to take part in the online survey. In the first wave, respondents who participated in the SOEP Innovation Sample by October 15 were included, while those who participated by November 26 were included in the second wave, those who participated by January 7 in the third wave, and those who participated by March 4 in the fourth wave. Field time for the online survey was thus longer, lasting from October until the end of March, than in the SOEP Innovation Study.

The reason for conducting four waves—in contrast to one wave at the end of fieldwork for the SOEP Innovation Study, in which all respondents could have been contacted at the same time, was to gain a high response rate. Because respondents were contacted shortly after the announcement of the online survey, we assumed that we could achieve a higher response rate because the online survey is still more “present” in their minds. Furthermore, at least one reminder was sent to respondents who still had not taken part in the survey after a certain period of time in order to maximize response rates.

### Questionnaire

After a short introduction to the survey and two demographic questions (sex and date of birth), the first content-related question dealt with general interest in questions on language. After that, the questionnaire was divided into several splits that differed in regard to the order of items and wording. Issues addressed included attitudes towards and the assessment of different German dialects and of the German language in general. Moreover, respondents were asked about their attitudes towards people with different native languages and about their behavior in relation to various aspects of language. The use of male and female pronouns in German was one aspect of this. The last topic in the questionnaire asked respondents to assess different sentences using colloquial words and phrases. These sentences were presented in written form to half of the respondents. For the second half of the respondents, these sentences were presented in audio files (after respondents had successfully answered an audio control question to ensure that the user device played the audio files appropriately to the needs of the respondent).

### Preliminary Results

At the time of writing (March 15, 2018), fieldwork was still underway, so only preliminary results are reported in the tables. As shown in **Table 37**, 71.6% of the respondents of the SOEP Innovation Study had Internet access and were able to take part in the survey.

Up to March 15, 1,392 respondents had completed the survey. This means that more than one third of the persons with Internet access had participated. The two main reasons for not taking part were no interest and lack of time.

In the open answers, most respondents provided answers suggesting that they enjoyed the survey: they considered the language topic as interesting and important and found the questionnaire enjoyable and user-friendly. This finding appears in the dropout rate as well: With only 5 percent dropouts during the interview, this rate can be described as quite low. So far, nearly half of the respondents (47 percent) decided to donate their incentive of 5 euros whereas the second half (52 percent) chose to keep the money for themselves.

In the history of the SOEP Innovation Study, this online survey is the first survey in CAWI, as the regular survey is conducted in CAPI. Experiences so far are promising: considering individuals with Internet access, the response rate is high, suggesting general acceptance of this survey: a good sign regarding further possible online surveys in the context of the SOEP Innovation Study. Of course, here, efforts were undertaken to ensure that the topic of the survey is of interest and that the questionnaire has an appropriate length (approximately 15 minutes), with simple, easy-to-answer questions.

### Conclusion

In the history of the SOEP Innovation Study, this online survey is the first survey in CAWI, as the regular survey is conducted in CAPI. Experiences so far are promising: considering individuals with Internet access, the response rate is high, suggesting general acceptance of this survey: a good sign regarding further possible online surveys in the context of the SOEP Innovation Study. Of course, here, efforts were undertaken to ensure that the topic of the survey is of interest and that the questionnaire has an appropriate length (approximately 15 minutes), with simple, easy-to-answer questions.

Table 37

## Response rate additional online survey[1]

| | n | in % of gross sample | in % with Internet access |
|---|---|---|---|
| Gross sample | 5,471 | 100 | |
| Without Internet access | 1,528 | 27.9 | |
| **With Internet access** | **3,919** | **71.6** | **100** |
| **No interest in additional survey** | **1,535** | **28.1** | **39.2** |
| Not interested / unwilling to take part | 726 | 13.3 | 18.5 |
| Not enough time / too much effort | 479 | 8.8 | 12.2 |
| Currently no Internet access / other technical issues | 44 | 0.8 | 1.1 |
| No or too little experience with the Internet / device | 106 | 1.9 | 2.7 |
| Data protection / privacy | 11 | 0.2 | 0.3 |
| Issues of health / language difficulties / age | 70 | 1.3 | 1.8 |
| Other reasons | 99 | 1.8 | 2.5 |
| Initial agreement but consent form not signed | 15 | 0.3 | 0.4 |
| **Interest in additional survey** | **2,339** | **42.8** | **59.7** |
| Consent form signed and e-mail address provided | 2,316 | 42.3 | 59.1 |
| **Actual participation in the survey** | **1,392** | **25.4** | **35.5** |
| No answer | 45 | 0.8 | 1.1 |

1 Preliminary results (date of table generation: March 15)

# SOEP-Related Studies: Definition and Overview

The SOEP-Related Studies (SOEP-RS) started in 2010 and are planned in close cooperation with the SOEP team and structured in a similar way to the SOEP. This makes it possible to link the SOEP-RS data sets with the original SOEP questionnaire (SOEP-Core) and to analyze the data together or even integrate the RS-data later into SOEP-Core. Up to the present day, there are seven research projects in diverse disciplines among the SOEP-Related Studies, some of which have already been completed and integrated into SOEP-Core (BASE II, FiD), projects whose funding period has just ended, and (PIAAC-L) and projects in which research has just begun (BRISE).

## BASE II (Berlin Aging Study II)

The Berlin Aging Study II (BASE-II) is an extension and expansion of the Berlin Aging Study (BASE). This study, with more than 2,200 participants of different ages, aims to complement the analysis of cognitive development across the lifespan by including socio-economic and biological factors such as living conditions, health, and genetic preconditions. The study was funded by the Federal Ministry of Education and Research from 2009 up to December 2015, and the collaborating institutions are: The Geriatrics Research Group of the Charité, Max Planck Institute for Molecular Genetics, Max Planck Institute for Human Development, Karolinska Institute (Sweden), Freie Universität Berlin, University of Tübingen, as well as the SOEP. Subsequently, participants have been integrated into the annual SOEP survey and provide information about their life situations and living conditions. For more information, see: https://paneldata.org/soep-base

### Selected Publications:


- **Jung, Alissa, Dominik Spira, Elisabeth Steinhagen-Thiessen, Ilja Demuth, Kristina Norman.** 2017. Zinc deficiency is associated with depressive symptoms: Results from the Berlin Aging Study II. *The Journals of Gerontology: A, Biological Sciences and Medical Sciences 72, 1149–1154.* https://doi.org/10.1093/gerona/glw218
- **König, Maximilian et al.** 2017. Prevalence of impaired kidney function in the German elderly: Results from the Berlin Aging Study II (BASE-II). *Gerontology 63, 201–209.* https://doi.org/10.1159/000454831
- **Kühn, Simone, Sandra Düzel, Peter Eibich, Christian Krekel, Henry Wüstemann, Jens Kolbe, Johan Martensson, Jan Goebel, Jürgen Gallinat, Gert G. Wagner & Ulman Lindenberger.** 2017. In search of features that constitute an "enriched environment" in humans: Associations between geographical properties and brain structure. *Scientific Reports 7 (11920).* https://doi.org/10.1038/s41598-017-12046-7
- **Eibich, Peter, Christian Krekel, Ilja Demuth, & Gert G. Wagner.** 2016. Associations between neighbourhood characteristics, health and well-being vary over the life course. *Gerontology 62, 362–370.* https://doi.org/10.1159/000438700
- **Eibich, Peter, Nikolaus Buchmann, Martin Kroh, Gert G. Wagner, Elisabeth Steinhagen-Thiessen, Ilja Demuth, Kristina Norman.** 2016. Exercise at different ages and appendicular lean mass and strength in later life: Results from the Berlin Aging Study II. *The Journals of Gerontology: A, Biological Sciences and Medical Sciences 71, 515–520.* https://doi.org/10.1093/gerona/glv171

- **Köllinger, Philipp, Lars Bertram, and Gert G. Wagner.** 2016. Neue Gene für Wohlbefinden, Depression und neurotisches Verhalten gefunden. Keine Angst: den größten Anteil am Glück haben wir selbst in der Hand! (published in a slightly different version in *Frankfurter Allgemeine Zeitung, 05/03/2016, No. 103, p. 12*, title: "Bei manchen hat das heitere Gemüt schon Tradition")
- **TNS Infratest Sozialforschung.** 2015. SOEP-RS BASE II 2008–2014 – Erhebungsinstrumente Berliner Altersstudie II. SOEP Survey Papers 269: Series A. Berlin: DIW/SOEP.
- **Böckenhoff, Anke, Denise Saßenroth, Martin Kroh, Thomas Siedler, Peter Eibich, and Gert G. Wagner.** 2013. The Socio-Economic Module of the Berlin Aging Study II (SOEP-BASE): Description, Structure, and Questionnaire. SOEPpapers 568. Berlin: DIW Berlin.
- **Denise Saßenroth, Martin Kroh and Gert G. Wagner.** 2013. Selectivity Processes in and Weights for the Berlin Aging Study II (BASE-II), SOEPpapers 608. Berlin: DIW Berlin.


# BIP (Bonn Intervention Panel)

The Bonn Intervention Panel (BIP) investigates the development of personality and preferences of children starting at primary school age up to age 25 and beyond. At age 25, the personality is largely developed and critical transitions in life have been completed. The main focus of the BIP is on the impact of early childhood environments. The first part of the project, which was completed in the fall of 2011, focuses on measuring personality traits and preferences before the start of the intervention in all children (through choice experiments) and their mothers (or other main caregivers).
In the third wave (at the end of 2014), the interview program acted as a bridge between the first two waves and the "classic" SOEP-IS. Here, families answered the standard SOEP-IS questionnaire batteries, and the BIP child and the main caregiver (mother) answered additional batteries. The BIP child took part in incentivized experiments regarding time, risk, and social preferences and answered the student questionnaire from SOEP-Core. The mothers answered additional questions regarding personality and parenting style. Since 2014 the "BIP families" have been included in SOEP-IS and are interviewed on a yearly basis to gather information on the further development of the children.
http://www.diw.de/Bonn-Intervention-Panel

### Publications:


- **Deckers, Thomas, Armin Falk, Fabian Kosse & Hannah Schildberg-Hörisch.** 2015. How Does Socio-Economic Status Shape a Child's Personality? IZA Discussion Paper No. 8977.
- **Kosse, Fabian, Thomas Deckers, Pia Pinger, Hannah Schildberg-Horisch & Armin Falk.** 2018. The Formation of Prosociality: Causal Evidence on the Role of Social Environment. *Discussion Paper Series*—CRC TR 224, No. 013.


# BRISE

The Bremen initiative for reinforcing early childhood development (Bremer Initiative zur Stärkung frühkindlicher Entwicklung) is a long-term study that examines the systematic effects of early childhood care and education.
BRISE monitors around 1,000 mothers from Bremen who are expecting a child between spring 2017 and the end of 2018 and their families. One-quarter of the mothers will be selected to participate in an intervention linking early childhood and pre-school care and education programs that are integrated into everyday life and already generally available at daycare centers in Bremen into a "chain of measures" (*Maßnahmekette*). With funding from the Federal Ministry of Education and Research (BMBF) for an initial period of four years, the BRISE research project will examine the cumulative effects that a coordinated care and education program has on the cognitive, social, and emotional development of children. Program planning includes a second four-year funding phase. Alongside the SOEP at DIW Berlin, other consortium members include the Leibniz Institute for Science and Mathematics Education at the University of Kiel (IPN), the University of Bremen, the University of Bamberg, the Leibniz Institute for Educational Trajectories (LIfBi), Freie Universität Berlin, and Heidelberg University. For more details, visit the BRISE website:
http://www.brise-bremen.de

# FiD (Families in Germany)

The project Familien in Deutschland (Families in Germany) is a longitudinal panel study financed by the German Federal Ministry for Family Affairs, Senior Citizens, Women and Youth (BMFSFJ) and the German Federal Ministry of Finance (BMF). Its main purpose is to provide researchers with new and better data on specific groups in the German population: low-income families, families with more than two children, single-parent families, as well as families with young children.
The data are the backbone of the first large-scale evaluation of family policy measures in Germany carried out on behalf of the two ministries. The first wave of data collection started in 2010, and in 2014, FiD was fully integrated into SOEP-Core. The data were made available to the scientific community in April 2012. They can be obtained with a SOEP data distribution contract at the RDC SOEP. Even though the survey instruments have been adapted to the specific research focus of the evaluation, they are based on those used for the SOEP survey. Hence, combined usage of FiD and SOEP data is encouraged, especially because the majority of the known datasets are included in FiD, along with joint weighting factors to allow for analyses representative for the German population.
http://www.diw.de/soep-fid

### Selected Publications:

- **Fräßdorf, Mathis, et al.** 2016. SOEP FiD – 'Familien in Deutschland', Data Documentation Release FiDv4.0. SOEP Survey Papers 341: Series D—Variable Description and Coding. Berlin: DIW Berlin.
- **Lauber, Verena, Johanna Storck, C. Katharina Spieß, and Nittaya Fuchs.** 2014. Vereinbarkeit von Beruf und Familie von Paaren mit nicht schulpflichtigen Kindern – unter spezifischer Berücksichtigung der Erwerbskonstellation beider Partner: ausgewählte Ergebnisse auf der Basis der FiD-Daten ("Familien in Deutschland"). DIW Berlin: Politikberatung kompakt No. 88. Berlin: DIW Berlin.
- **Schröder, Mathis, Rainer Siegers, and C. Katharina Spieß.** 2013. Familien in Deutschland – FiD. *Schmollers Jahrbuch 133(4), 595-606.* https://doi.org/10.3790/schm.133.4.595

# PIAAC-L

The Programme for the International Assessment of Adult Competencies (PIAAC), carried out on behalf of the OECD, examines the basic skills that are necessary for adults to participate successfully in society and working life. Findings from the 2011/2012 wave of the PIAAC study were released in October 2013. Around 98% of the approximately 5,400 PIAAC survey respondents in Germany agreed to participate in further surveys. PIAAC-L is a cooperative project of GESIS, the National Educational Panel Survey (NEPS) at the Leibniz Institute for Educational Trajectories (LIfBi), and the Socio-Economic Panel (SOEP) at DIW Berlin, whose aim is to convert the PIAAC study into a longitudinal study with three waves. This will create one of the world's first internationally comparable longitudinal studies on competencies and their significance across the life course. The project is planned to consist of three survey waves (in 2014, 2015, 2016) with different focal points. This will involve use of the SOEP-Core survey instruments (both individual and household questionnaires), PIAAC instruments (competency measurement and background questionnaire), and competency tests from NEPS and SOEP. In the first survey wave, only the SOEP survey instruments will be used (household and individual questionnaires). The third wave will focus on measuring the competencies of all household members based on the short scales used in the SOEP in 2006 and 2012 on basic cognitive skills. The surveys are aimed at comparative methodological analysis of the competency indicators used in PIAAC, NEPS, and SOEP and innovative analysis of labor market, education, and socio-political issues. By the end of the project, findings will be released on the influence of competencies on educational and professional careers in the form of research publications, and the data from all waves will have been made available to the research community together with supporting documentation. According to current plans, the analyses of competency-related issues will make use of the longitudinal character of the new dataset and will be designed for comparison with the SOEP. It is also planned that as of 2018, participants from PIAAC-L who are willing to join a permanent, institutionalized longitudinal study will be transferred into either the recently launched SOEP Innovation Sample or the NEPS adult cohort.
Data from the first wave (surveyed 2014) of the study PIAAC-L have been updated on July 20, 2016 (doi: 10.4232/1.12576). The PIAAC-L data is available for scientific use can be linked with PIAAC 2012 data through the GESIS data archive.
http://www.diw.de/piaac-l_en and GESIS website.

### Selected Publications:

- **Bartsch, Simone, Katharina Poschmann, K., and Luise Burkhardt.** 2017. Weighting in PIAAC-L 2014. GESIS Papers 2017|06. GESIS: Köln.
- **Burkhardt, Luise and Simone Bartsch.** 2017. Weighting in PIAAC-L 2015. GESIS Papers 2017|30. Mannheim: Gesis – Leibniz-Institut für Sozialwissenschaften.
- **Rammstedt, Beatrice, et al. 2017. The PIAAC longitudinal study in Germany: rationale and design. Large-scale Assessments in Education 5(4).** (http://doi.org/10.1186/s40536-017-0040-z).

# SOEP-ECEC Quality (K$^2$ID-SOEP)

Are some groups of parents in Germany more likely to choose high-quality education and care institutions for their children than others, whether due to the information available or personal preferences? Are mothers whose children are in high-quality care more satisfied with their lives and more likely to be employed? These are some of the questions examined in the project K$^2$ID-SOEP. K$^2$ID is short for "Kinder und Kitas in Deutschland" and refers to the German name of the surveys carried out as part of a project entitled "Early childhood education and care quality in the Socio-Economic Panel" (K$^2$ID-SOEP). The project aims at investigating effects of the quality of early childhood education and care (ECEC) institutions on children's development and parents' employment and wellbeing. It also examines socioeconomic differences in parental choices of ECEC quality and whether they are linked to information asymmetries between mothers and ECEC providers. New data is collected on the quality of ECEC institutions, which are attended by children below school age who are sample members of a representative annual household panel study for Germany, the Socio-Economic Panel Study (SOEP).
The three-year project was launched in September 2013 with funding from the Jacobs Foundation. The project ended in April 2017. In March 2017 there was held an interdisciplinary conference on ECEC quality.
http://www.kid2id.de

### Publications:

- **Pia S. Schober, C. Katharina Spieß, Juliane F. Stahl, Gundula Zoch, and Georg F. Camehl.** 2017. The Early Childhood Education and Care Quality in the Socio-Economic Panel (SOEP-ECEC Quality) Study—K$^2$ID-SOEP Data. Data Documentation 91, Berlin: DIW Berlin.
- **Stahl, Juliane F. and Pia S. Schober.** 2017. Convergence or divergence? Educational discrepancies in work-care arrangements of mothers with young children in Germany. Work, Employment & Society (online first).
- **Schober, Pia S. and Juliane F. Stahl.** 2016. Expansion of Full-Day Childcare and Subjective Well-Being of Mothers: Interdependencies with Culture and Resources. *European Sociological Review 32(5), 593-606*. (http://doi.org/10.1093/esr/jcw006).
- **Stahl, Juliane F. and Pia S. Schober.** 2016. Ausbau der ganztägigen Kindertagesbetreuung kann zur Zufriedenheit von Müttern beitragen. DIW Wochenbericht 83(37), 840-847.

# The Linked Employer-Employee Survey (SOEP-LEE)

In 2012/13, a survey of German employers was conducted using face-to-face and paper-and-pencil interviews (N = 1,708; response rate = 30.1 %). Establishments were sampled based on address information provided by employed participants from the SOEP. The information obtained from SOEP-LEE and the SOEP survey can be linked in order to create a linked employer—employee data set concerning organizational context and individual outcomes (N = 1,834, mostly one employee per employer). The information collected in the LEE study reported enrich and enhance the existing individual-level and household-level SOEP data with supplemental data about the workplace and the employees' working conditions. In contrast to the SOEP core study, the SOEP-LEE data set contains more detailed and independent information concerning the work context. This way, the LEE data can be used to investigate the organizational impact on the genesis of social inequalities and the individual development of the life course. The SOEP-LEE study specifically sought to obtain information about inter-organizational as well as intra-organizational heterogeneities such as forms of

employment (part-time, full-time), temporary work, and similar atypical forms of employment, as well as about other factors, such as gender composition, the age of the employees, and the wage structure of the establishment. The overall aim was to investigate social inequalities and their relation to employers and organizations (e. g., to determine how organizational structures and practices influence social inequality at the individual level). The study involved cooperation between the SOEP department at DIW Berlin and Bielefeld University. The project ran from January 1, 2012, to December 31, 2013, and received funding from the Wissenschaftsgemeinschaft Leibniz e. V. (SAW 2012-SOEP-2).
http://www.diw.de/soep-lee

### Selected Publications:


- **Weinhardt, Michael, Alexia Meyermann, Stefan Liebig, Jürgen Schupp.** 2017. The Linked Employer—Employee Study of the Socio-Economic Panel (SOEP-LEE): Content, Design and Research Potential. J*ahrbücher für Nationalökonomie und Statistik 237(5), 457–467.* https://doi.org/10.1515/jbnst-2015-1044
- **Bechmann, Sebastian and Kerstin Sleik.** 2016. SOEP-LEE Betriebsbefragung – Methodenbericht der Betriebsbefragung des Sozio-oekonomischen Panels. SOEP Survey Papers 305: Series B. Berlin: DIW/SOEP.
- **Weinhardt, Michael.** 2016. SOEP-LEE Betriebsbefragung – Datenhandbuch der Betriebsbefragung des Soziooekonomischen Panels. SOEP Survey Papers 306: Series D. Berlin: DIW/SOEP.

# Report from the SOEP Research Data Center

By Jan Goebel

## Overview of Last Year

In 2017, the range of datasets the SOEP provides to our user community has continued to grow. The SOEP is no longer merely one longitudinal study, but a constellation of different studies with the SOEP-Core at its center.

Of course, the most important addition to our user services in 2017 was the release of Version 33 of the SOEP-Core data (1984–2016, 10.5684/soep.v33) and the integration of the new IAB-BAMF-SOEP sample of refugees.

With version 33 of the SOEP data, we released the integrated data from the 2016 IAB-BAMF-SOEP Survey of Refugees in Germany as two supplementary samples to the SOEP. The samples are based on the overall population of refugees, independent of residency status, who arrived in Germany between January 1, 2013, and January 31, 2016. The samples were surveyed through additional funding from BA/IAB/BMAS in the case of M3 and from BMBF in the case of M4. Sample M4 contains a higher number of refugee families containing children and teenagers. The German Central Registry of Foreigners (AZR) provided the data basis from which the sample was drawn. In this sample, 4,816 adults in 3,554 households were surveyed in 2016, and basic data was collected on 5,717 minors living in the same households. To conduct the survey, the questionnaire was translated into seven languages, in some cases interpreters were available. To address the specific situation of the target group, audio-assisted versions of the survey instruments were developed [7].

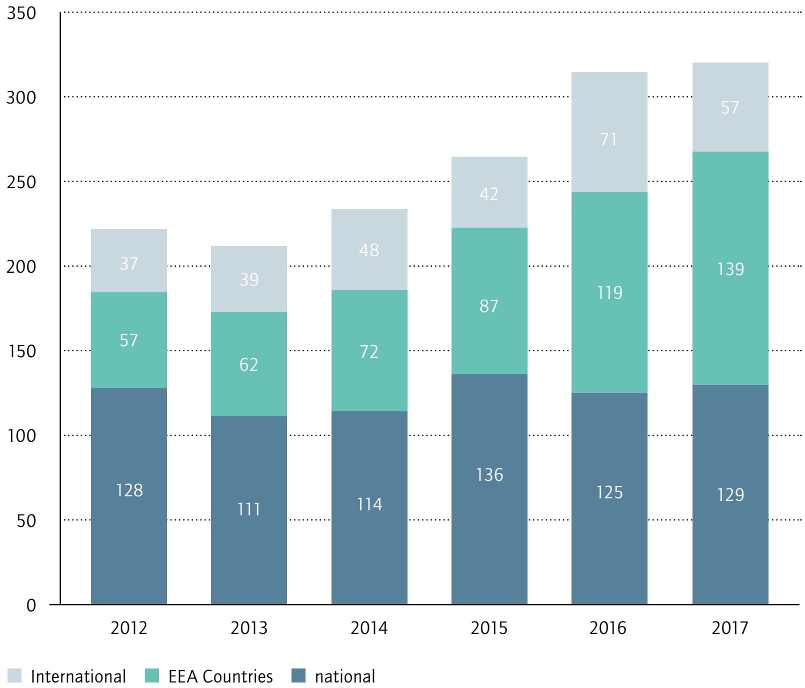
Along with this "classic" data distribution, we also distributed the data from the release of the SOEP Innovation Sample (10.5684/soep.is.2015, see back to pp. 60 for more on the SOEP-IS). We now also provide data from a surveys carried out as part of the project described above, entitled "Early childhood education and care quality in the Socio-Economic Panel", K²ID-SOEP (10.5684/k2id-soep-2013-15/v1) (See p. 77 above). Data collection for K²ID is based on participants in the Socio-Economic Panel (SOEP). The K²ID sample includes all households with children born after September 1, 2007, that participated in the 2013 wave of SOEP or FiD and did not decline to participate in the 2014 survey. Therefore, at the beginning of fieldwork in October 2013, target children were between zero and six years of age. An additional questionnaire concerning childcare arrangements with a focus on quality was given to this group of people. If they used an ECEC institution, they were also asked to provide the address of this institution and, if applicable, to identify the specific group their children attended. In a second step, the ECEC institution directors and group educators were also given a questionnaire to collect additional information on quality in the respective setting.

The increasing diversity and growing range of data products provided by the SOEP Research Data Center underscore the importance of our paneldata.org system we have been developing. The new system now not only contains virtually all the functions of the old SOEPinfo, but can also show relationships between the individual studies. We are continuously expanding the possibilities of this new documentation service for documenting various surveys and the links between them in one overarching system. Due to the different demands of the different datasets, depending on their size and the depth of the data, we offer different forms of data access. First, data are distributed as standard scientific-use files via secure download connections (using the encryption program Cryptshare, and providing users with indi-

**7** The study design is described in detail in Martin Kroh et al. 2016. Das Studiendesign der IAB-BAMF-SOEP-Befragung von Geflüchteten. **SOEP Survey Papers 365**: Series C. Berlin: DIW Berlin / SOEP.

Figure 3

Number of data distribution contracts




vidual passwords for downloading). Second, for the "sensitive" regional data, which are subject to strict data protection regulations, users can obtain access through our remote execution system SOEPremote (based on the LISSY System of the Luxembourg Income Study), which has been available for years now, or as part of a guest research visit to the SOEP.

For the use of the highly-sensitive geocoded coordinates of the survey households, a specialized mode of data access was designed. This service is provided on specific computers on site at DIW Berlin, where researchers can work with the data via a secure connection with a special server. The SOEP Research Data Center is the only one in Germany that allows its scientific users to use a longitudinal survey in connection with the coordinates of the survey households. This use is only possible, however, under adherence to extremely high technical and organizational standards. Researchers are not allowed to use the coordinates and the survey data simultaneously. This prevents researchers from determining where an individual household is actually located. Data transfers to or from this server have to be made and overseen by employees of the Data Research Center.[8] To simplify the use of geographic data in connection with survey data in the future, we are working together on a project with GESIS, IÖR, KIT with funding from the German Research Foundation: "Social Spatial Science Research Data Infrastructure". It will create an infrastructure enabling social scientists without detailed knowledge about geodata and GIS to use and assess the two types of data together.

# Data Usage

The SOEP Research Data Center (SOEP-RDC), which is accredited by the German Data Forum (RatSWD), provides access to anonymous Microdata for the international research community, thereby fulfilling our task as an independent, non-partisan research infrastructure.

Since the SOEP data can only be used for scientific research purposes, a data use contract with the DIW is mandatory to obtain any of the data, no matter whether they are going to be used within or outside Germany. The SOEP Hotline (soepmail@diw.de) provides assistance in applying for data use. All the necessary forms are also available on our website (most importantly, the form to apply a data distribution contract). See: http://www.diw.de/soepforms.

**Figure 3** presents an annual overview of the development of data distribution contracts since 2012. In 2017 we signed more than 300 contracts with external users.

Usually there is more than one individual data user behind a given contract number—often an entire research team at the respective institute. The breakdown for 2017 in **Table 38**, shows that more than 800 individual researchers were given access to the SOEP data that year.

Table 38

New contracts 2017

| Region | Contracts | Researchers |
|---|---|---|
| Germany | 129 | 586 |
| EU/EEA (Germany excl.) | 139 | 167 |
| International | 57 | 61 |
| Total | 325 | 814 |

8 See: Goebel, Jan, and Bernd Pauer, "Datenschutzkonzept zur Nutzung von SOEPgeo im Forschungsdatenzentrum SOEP am DIW Berlin," Zeitschrift für amtliche Statistik Berlin-Brandenburg 8 (3) (2014): 42-7. https://www.statistik-berlin-brandenburg.de/produkte/zeitschrift/2014/HZ_201403.pdf

# Remote Execution (SOEPremote)

The SOEP offers not only the use of regional data on site at the SOEP Data Research Center (65 researchers in 2017), but also the possibility of controlled remote execution (at least at the level of the district-level indicators). Using the thoroughly tested LISSY software of the Luxembourg Income Study, Stata syntax jobs are run and tested at the SOEP-RDC. Users can send the Stata syntax by e-mail to the SOEP-RDC, which automatically checks the data for authorization and for unauthorized commands and runs the job. If all automatic checks are passed, the output file is sent out immediately. If not, a SOEP-RDC staff member checks the output by hand. **Table 39** shows that around 50 to 85 users are active every year, with a rising number of active users over time. These users produce several thousand syntax jobs per year, counting only those with a processing time of over five seconds. The number of processed jobs has more than doubled in the last six years.

Table 39

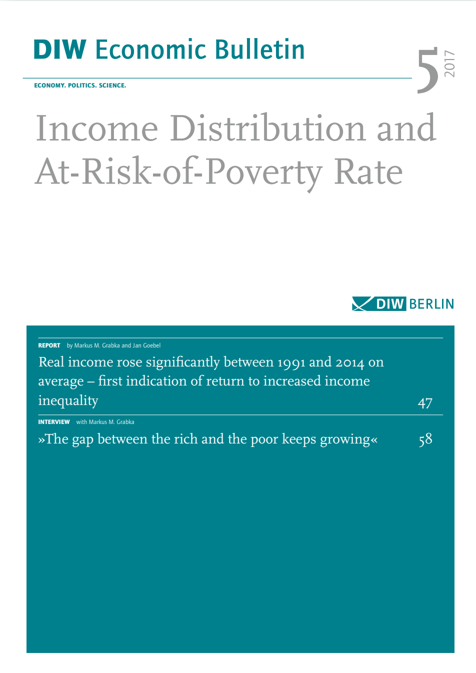
**SOEPremote use by year**

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|
| Unique users | 55 | 54 | 65 | 69 | 83 | 85 |
| Number of jobs > 5 sec. | 4,219 | 6,170 | 5,815 | 8,237 | 8,305 | 11,041 |
| Number of jobs (total) | 9,434 | 10,036 | 10,407 | 13,337 | 12,497 | 16,349 |

PART 3

# A Selection of SOEP-Based *DIW Economic Bulletins*

2017


DIW Economic Bulletin 5 2017

ECONOMY. POLITICS. SCIENCE.

Income Distribution and At-Risk-of-Poverty Rate

DIW BERLIN



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http://www.diw.de/econbull_en

# Real income rose significantly between 1991 and 2014 on average – first indication of return to increased income inequality

**By Markus M. Grabka and Jan Goebel**

The real disposable income of private households in Germany, accounting for inflation, rose by 12 percent between 1991 and 2014. This is what the present study based on data from the Socio-Economic Panel (SOEP) has shown. However, the trends varied greatly depending on income group. While the middle income segment rose by more than eight percent, the highest income segment increased by up to 26 percent. The lower income segment, on the contrary, declined in real terms. Consequently, income inequality has increased overall, especially in the first half of the 1990s, in the period from 1999 to 2005, and after 2009. It stagnated or even decreased in the interim periods. The proportion of people at risk of poverty has recently become greater again. Gainful employment still provides the most effective protection against income poverty, but more and more employed persons are at risk of becoming poor. Containment of the low wage sector, by revoking the privileged status of mini-jobs, for example, could counteract this effect. And single parents should no longer be fiscally disadvantaged in comparison to childless coupled households – this could also reduce the number of children at risk of poverty.

The present study updates previous DIW Berlin studies on personal income inequality and the proportion of people at risk of poverty in Germany up to and including 2014 (box).[1] The empirical analysis is based on Socio-Economic Panel (SOEP) data collected by DIW Berlin in partnership with *Kantar Public* (formerly TNS Infratest Sozialforschung).[2] Since the SOEP survey is repeated every year, it can be used to analyze trends in income over time.[3] The following functional income analysis, which initially examines the distribution of income across the production factors "labor" and "capital," was based on the German national accounts (*Volkswirtschaftliche Gesamtrechnungen*) of the German Federal Statistical Office (*Statistisches Bundesamt*).

## Employee compensation trend no longer lags behind that of company profits

To analyze functional income distribution, we contrasted the two main production factors, "capital" (corporate profits) and "labor" (employee compensation from corporations).[4]

**1** See Jan Goebel, Markus M. Grabka, and Carsten Schroeder, "Einkommensungleichheit in Deutschland bleibt weiterhin hoch – junge Alleinlebende und Berufseinsteiger sind zunehmend von Armut bedroht," *DIW Wochenbericht* 25 (2015): 571–86.

**2** SOEP is a recurring annual representative survey of private households. It began in West Germany in 1984 and expanded its scope to include the new federal states in 1990; see Gert G. Wagner et al., "Das Sozio-oekonomische Panel (SOEP): Multidisziplinäres Haushaltspanel und Kohortenstudie für Deutschland – Eine Einführung (für neue Datennutzer) mit einem Ausblick (für erfahrene Anwender)," *AStA Wirtschafts- und Sozialstatistisches Archiv 2* no. 4 (2008): 301–28.

**3** In accordance with the conventions used in the German federal government's *Report on Poverty and Wealth* (Federal Ministry of Labour and Social Affairs, "Lebenslagen in Deutschland," report in German only, 2013. http://www.bmas.de/SharedDocs/Downloads/DE/PDF-Publikationen-DinA4/a334-4-armuts-reichtumsbericht-2013-kurzfassung.pdf?__blob=publicationFile&v=3) and the appraisal of the German Council of Economic Experts (most recent annual appraisal: "Time for Reforms," excerpts in English, 2016/2017. https://www.sachverstaendigenrat-wirtschaft.de/jahresgutachten-2016-2017.html?&L=1), this report identifies the relevant income year. The SOEP collects annual income information in retrospect – for the previous calendar year – but weighted according to the population structure at the time of the survey. The data for 2014 presented here were collected in the 2015 survey wave.

**4** The wage share is an additional key indicator in our functional distribution analysis. It indicates the relationship of employee compensation to overall GDP.

Box

### Definitions, Methods, and Assumptions for Measuring Income

The analyses presented in this report are based on data from the longitudinal household survey the Socio-Economic Panel (SOEP) study and primarily based on annual incomes. In the survey year (*t*), all the income components affecting a surveyed household as a whole, and all the individual gross incomes of the current members of the surveyed household are added together (market income from the sum of capital income and earned income, including private transfer payments and private pensions), all of these referring to the previous calendar year (*t-1*). In addition, income from statutory pensions as well as social transfer payments (income support, housing assistance, child benefits, unemployment benefits, and others) are taken into account, and finally, annual net incomes are calculated employing a simulation of taxes and social security contributions—including one-off special payments such as a 13th or 14th month's salary for a given year, a Christmas bonus, and a vacation bonus.

The calculation of the annual burden of income taxes and social security contributions is based on a micro-simulation model[1] which generates a tax assessment incorporating all types of income in accordance with the Income Tax Act (*Einkommensteuergesetz, EStG*) as well as tax exemptions, income-related expenses, and extraordinary expenses. Since this model cannot simulate all the complexity of German tax law because of its numerous special provisions, income inequality measured in the SOEP is assumed to be underestimated.

**1** See Johannes Schwarze, "Simulating German income and social security tax payments using the GSOEP. Cross-national studies in aging," Program project paper no. 19 (Syracuse University, US, 1995).

Following the international literature,[2] fictitious (net) income components from owner-occupied housing (imputed rent) are added to income. In addition, non-monetary income components from subsidized rental housing (government-subsidized housing, housing with rents reduced by private owners or employers, households that do not pay rent) are taken into account in the following—as required by the EU Commission for EU-wide income distribution calculations based on EU-SILC as well.

The income situations of households of different sizes and compositions are made comparable by converting a household's entire income into equivalent incomes (per capita incomes modified according to needs) in accordance with international standards. Household incomes are thereby converted employing a scale proposed by the Organisation for Economic Co-operation and Development (OECD) and generally accepted in Europe. The calculated equivalent income is allocated to each household member on the assumption that all household members benefit from the joint income equally. The head of household is given a needs weighting of 1; additional adults each have a weighting of 0.5, and children up to 14 years of age weightings of 0.3.[3] In other words, cost degression is assumed in larger households.

**2** See Joachim R. Frick, Jan Goebel, and Markus M. Grabka, "Assessing the distributional impact of "imputed rent" and "non-cash employee income" in micro-data," in European Communities, ed., *Comparative EU statistics on Income and Living Conditions: Issues and Challenges*. Proceedings of the EU-SILC Conference, Helsinki, November 6–8, 2006, EUROSTAT 2006: 116–142.

**3** See Brigitte Buhmann et al., "Equivalence Scales, Well-Being, Inequality and Poverty," *Review of Income and Wealth* 34 (1998): 115–142.

We did not consider the overall economy but covered a substantial part of it: 71 percent of total employee compensation is included in the study. Three groups were excluded: business partnerships (small and micro businesses) and – of particular significance – the government and non-profit organizations. The present study also focused on investment income in the overall economy, which included income that was not directly generated from ongoing production (e.g., income from rentals and leases).

From 1991 to 2000, employee compensation from corporations rose by just under 33 percent in nominal terms. In the same period, corporate profits experienced vigorous growth, increasing by almost 50 percent (Figure 1). Subsequently, the gap widened. While profits almost doubled until 2007 – the year of the global financial crisis – employee compensation rose by only eight percent in nominal terms. In 2007 and 2009, corporations were forced to accept a massive decrease in profits, but all in all the financial crisis hardly made a dent in employee compensation.

Since the crisis did not last long in Germany, profits rose again after 2009 – at a rapid pace. They dropped again temporarily, but swiftly recovered as of 2013. Employee compensation showed a much steadier trend. After the financial crisis it increased continuously – at a higher rate than before. From the crisis year 2009 until 2015, employee compensation rose by 25 percent. During the same period, employment surged upward as well. In these years, profits rose to the same overall extent. On the whole the gap between the wages paid by corporations and their profits has not grown larger since the cri-

In 2000, the unadjusted wage share was 71.9 percent – the highest since German reunification. In the wake of the wage restraint of the 2000s, it dropped to under 64 percent in 2007. By 2015, it reached 68.3 percent.

That means, for example, that household income for a four-person household (parents, a 16-year-old, and a 13-year-old) is not divided by four as is the case in a per-capita calculation (=1+1+1+1), but by 2.3 (=1+0.5+0.5+0.3).

In all population surveys, a particular challenge is how to take proper account of missing values for individual people surveyed, especially concerning questions considered sensitive, such as those about income. The incidence of missing values is often selective, with households with incomes far above or below the average refusing to respond.

In the SOEP data analyzed here, missing values are replaced using an elaborate imputation procedure that is both cross-sectional and longitudinal.[4] This also applies to missing values for individual household members refusing to answer any questions in households otherwise willing to participate in the survey. In these cases, a multi-stage statistical procedure is applied to six individual gross income components (earned income, pensions and transfer payments in case of unemployment, vocational training/tertiary-level study, maternity benefits/child-raising allowance/parental leave benefits, and private transfer payments).[5] For each new data collection, all missing values are always imputed again retrospectively because new information from the surveys can be used to impute missing data from the previous year. This can result in changes to earlier evaluations. As a rule, however, these changes are minor.

In order to avoid methods-based effects in the time series of calculated indicators, the first survey wave of the individual SOEP samples was excluded from the calculations. Studies show that there are more changes in response behavior which cannot be attributed to differences in willingness to participate in the survey.[6]

After taking weighting factors into account, the SOEP microdata on which these analyses are based (version v32 based on the 32th survey wave in 2015) show a representative picture of the population in households and thus permit inferences about the entire population.

To stay abreast of changes in the number of migrants, independent sub-samples has been drawn in 2013 and 2015. However, for the inequality analyses the IAB-SOEP-migration sample drawn in 2013 has been additionally considered only.[7] The weighting factors allow for differences in the sampling designs of the various SOEP samples as well as in the respondents' participation behavior. In order to increase compatibility with official statistics, these factors are adjusted to currently available framework data from the official microcensus. Populations living in institutions (for example, in retirement homes) are generally not taken into account.

4 Joachim R. Frick and Markus M. Grabka, "Item Non-response on Income Questions in Panel Surveys: Incidence, Imputation and the Impact on Inequality and Mobility," *Allgemeines Statistisches Archiv* 89 (1) (2005): 49–61.

5 Joachim R. Frick, Markus M. Grabka, and Olaf Groh-Samberg, "Dealing with incomplete household panel data in inequality research," *Sociological Methods & Research* 41 (1) (2012): 89–123.

6 Joachim R. Frick et al., "Using Analysis of Gini (ANOGI) for Detecting Whether Two Subsamples Represent the Same Universe. The German Socio-Economic Panel Study (SOEP) Experience," *Sociological Methods & Research* 34 (4) (2006): 427–468, doi: 10.1177/0049124105283109.

7 Martin Kroh et al., "Neue Muster der Migration," *DIW Wochenbericht* 42 (2014): 1126–1135.

sis. More than a decade earlier, profits were quickly outstripping wages.

Looking at investment income in the overall economy, we see a similar pattern: until the crisis it rose much more significantly than wages. There was a subsequent drop, but not as large as that of profits. From 2009 onward, investment income barely increased. This was probably linked to the European Central Bank's monetary policy, which curbed interest income.

That said, it must be kept in mind that the significance of trends in variables from the German national account for issues relating to personal income distribution is limited. The present study focuses on income not directly generated by the interplay of production factors. For example, households can receive income from entrepreneurial activities, capital investments and state transfers in addition to income from paid employment. Furthermore, since households are responsible for making social welfare contributions and paying taxes on various types of income, they only receive part of the income they generate. In the following section, we present the results of analyzing personal income distribution based on the SOEP survey.

## On average, real income has increased since 1991

Adjusted for household size[5] and inflation, between 1991 and 2005 the average annual market income[6] of persons

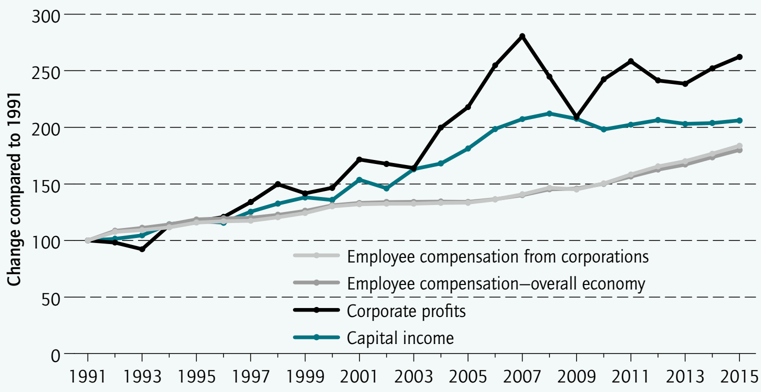
5 Also see the term *Äquivalenzeinkommen* in the DIW Berlin glossary (in German only). http://www.diw.de/de/diw_01.c.411605.de/presse_glossar/diw_glossar/aequivalenzeinkommen.html.

6 Market income equals the sum of capital and employment income, including private transfers and private pensions, before taxes and monetary social benefits.

Figure 1

**Employee compensation from corporations and corporate profits, capital income in overall economy**

Change in percent, 1991 = 100




*Source: Federal statistical office; calculations of DIW Berlin.*

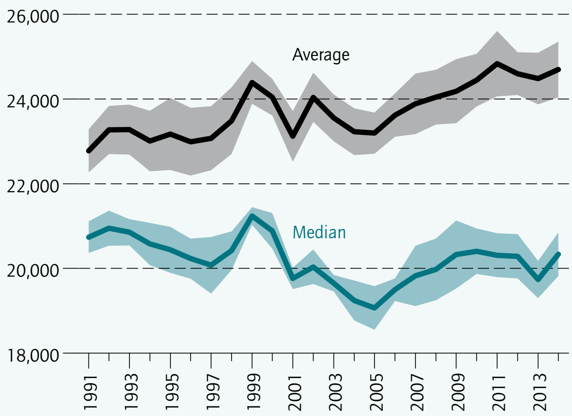


Since the financial crisis employee compensation from corporations and corporate profits no longer grow apart.

Figure 2

**Real market income of private households in Germany**

In Euro




*Note: Real incomes in prices of 2010. Population: Persons living in private households. Equivalized annual income surveyed the following year. Market household income including a fictitious employer's contributions for civil servants. Equivalized with the modified OECD-scale. Shaded area indicate a 95-percent confidence band.*

*Source: SOEPv32; calculations of DIW Berlin.*



Market incomes of individuals living in private households has increased since 2005 in particular.

in private households basically remained unchanged (Figure 2). It rose by 6.5 percent from 2005 to 2014, primarily the result of the significant upswing in employment[7] and subsequent increase in total wages. Overall, average real market income has risen by around 2,000 euros since 1991 – to just under 25,000 euros per person in 2014 (for the definition and measurement of income, see box).

However, this trend only partly applies to median market income.[8] Between 1991 and 2005, it fell from approximately 20,700 euros to 19,000 euros and then rose to 20,300 euros in 2014. Real median market income ended up at the same level it initially had in 1991.

The growth of disposable household income, on the other hand, was significantly more dynamic (Figure 3).[9] On average, private households had disposable real incomes in 2014 that were 2,500 euros higher than at the beginning of the 1990s. This is an increase of more than 12 percent. Median growth was somewhat flatter. It was around 1,700 euros – an increase of nine percent.[10]

The fact that the growth in mean disposable household income was flatter in comparison to the median indicates growth in income was not equal among income groups. Dividing the income groups into deciles[11] and indexing the mean income of each decile to 1991 shows that income in the upper range experienced the highest growth (Figure 4). For example, the disposable real income of the highest income group (tenth decile) rose by almost 27 percent from 1991 to 2014,[12] but the fifth

**7** For example, the number of registered unemployed persons decreased by 2.38 million between February 2005 and February 2016. See Federal Employment Agency, "Arbeitslosigkeit im Zeitverlauf," November 2016.

**8** The median is the value that separates the richer half from the poorer half of the population. Also see the term *Medianeinkommen* in the DIW Berlin glossary (in German only). http://www.diw.de/de/diw_01.c.413351.de/presse_glossar/diw_glossar/medianeinkommen.html.

**9** Disposable household income consists of market income, statutory pensions, and government transfer benefits such as the child benefit, housing allowance, and unemployment benefits minus direct taxes and social security contributions.

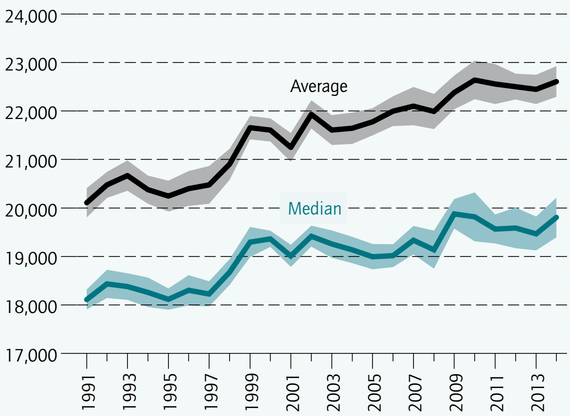
**10** One reason for the lackluster growth in median household income is the weak trend of pensions in the statutory pension fund, since they were not indexed to inflation during the 2000s. In 2004, 2005, 2006, and 2010, pensions were not raised. When adjusted for inflation, these years are marked by income losses.

**11** Sorting the population by income level and dividing the results into ten groups of equal size results in ten deciles. The lowest decile indicates the income situation of the poorest ten percent of the population and the top decile, the richest. It should be noted that due to income mobility personal income positions can change, and people may not always be assigned to the same decile. For this reason, our statements refer to the mean changes in the ten income groups.

**12** In the SOEP survey, people who earn top incomes are underrepresented and therefore in all likelihood, the actual trend in this decile is underestimated. See Stefan Bach, Giacomo Corneo, and Viktor Steiner, "From Bottom to Top: The entire income distribution in Germany, 1992–2003," *Review of Income and Wealth* 55 (2009): 303–30.

Figure 3

**Real disposable income of private households in Germany**
In Euro




*Note: Real incomes in prices of 2010. Population: Persons living in private households. Equivalized annual income surveyed the following year. Equivalized with the modified OECD-scale. Shaded area indicate a 95-percent confidence band.*

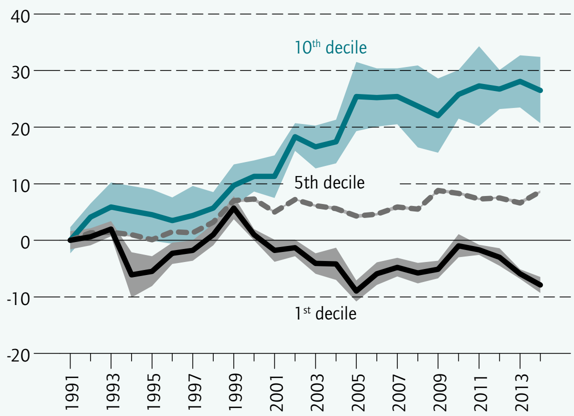
*Source: SOEPv32; calculations of DIW Berlin.*



Real disposable income of private households has been increased by 12 percent between 1991 and 2014.

Figure 4

**Disposable income of private households in Germany by deciles**
Change in percent, 1991=100




*Note: Real incomes in prices of 2010. Population: Persons living in private households. Equivalized annual income surveyed the following year. Equivalized with the modified OECD-scale. Shaded area indicate a 95-percent confidence band.*

*Source: SOEPv32; calculations of DIW Berlin.*



In real terms low income households receive less income compared to 1991.

decile grew by just under nine percent. In comparison to 1991, the ten percent of the households with the lowest income (first decile) were forced to accept a loss in real income – accounting for inflation – of eight percent.[13] And we were able to discern several phases within the period studied. Income in the different deciles grew at different rates from 1991 to 1995, but approached each other again until 1999. The gap widened from 2000 to 2005, again followed by a phase lasting until 2009 in which growth was similar across all income deciles. After 2009, the gap widened once again.

Among other factors, sporadic expansion of the low wage sector[14] and inadequate inflation adjustments of government transfers[15] are responsible for the real income losses in the lowest deciles. Two other factors are the slow growth of retirement income and the fact that on average, old-age pensions have an increasingly larger piece of the household income pie than income from employment due to the demographic shift in Germany. Unfortunately pensions usually represent lower sums of money. On the other hand, in many years income from capital investments and self-employment increased in the top decile, leading to income increases. And employment has special significance in this situation: overall, the proportion of employed persons increased, and growth was especially dynamic in the top income range. While the employment rate remained virtually constant in the lowest decile between 2005 and 2014, in the top three deciles it rose by around five percentage points.

## Germany falls short of UN targets for reducing inequality

As part of the debate on alternatives to using GDP to measure society's progress,[16] the United Nations (UN) adopted a catalog of 17 sustainability targets.[17] The Millen-

**13** In the second decile, real incomes stagnated while the third decile recorded an increase of three percent in comparison to 1991.

**14** Thorsten Kalina and Claudia Weinkopf, "Niedriglohnbeschäftigung 2012 und was ein gesetzlicher Mindestlohn von 8,50 € verändern könnte," *IAQ Report* 02 (2014), report in German only. http://www.iaq.uni-due.de/iaq-report/2014/report2014-02.pdf. However, various effects must be considered. After all, an expansion of the low wage sector can create more (additional) employment but it can also trigger displacement processes if, for example, full-time positions are converted into several low-wage jobs.

**15** An example of this is the child benefit. Between 2010 and 2014, the child benefit was not raised, leading to a loss in real value of more than six percent.

**16** See Joseph E. Stiglitz, Amartya Sen, and Jean-Paul Fitoussi, *Mismeasuring Our Lives. Why GDP Doesn't Add Up* (New York: The New Press, 2010).

**17** See United Nations, Sustainable Development Goals, online at https://sustainabledevelopment.un.org/sdgs.

nium Development Goals for 2015[18] were ambitious, but in September 2015 the intergovernmental organization set the even more ambitious goal of eradicating extreme poverty by 2030. The member states also set distribution goals aimed at reducing the level of income inequality in individual (developed) nations. The UN Agenda for Sustainable Development targets an increase in income for the poorest 40 percent of the population that is higher than the mean income gain of the total population by 2030. UN members are still working out how to turn the goals into concrete actions.[19] But at present the clearly defined indicator only lacks the relevant periods to which the growth in income will refer (e.g., five or ten years).

Looking at the situation from 1991 to 2014, Germany fell short of the goal. The lowest 40 percent's income growth lagged behind that of the overall population's mean income growth (Figure 5). Since 1999, the real disposable income of this 40 percent of the population has actually fallen, while the real income of the remaining 60 percent has grown significantly.[20]

## Market income inequality remains high

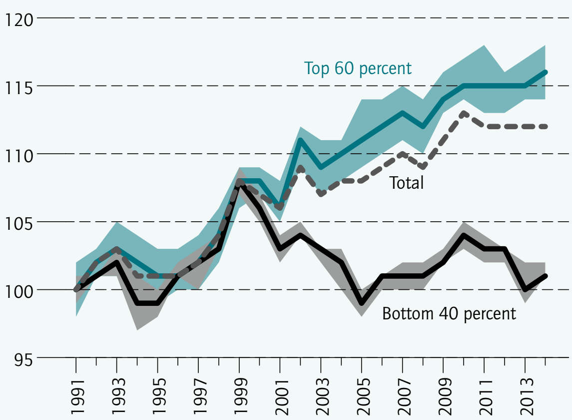
The Gini coefficient is a standard measure of income inequality.[21] It can have a value in the 0 to 1 range; the higher the value, the more pronounced the inequality measured. The Gini coefficient trend shows that inequality of market incomes increased significantly between 1991 and 2005, and subsequently dropped sharply until 2010 (Figure 6). This was partially due to the fact that overall, capital income had less of an influence on inequality in this period.[22] Since then, however, the measured inequality of market incomes has increased significantly again. In 2014 it was approximately at the same level as in the mid-2000s.

Income from paid employment is the main component of market income. We can distinguish two aggregate levels here: individual gross wages and household income from paid employment adjusted for household size for

Figure 5

**Income changes of the bottom 40 percent and the top 60 percent**

Change in percent, 1991=100




*Note: Real incomes in prices of 2010. Population: Persons living in private households. Equivalized annual income surveyed the following year. Equivalized with the modified OECD-scale. Shaded area indicate a 95-percent confidence band.*

*Source: SOEPv32; calculations of DIW Berlin.*



The goal set by the United Nations that the incomes of lowest 40 percent should increase faster than the mean of the total population, has been failed.

households in which at least one person earns this type of income.

Individual income from paid employment showed a significant rise in the Gini coefficient from 0.38 to 0.44 between 1991 and 2004 (Figure 7). With minor fluctuations, it rose further to 0.45 by 2010. The Gini coefficient has slightly decreased since then, but this is only statistically significant when a 90-percent confidence interval in comparison to 2010 is applied.[23] At the same time, annual wages and salaries in the lowest decile have increased by more than 300 euros (a solid 20 percent) since 2010. However, it should be noted that since 1991 the lowest decile has experienced a 30-percent drop in real income from paid employment. The latest income increase was not to compensate for the overall loss.[24]

**18** See United Nations, *The Millennium Development Goals Report 2015*, 2015, online at http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf.

**19** In Germany, the Federal Ministry of Economic Cooperation and Development (*Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung, BMZ*) is in charge: *Die Agenda 2030 für nachhaltige Entwicklung*, online at http://www.bmz.de/de/ministerium/ziele/2030_agenda/index.html.

**20** Looking at the trend between 2004 and 2014, the income of the lowest 40 percent stagnated while the mean rose by slightly more than four percent. Between 2009 and 2014, the real income of the lowest 40 percent fell by more than one percent, while the mean rose by one percent.

**21** Also see the term *Gini-Koeffizient* in the DIW Berlin glossary (in German only), online at http://www.diw.de/de/diw_01.c.413334.de/presse_glossar/diw_glossar/gini_koeffizient.html.

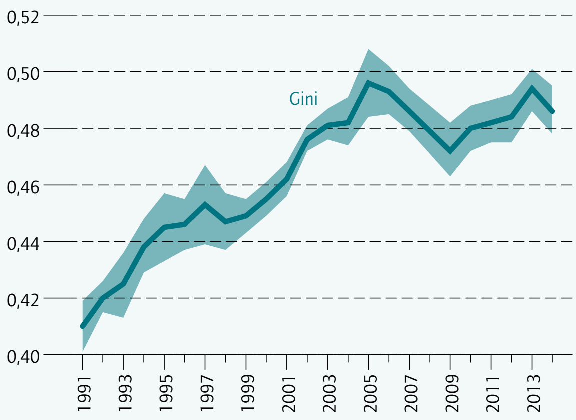
**22** See Markus M. Grabka, "Income and wealth inequality after the financial crisis-the case of Germany," *Empirica – Journal of European Economics* 42 (2) (2015): 371–90. Original version DOI: 10.1007/s10663-015-9280-8.

**23** Data from the Institute for Employment Research (*Institut für Arbeitsmarkt- und Berufsforschung, IAB*) also indicate a slight decrease in wage inequality in Germany. See Joachim Möller, "Lohnungleichheit: Gibt es eine Trendwende?" *IAB Discussion Paper* 09 (2016): 17.

**24** The relatively sharp increase in wages and salaries in the first decile are the result of sector-specific minimum wages and initial anticipatory effects in the wake of an announcement by the German government (or political parties) that a generally binding minimum wage would be implemented.
In the fifth decile, real income has dropped by three percent since 1991, and in the tenth decile, it has risen by 17 percent in real terms. The difference in the growth of wages can be explained in part by a difference in demand for quali-

Figure 6

**Inequality of market household income**
Gini-coefficient




*Note: Real incomes in prices of 2010. Population: Persons living in private households. Equivalized annual income surveyed the following year. Market household income including a fictitious employer's contributions for civil servants. Equivalized with the modified OECD-scale. Shaded area indicate a 95-percent confidence band.*

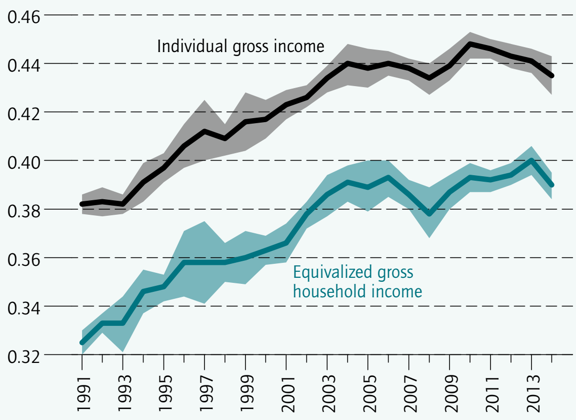
*Source: SOEPv32; calculations of DIW Berlin.*



Since 2010 inequality of market income has risen again.

Figure 7

**Inequality of income from dependent employment**
Gini-coefficient




*Note: Real incomes in prices of 2010. Population: Persons with income from dependent employment (individual gross income) and persons in private households (equivalized gross household income). Equivalized annual income surveyed the following year. Equivalized with the modified OECD-scale. Shaded area indicate a 95-percent confidence band.*

*Source: SOEPv32; calculations of DIW Berlin.*



Income from dependent employment are now more unequal than in 1991.

Household income from paid employment adjusted for household size behaved differently. Here, the Gini coefficient rose significantly – from 0.325 to 0.393 – between 1991 and 2006. Inequality subsequently plateaued. One reason individual income and household income from paid employment adjusted for household size show different trends is that persons with low individual incomes from employment are able to benefit from other household members who receive higher incomes from paid employment.[25]

## Return to increased inequality in disposable household income

The level of inequality in disposable household income remained virtually constant from 1991 to 1999 (Figure 8). It subsequently increased until 2005: the Gini coefficient rose from 0.25 in 1999 to 0.29 in 2005. Unlike inequality in market income, inequality in disposable household income regressed only slightly between 2005 and 2009. Since 2009, inequality has tended to increase again. The 90:10 percentile ratio is an alternative indicator for measuring inequality. It indicates the relationship between the income of the person with the lowest income in the top decile and the income of the person with the highest income in the bottom decile. In the 1990s, this indicator hovered around 3.0 (the rich person's income was three times higher than the poor person's income). Similar to the Gini coefficient, it rose to a value of 3.5 by 2005. It experienced a further statistically significant rise after 2011 – to a record high of 3.65 in 2014.

## Upswing in the at-risk-of-poverty rate

In this section, we look at the people whose income is below the at-risk-of-poverty threshold, as they are a special focus socio-politically.[26] People in households with less than 60 percent of the median net household income of the overall population at their disposal live below the at-risk-of-poverty line.[27] Based on the SOEP sample, in

fied vs. unqualified employees (the "Skilled-Biased Technical Change" hypothesis).

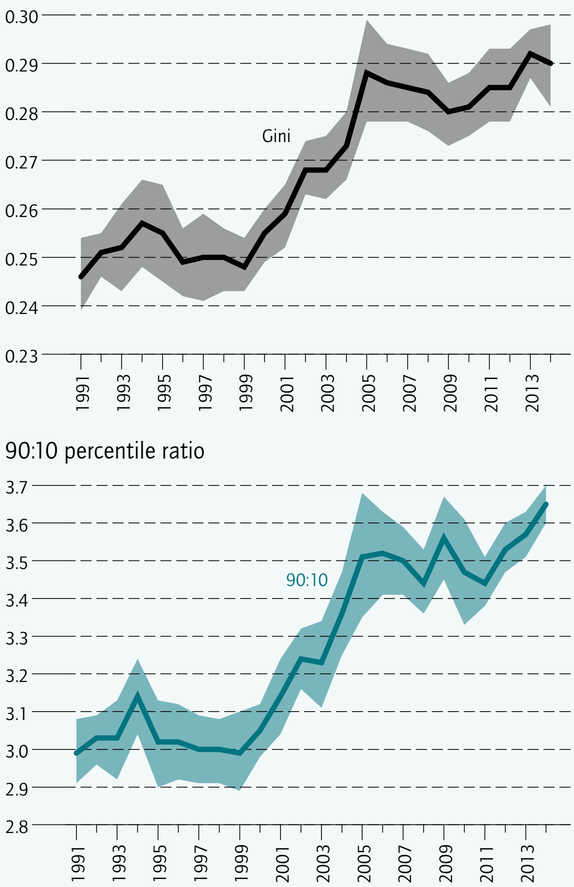
**25** For example, this occurs when a person with a mini-job lives in the same household as someone with well-paid full-time employment.

**26** Also see the term *Armut* in the DIW Berlin glossary (in German only), online at http://www.diw.de/de/diw_01.c.411565.de/presse_glossar/diw_glossar/armut.html.

**27** The at-risk-of-poverty threshold is a relative limit. The at-risk-of-poverty indicator describes the proportion of the population below the at-risk-of-poverty threshold. We can also speak of "absolute poverty" in the case of people who receive basic social benefits such as welfare or unemployment benefits. As a rule, this measure leads to underestimating the population of people living in poverty because some people who have a right to basic social benefits do not

Figure 8

**Inequality of disposable household income**
Gini-coefficient




*Note: Real incomes in prices of 2010. Population: Persons living in private households. Equivalized annual income surveyed the following year. Equivalized with the modified OECD-scale. Shaded area indicate a 95-percent confidence band.*

*Source: SOEPv32; calculations of DIW Berlin.*



Since 2010 inequality of disposable income tend to increase again.

2014 that amounted to 1,050 euros per month for a single-person household – accounting for inflation in this period, this was only 20 euros more than in 2000.[28]

In the 1990s, the proportion of the population at risk of poverty was around 11 percent, but by 2014 it had risen to just below 16 percent (Figure 9). Since the turn of the millennium, the at-risk-of-poverty rate has risen continually, with brief interruptions in the upward trend in 2010 and 2011 only. In 2014, 12.7 million people in Germany were at risk of poverty. The latest results based on the German Federal Statistical Office's microcensus showed a similar proportion.[29] The alternative data of the European Union Statistics on Income and Living Conditions (EU-SILC) yielded an even higher value of 16.7 percent. All three data sources indicated the same slow upward trend in recent years.

There are clear differences in the extent to which the old and new federal states are affected. At 14.7 percent, the at-risk-of-poverty rate in western Germany in 2014 was around seven percentage points lower than in eastern Germany. This discrepancy chiefly reflects the lower levels of employment and investment income in the new federal states.

## Especially high risk of poverty for children and teens

In 2014, more than 20 percent of all children and teens in Germany were at risk of poverty (Table 1). Looking at the trend in this group's risk of poverty over the past 20 years, the increase occurred almost entirely in the second half of the period – the years between 2004 and 2014, when the proportion increased by more than four percentage points.

The 25–34 age group experienced the highest growth, almost nine percentage points over the past 20 years. This is surprising, since this group is typically of an employable age and should have benefited from the positive job market situation. The people in this group who received incomes from employment had an at-risk-of-poverty proportion that was seven percentage points higher than 20 years ago. Among the 25–34-year-olds who did not have income from employment, the proportion rose even more significantly. However, the age group's behavior with respect to education has changed over time: more and more of the people in this age cohort go to university.[30]

take advantage of them (called "hidden poverty" in Germany (*verdeckte Armut*)). See Irene Becker, "Der Einfluss verdeckter Armut auf das Grundsicherungsniveau," Hans Böckler Foundation Working Paper no. 309 (2015). The at-risk-of-poverty rate can also be interpreted as an alternative indicator for income inequality.

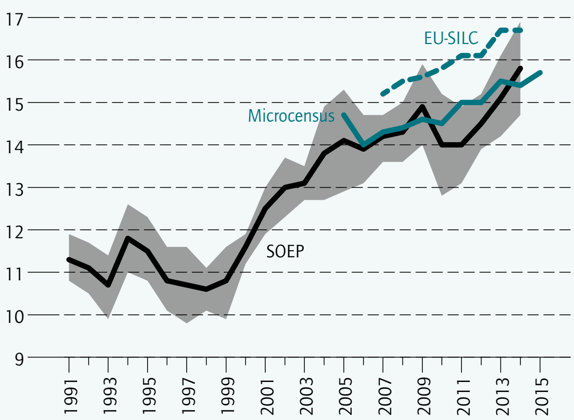
**28** The German Federal Statistical Office's system of social reporting in official statistics is based on the microcensus (see www.amtliche-sozialberichterstattung.de/index_en). By comparison, the at-risk-of-poverty threshold we use here is higher. As per international convention, we include the rental value of owner occupied property as income in our income calculation. For additional methodological differences from the official social reporting, see Markus M. Grabka, Jan Goebel, and Jürgen Schupp, "Höhepunkt der Einkommensungleichheit in Deutschland überschritten?" *DIW Wochenbericht* no. 43 (2012): 3–15.

**29** See German Federal Statistical Office and the statistical offices of the federal states, "System of social reporting," online at http://www.amtliche-sozialberichterstattung.de/index_en.

**30** According to data from the SOEP, the proportion of people pursuing a university degree in this age group was around seven percent in the 1990s. This figure almost doubled to approximately 13 percent in 2014.

Figure 9

**At-risk-of-poverty rate**[1]




*1 Persons with less than 60 percent of median disposable income.*
*Note: Real incomes in prices of 2010. Population: Persons living in private households. Equivalized annual income surveyed the following year. Equivalized with the modified OECD-scale. Shaded area indicate a 95-percent confidence band.*

*Source: SOEPv32, Federal Statistical office (Microcensus, EU-SILC); calculations of DIW Berlin.*



The at-risk-of-poverty rate has been risen almost continuously since the millennium.

At 24 percent, the group of young adults between 18 and 24 had the highest risk of poverty in 2014. A large portion of people in this age group also went to university or participated in an apprenticeship program. They often lived in their own household,[31] but at the same time did not have much money.[32]

The proportion of people at retirement age that are at risk of poverty continues to be below the mean of the total population. However, there are significant differences depending on region. In the 65–74 age group, the proportion at risk of poverty rose by eight percentage points in eastern Germany between 2002 and 2014, while in western Germany it fluctuated between 12 and 14 percent. There is a reason for the significant rise in risk of poverty among older people in eastern Germany. In recent years, people who have entered into retirement receive lower old-age benefits, often because they were unemployed for longer periods of time. And in eastern Germany, company-related or private pensions are the exception and not the rule.[33]

The 25–34 age group also exhibited a differentiated trend. While in western Germany their risk of poverty has risen somewhat more sharply than the population average since 2000 (by five percentage points to 17 percent), in the same period the risk of poverty in eastern Germany rose by 20 percentage points to slightly below 35 percent in 2014. It is interesting to note that this group's risk of poverty continued to rise even after the financial crisis, although unemployment in Germany dropped sharply during the same time period. It is evident that this age group was not wholly able to benefit from the good job market situation.

## The younger the age cohort, the higher the risk of poverty

In this section we examine age cohorts. Most of them contain ten consecutive birth cohorts, beginning with the cohort of those born between 1930 and 1939 and ending with those born between 2010 and 2015. For each year that income was recorded in the SOEP, we calculated the relevant risk of poverty. This made it possible to depict the risk of poverty for all older cohorts for 32 survey years and therefore for a major portion of their lives (Figure 10). We have shown the age of the youngest person in each of the various cohorts here.

Overall, we demonstrated that every time a younger cohort is added, the risk of poverty rises. The difference is greatest at age 30. While the risk of poverty of the cohort with those born between 1960 and 1969 was still around ten percent when the youngest person in the cohort was 30, the cohorts of those born between 1970 and 1979 had a proportion of around 15 percent. For those born between 1980 and 1989, at around 23 percent the proportion was even higher.[34] These findings parallel those of analyses based on data from *Deutsche Rentenversicherung Bund*, the German pension fund,[35] and show that the wage inequality of men across cohorts has increased in Germany. And starting with the 1955 birth cohort, the lifelong income of the lower 20 percent of wage-earning persons decreased in comparison to older birth cohorts. Amidst all of these observations, it should be considered that over time and thus, across age cohorts, education-related and pension-age behavior have changed – both of which can influence income.

**31** These age groups' comparatively high at-risk-of-poverty rates have recently triggered fundamental debates on the concept of relative poverty. See for example Georg Cremer, *Armut in Deutschland* (Munich: C. H. Beck, 2016), 47 et seq.

**32** In the ongoing cross-sectional analysis, trainees and students are usually poor if they do not live in their parents' households. In later life, however, they are rarely at risk of poverty.

**33** See Julia Simonson et al., "Ostdeutsche Männer um 50 müssen mit geringeren Renten rechnen," *DIW Wochenbericht* 23 (2012): 3–13.

**34** The two oldest cohorts are an exception, since their risk of poverty are virtually the same between ages 55 and 64.

**35** See Timm Bönke, Giacomo Corneo, and Holger Lüthen, "Lifetime Earnings Inequality in Germany," *Journal of Labor Economics* vol. 33(1) (2015): 171–208.

Table

**At-risk-of-poverty rate[1] by age group**

In percent

| | <10 years | 10–18 years | 18–25 years | 25–35 years | 35–45 years | 45–55 years | 55–65 years | 65–75 years | 75 years and over | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 1994 | 17.2 | 15.3 | 17.0 | 11.8 | 9.1 | 6.0 | 9.9 | 10.8 | 15.7 | 11.8 |
| 2004 | 17.6 | 18.7 | 22.7 | 15.5 | 11.5 | 10.1 | 10.7 | 11.0 | 12.7 | 13.8 |
| 2014 | 21.9 | 20.1 | 24.3 | 20.7 | 12.8 | 10.6 | 13.2 | 14.1 | 13.3 | 15.8 |
| Differenz 1994/2014 | 4.7 | 4.8 | 7.3 | 8.8 | 3.7 | 4.6 | 3.3 | 3.3 | −2.4 | 4.0 |
| ***Reporting:*** | | | | | | | | | | |
| **with individual earnings** | | | | | | | | | | |
| 1994 | – | – | 13.4 | 8.5 | 6.6 | 2.8 | 4.7 | 8.2 | 16.0 | 6.8 |
| 2004 | – | – | 19.7 | 11.3 | 7.6 | 5.7 | 4.3 | 10.9 | 9.0 | 8.8 |
| 2014 | – | – | 20.2 | 15.6 | 8.2 | 6.2 | 6.9 | 7.9 | 4.1 | 9.8 |
| Difference 1994/2014 | | | 6.8 | 7.1 | 1.6 | 3.4 | 2.2 | −0.3 | −11.9 | 3.1 |
| **without individual earnings** | | | | | | | | | | |
| 1994 | – | – | 26.1 | 29.0 | 22.8 | 21.7 | 16.9 | 11.0 | 15.7 | 16.9 |
| 2004 | – | – | 29.4 | 39.6 | 35.9 | 34.9 | 20.8 | 11.0 | 12.8 | 19.0 |
| 2014 | – | – | 31.8 | 52.7 | 48.1 | 44.1 | 34.6 | 15.8 | 13.8 | 22.9 |
| Difference 1994/2014 | | | 5.7 | 23.7 | 25.3 | 22.4 | 17.8 | 4.7 | −1.9 | 6.0 |

*1 Persons with less than 60 percent of median disposable income. .*

*Note: Real incomes in prices of 2010. Population: Persons living in private households. Equivalized annual income surveyed the following year. Equivalized with the modified OECD-scale.*

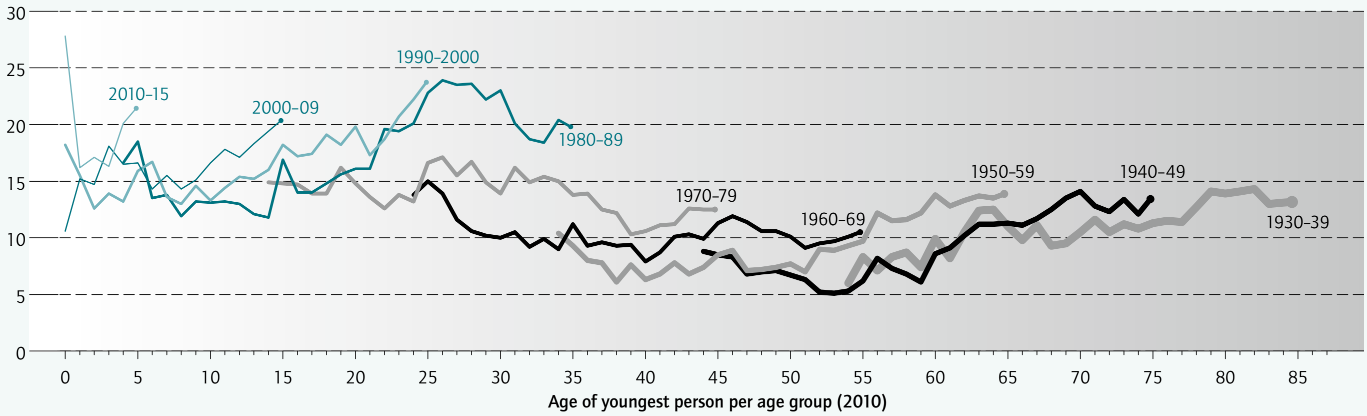
*Source: SOEPv32; calculations of DIW Berlin.*



Figure 10

**At-risk-of-poverty rate[1] by age cohorts**

In percent




*1 Persons with less than 60 percent of median disposable income.*

*Note: Real incomes in prices of 2010. Population: Persons living in private households. Equivalized annual income surveyed the following year. Equivalized with the modified OECD-scale. Shaded area indicate a 95-percent confidence band.*

*Source: SOEPv32, Federal Statistical office (Microcensus, EU-SILC); calculations of DIW Berlin.*



The younger the age cohort the higher the risk-of-poverty.

## Employed persons are increasingly at risk of poverty

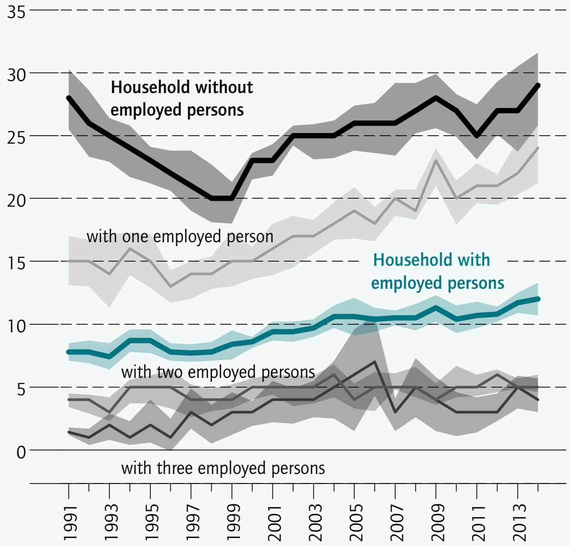
Given the sharp drop in unemployment in Germany since 2005 and the current record employment rate, we asked whether the risk of poverty among employed persons has also decreased. The initial rule of thumb is that in households in which no one received employment income in the relevant previous year, the risk of poverty was higher than average.[36] In 2014, the proportion of those affected was over 28 percent, but it initially regressed between 1991 and 1999. This was due to significant pension increases in eastern Germany in the

**36** In 2014, this affected 23 percent of the population – especially people of retirement age.

Figure 11

**At-risk-of-poverty rate[1] by number of employed persons in household**
**In percent**

In percent




*1 Persons with less than 60 percent of median disposable income.*
*Note: Real incomes in prices of 2010. Population: Persons living in private households. Equivalized annual income surveyed the following year. Equivalized with the modified OECD-scale. Shaded area indicate a 95-percent confidence band.*

*Source: SOEPv32; calculations of DIW Berlin.*



Households with one employed person only have now a higher at-risk-of-poverty than in the 1990's.

1990s.[37] Since that time, however, this segment's risk of poverty has significantly increased.

In households with at least one employed person, the risk of poverty has slightly increased since 1991 – most recently to 12 percent. Further differentiating among households with employed persons by number of employed persons, we saw that the risk of poverty with two or more employed persons in the household (somewhat more than half of the population) has remained virtually the same since 2005, fluctuating around five percent. Households with only one employed person exhibited different behavior.[38] For them the proportion at risk of poverty was 15 percent in the 1990s and rose to 24 percent in 2014.[39] This shows that not every job protects against poverty – take for example those in the low-wage segment or hours that are less than full time. In addition to hourly wages and number of hours worked, whether or not household income is sufficient to exceed the at-risk-of-poverty threshold depends on household composition.[40]

## Conclusion

In Germany, real GDP rose by 22 percent between 1991 and 2014. However, not everyone benefited equally from the burgeoning economy. While real disposable household income has risen by eight percent in the middle income groups since 1991 and by even more in the upper income groups, the lowest income groups were forced to accept losses in real income. Consequently, income inequality has increased.

Employment income is one of income equality's key drivers.[41] With the implementation of the statutory minimum wage in 2015, policy makers took a step towards countering a further increase in income inequality.[42] However, additional measures are necessary to achieve the goal set by the United Nations of increasing the income of the lower 40 percent of the population more sharply than that of the overall population on average. For example, deprivileging mini-jobs and creating incentives to convert their holders into employees who contribute to the social insurance system could contain the low wage sector in Germany. Additional measures should improve the work- family balance. It would also be helpful to remedy fiscal disadvantages to single parents as opposed to childless coupled households. This type of measure could also reduce the number of children at risk of poverty.

**37** Since the calculations only go until 2014, the effect of implementing the statutory minimum wage cannot as yet be analyzed.

**38** In 2014, this equaled 29 percent of the population.

**39** For the period between 2008 and 2014, the increase was significant.

**40** A regression analysis to examine the determinants of the risk of poverty within the improved job market situation showed that the risk of falling below the at-risk-of-poverty threshold despite (full-time) employment has risen over time. One of the reasons is that jobs for people with low qualifications pay less. The change in household structures is less to blame. See Goebel et al., "Einkommensungleichheit in Deutschland bleibt weiterhin hoch," 3–15. This also corresponds to an increasing risk of poverty for people without professional qualifications. Between 2004 and 2014, their rate rose significantly from 24 percent to just under 29 percent.

**41** See Martin Biewen and Andos Juhasz, "Understanding Rising Inequality in Germany, 1999/2000 - 2005/06," *Review of Income and Wealth* vol. 58 (2012): 62–647.

**42** Future analyses must show the magnitude of the effect of the minimum wage on income inequality in Germany.

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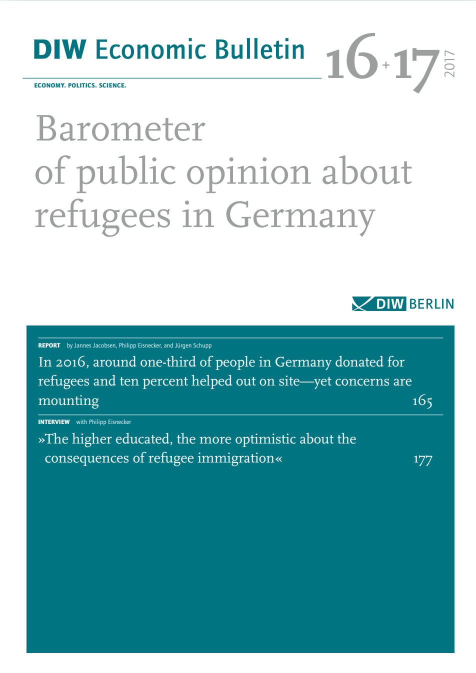
**Keywords:** Income inequality, poverty, SOEP


DIW Economic Bulletin 16+17 2017

ECONOMY. POLITICS. SCIENCE.

Barometer of public opinion about refugees in Germany

DIW BERLIN

REPORT by Jannes Jacobsen, Philipp Eisnecker, and Jürgen Schupp

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# In 2016, around one-third of people in Germany donated for refugees and ten percent helped out on site—yet concerns are mounting

By Jannes Jacobsen, Philipp Eisnecker, and Jürgen Schupp

The presence of refugees in Germany and the challenges their integration poses have preoccupied the public for the past two years. According to the latest data of the Socio-Economic Panel (SOEP), many more people in Germany were concerned about migration and xenophobia last year than in 2013. The additional representative results of the Barometer of Public Opinion on Refugees in Germany in 2016 and the current SOEP wave also indicated that respondents see more risks than opportunities in the refugee migration to Germany. At the same time, around one-third of the population said they had actively supported refugees in the form of monetary or material donations; around ten percent had helped out on site, for example by accompanying refugees to appointments at authorities or language instruction. People with a higher level of formal education and a history of volunteering were more likely to assist actively on site in the integration of refugees. In the course of the year, however, the number of respondents who expressed their intention to become active in the future decreased.

The issues associated with accommodating and sustainably integrating refugees into German society are being hotly debated here, along with the economic and social consequences of the 2015 and 2016 migration waves.[1] Due in no small part to this year's state and federal elections, they have taken center stage.[2]

This *Economic Bulletin* examines views on the consequences of refugee migration and the extent to which society is willing to support refugees. These issues are essential for fully depicting public opinion on the refugee migration question.

The year examined for this report, 2016, began with a mass sexual assault in Cologne.[3] In the course of the year Germany was the target of several acts of terrorist violence, some of which were of Islamist motivation.[4] These events, the drop in registered refugees in the course of 2016, and the kick-off of integration measures probably have had a substantial influence on public opinion on refugees in Germany.

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**1** In 2015, around 890,000 asylum seekers migrated to Germany. A year later, the number dropped to around 280,000 (without double counting, excluding persons in transit). See Federal Ministry of the Interior (BMI), press release dated November 11, 2017 (in German only, available online; retrieved April 6, 2017. This applies to all other online sources cited in this report unless otherwise noted)

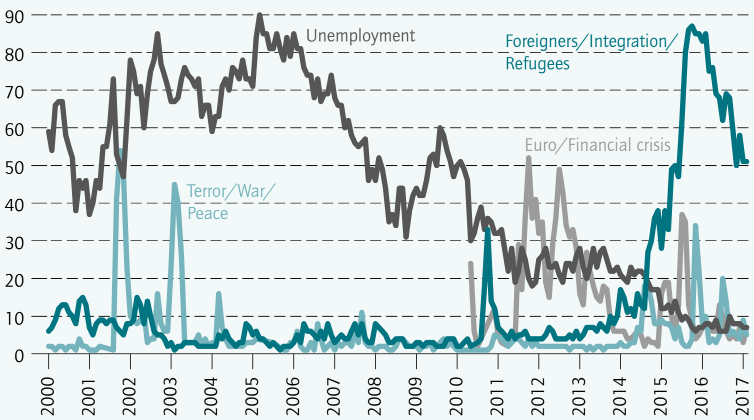
**2** For example, as part of the ARD-Deutschland-Trend survey in January 2017 Infratest Dimap found that all eligible voters viewed refugee policy as the most important political topic by far, and 40 percent of eligible voters considered it a priority (in German only, available online). Also see Marco Giesselmann et al., "Fluchtzuwanderung ganz oben auf der Liste der dringenden politischen Prioritäten," *Wirtschaftsdienst*, 97th year no. 3 (2017): 192–200 (in German only, available online).

**3** Many of the suspects were young men from Northern-Africa, and some of them seeking asylum in Germany.

**4** See Bundesamt für Verfassungsschutz, See the overview of selected radical Islamist terrorist attacks (in German only, available online).

Figure 1

**Mentioned problematic issues in Germany (selection)**
Relative proportion of the respondents that mentioned at least one issue




*Note: If more than one poll was available, the last of the month was picked.*

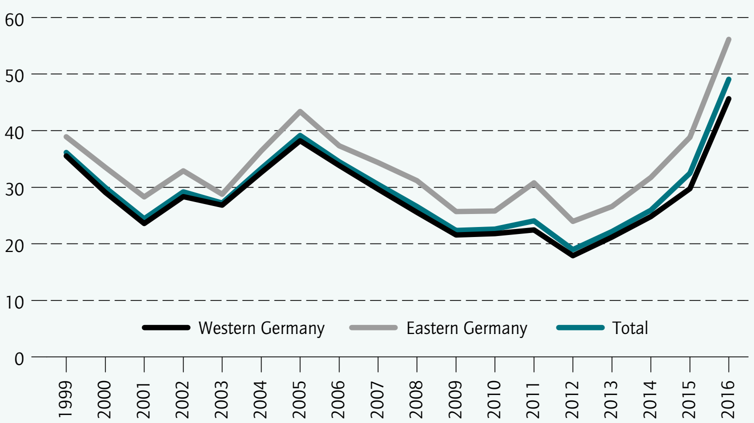
*Source: Forschungsgruppe Wahlen: Politbarometer 01/2000 bis 02/2017 (available online).*



Since 2015, eligible voters name issues regarding "Foreigners, integration and refugees" as especially problematic.

Figure 2

**"Great concerns" because of immigration to Germany**
Relative proportion




*Sources: SOEP v.33 (weighted), waves 1999–2016; authors' own calculations.*



An increasing amount of people express concerns over immigration.

## Migration to Germany and xenophobia cause worries

According to the results of *Forschungsgruppe Wahlen*, a research group that provides public TV station ZDF with background information for its election broadcasts, "foreigners, integration, and refugees" has been one of the two top sets of issues mentioned by a majority of eligible voters in Germany since summer 2015. In some months, the majority took on overwhelming proportions (Figure 1). In the population's perception, this issue has replaced the issue of "unemployment" and, at times, that of "euro and financial crisis" as the most urgent policy challenge.

In the SOEP[5] household survey, the concerns that respondents have regarding various sets of issues are recorded every year.[6]

Concerns about migration grew considerably in 2015 and 2016: in Germany in 2016, 49 percent of respondents said the issue was a matter "of great concern." Looking only at eastern Germany, the level was around 56 percent, an all-time high for the SOEP survey (Figure 2). This particularly high concern is out of line with the actual proportion of migrants in the "new German states,"[7] which is considerably lower in comparison to that of western Germany.

Concern with regard to xenophobia also rose substantially during the period examined. In 2016 in Germany, around 50 percent of respondents answered that xenophobia was a matter of "great concern" (Figure 3).

Around 28 percent of respondents answered both questions with "great concern." Those who expressed great concerns therefore hardly differ between the two sets of problems.

Against the backdrop of numerous assaults on refugees and refugee shelters,[8] the values are as high as they were at the beginning of the 1990s in western Germany. Back then, there were also many assaults on migrants: in Ros-

**5** SOEP is an annually recurring representative survey of private households. It began in West Germany in 1984 and expanded in scope to include the new federal states in 1990, see Gert G. Wagner et al., "Das Sozio-oekonomische Panel (SOEP): Multidisziplinäres Haushaltspanel und Kohortenstudie für Deutschland – Eine Einführung (für neue Datennutzer) mit einem Ausblick (für erfahrene Anwender)," *AStA Wirtschafts- und Sozialstatistisches Archiv 2* no. 4 (2008): 301–28.

**6** The respondents were asked if each topic area was a "great concern," "somewhat of a concern," or "no concern at all."

**7** See the analysis of the Federal Agency for Civic Education (*Bundeszentrale für politische Bildung*, bpb) based on the microcensus (in German only, available online).

**8** See the Amadeu Antonio Foundation chronicle of assaults on refugees (in German only, available online).

tock-Lichtenhagen in the eastern part of the country, for example.[9]

In order to depict public opinion on the current wave of refugee migration fully, above and beyond levels of general concern, the SOEP conducted a monthly "Barometer of Public Opinion on Refugees in Germany" in 2016 in addition to its panel survey. Data on the population's active support of the refugee cause was also collected. To create the Barometer, Kantar Public personally surveyed around 2,000 participants (always different people) each month (Boxes 1 and 2). Following prior partial analyses[10], the subsequent section presents assessments of all monthly survey waves over the year and additional findings of the SOEP panel study on the issues.

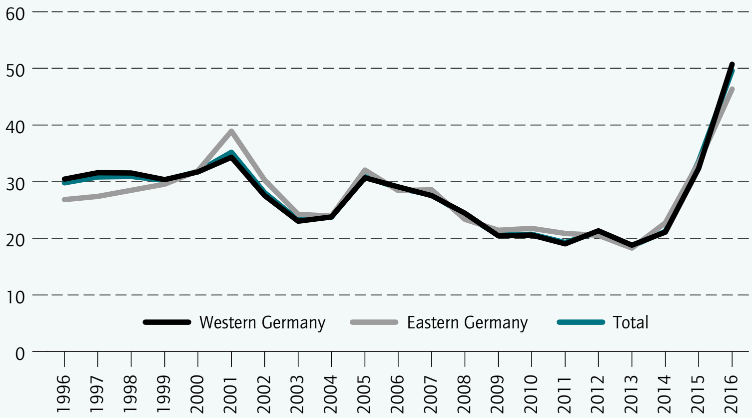
## Intention to support refugees decreased in the course of 2016

According to the Barometer, around one-third of all respondents provided assistance for refugees in the form of monetary or material donations in the course of 2016 (Figure 4).[11] Almost ten percent of the population actively helped on site by accompanying refugees to appointments at authorities or German language instruction. The respondents indicated they participated in demonstrations and petitions concerning the refugee issue relatively rarely: the proportion was between three and eight percent. However, the data do not reveal whether the demonstrations and campaigns were held in support of refugees or to express criticism or outright rejection of refugee migration. The average proportion of total Barometer respondents who were active concerning the refugee issue in one or more ways in 2016 was over 35 percent. During the year, each of the above percentages remained virtually stable. However, it should be noted that each month the sets of questions referred to activities in the past 12 months. For this reason, decreasing activities toward the end of the year cannot be adequately captured.

Figure 3

**"Great Concerns" because of xenophobia and hatred of foreigners**

Relative proportion




*Sources: SOEP v.33 (weighted), Wave 1996–2016; authors' own calculations.*

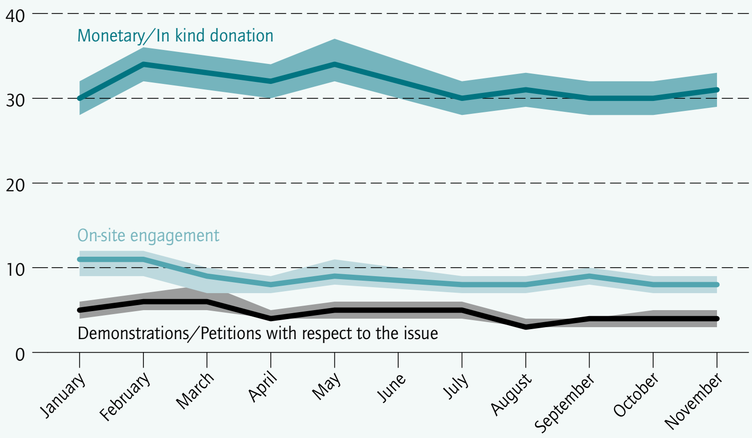


Both in eastern and western Germany, half of the population expresses concerns over xenophobia and hatred of foreigners.

Figure 4

**Engagement with refugees[1]**

Relative proportion




*1 At the time of the interview, it was referred to the engagement during the last 12 months.*

*Note: While "monetary donations/donations in kind" and "on-site engagement" are identified as an engagement for refugees, "Demonstrations and petitions regarding the topic" is identified as including engagement against refugees. Therefore due to the data, a strict separation regarding this item is not possible. The highlighted areas represent the 95-percent confidence intervals.*

*Sources: "Barometer of public opinion about Refugees in Germany" (weighted); poll from January to November 2016; author's own calculations.*



By far, most of the engagement is done by monetary donations and donations in kind for refugees.

---

**9** For an analysis of the events, see Dietrich Thränhardt, "Die Ursprünge von Rassismus und Fremdenfeindlichkeit in der Konkurrenzdemokratie: Ein Vergleich der Entwicklungen in England, Frankreich und Deutschland," *Leviathan* 21/3 (1993): 336–57.

**10** Philipp Eisnecker and Jürgen Schupp, "Flüchtlingszuwanderung: Mehrheit der Deutschen befürchtet negative Auswirkungen auf Wirtschaft und Gesellschaft," *DIW Wochenbericht* no. 8 (2016): 158–64 (available online); Philipp Eisnecker and Jürgen Schupp, "Stimmungsbarometer zu Geflüchteten in Deutschland," *SOEPpapers* 833 (2016) (available online); Jürgen Gerhards, Silke Hans, and Jürgen Schupp, "German Public Opinion on Admitting Refugees," *DIW Economic Bulletin* no. 21 (2016): 243–49 (available online).

**11** Whether or not findings based on samples can be generalized to reflect the overall population is always subject to a degree of uncertainty. This is why in this *Economic Bulletin*, we often indicate confidence intervals as either value ranges in the text or as supplementary graphics and tables. The larger the confidence interval, the more uncertain the estimate. For example, based on the present confidence interval, at least 28 percent and at most 37 percent of the population supported refugees via donations in 2016.

Box 1

**On the database of the Socio-Economic Panel and the Barometer of Public Opinion on Refugees in Germany**

The respondents of the monthly Barometer of Public Opinion on Refugees in Germany (Barometer) and the 2016 survey wave of the Socio-Economic Panel (SOEP) were both asked the same questions analyzed in the present report. Kantar Public[1] has conducted the SOEP longitudinal survey based at DIW Berlin annually since 1984, interviewing approximately 11,000 German households and containing around 30,000 respondents. The survey institute conducted the Barometer surveys in conjunction with the SOEP. The Barometer is based on a repeatedly stratified random sample each representative of the overall population. Interviewers collected information on multiple issues in around 2,000 personal interviews every month. They surveyed a different group of respondents in each monthly wave from January to November 2016, with the exception of June. The survey target group was people age 14 and over living in private households in Germany.

The monthly survey of the Barometer allowed us to record changes within the course of the year. Drawing on the SOEP, more extensive information, which often spans decades, could be used for analysis. In addition, the Barometer could also be used as external validation of comparable indicators collected in the SOEP.

The respondents were first asked to give personal subjective assessments of five areas based on a scale with ratings from one to 11. One was the most negative value and 11 the most positive one. The introductory questions were:

"The issue of refugees is controversial in Germany. What would you personally say to the following questions?

1. In general, is it *bad* or *good* for the **German economy** that refugees are coming here?
   - Bad for the economy (1)
   - Good for the economy (11)

2. Will refugees *undermine* or *enrich* **cultural life** in Germany in general?
   - Undermine (1)
   - Enrich (11)

3. Will refugees make **Germany** a *worse* or *better* place to live?
   - A worse place (1)
   - A better place (11)

1 Formerly TNS Infratest Sozialforschung München.

However, intention to provide active assistance to refugees for the first time or again in 2016 was subject to more obvious fluctuation (Figure 5): The year's highest value came in March, when around 40 percent of respondents indicated their intention to donate to the refugee cause. At around 20 percent, the intention to provide active support on site reached its highest value in February. The proportional values dropped until the summer, plateauing at a significantly lower value of approximately one-third for donations and ten percent for active on site support. Participation in demonstrations and petitions showed a similar trend, albeit at a considerably lower level.

## Negative assessments of the effects of refugee migration predominated in 2016

For five areas, the respondents were asked to rate the effects of the current wave of refugee migration on a scale of one to 11 and thereby to differentiate between positive and negative ratings (see Box 1). Overall, the negative ratings were clearly in the majority. With one exception, throughout the year the averages of the ratings for all five sets of questions remained significantly below the ambivalent and indifferent assessments indicated by the middle value on the scale. The skeptical responses with regard to the short-term effects of refugee migration were particularly striking; whereas the long-term effects were assessed less pessimistically (Figure 6). Of the three other individual areas, effects on the economy tended to be rated the most optimistically (Figure 7). Effects on cultural life were a close second. Of the three areas, the effect on Germany as a place to live received the most negative ratings.

The responses to all five sets of questions showed similar trends in the course of 2016. The respondents' assessments were still relatively skeptical in January, but they

4. Does a high influx of refugees mean *more risks* or *more opportunities* **in the short term**?
   - More risks short-term (1)
   - More opportunities short-term (11)

5. Does a high influx of refugees mean *more risks* or *more opportunities* **in the long term**?
   - More risks long-term (1)
   - More opportunities long-term (11)"

For the Barometer, interviewers were instructed to read the introductory question aloud from the laptop and then turn it around to allow respondents to enter their own answer. The interviewers were not able to see the actual answers.

The following questions targeted the respondents' activities concerning the refugee issue. The respondents were asked if they had engaged or intended to engage (again) in three types of activities. Unlike the first block of questions, the respondents in both the SOEP and the Barometer gave their answers verbally to the interviewer. The questions were:

"Which of the following activities have you done in connection with refugee issue since last year and which do you intend to do (again) in the future?

1a. Support refugees with monetary or material donations
   - Done since last year (Yes/No)

1b. Support refugees with monetary or material donations
   - Intend to do so (again) in the future (Yes/No)

2a. Work locally with refugees (e.g., appointments at authorities or language instruction)
   - Done since last year (Yes/No)

2b. Work locally with refugees (e.g., appointments at authorities or language instruction)
   - Intend to do so (again) in the future (Yes/No)

3a. Participate in demonstrations or petitions related to the refugee cause
   - Done since last year (Yes/No)

3b. Participate in demonstrations or petitions related to the refugee issue
   - Intend to do so (again) in the future (Yes/No)"

While the questions about monetary and material donations target relatively concrete behavior, the ones on working on site could be broadly interpreted, despite the examples listed. For example, in this way, active support within the respondents' working environments could also be included. This was done to create a balance between very concrete questions that exclude other specific relevant behavior and broader questions that allow more room for interpretation. The first two of the three questions target aspects that deal with helping refugees: donations and providing on-site support. The question about active political participation was more broadly formulated in order to include political activity pro and contra refugees.

rallied in the first three months of the year and reached peak values in July. In that month, for example, the rating for effects on the economy was between 5.7 and 6.0, corresponding to the neutral middle of the scale. With an average value between 3.8 and 4.1, the rating for short-term effects remained the most skeptical. In August, all five average ratings plunged[12] and would recover gradually by November. The majority of the values from the last month of the survey were somewhat higher than they were in January 2016.

**12** Several terrorist attacks occurred directly before the survey was taken—in Nice (France), Ansbach, and near Würzburg (Germany), for example. The latter two involved men who had entered Germany as refugees. We can presume that this contributed to the plunge in public opinion in August. And the comparably low values in January 2016 can probably be explained by the assaults in front of Cologne Cathedral during the New Years' celebration there.

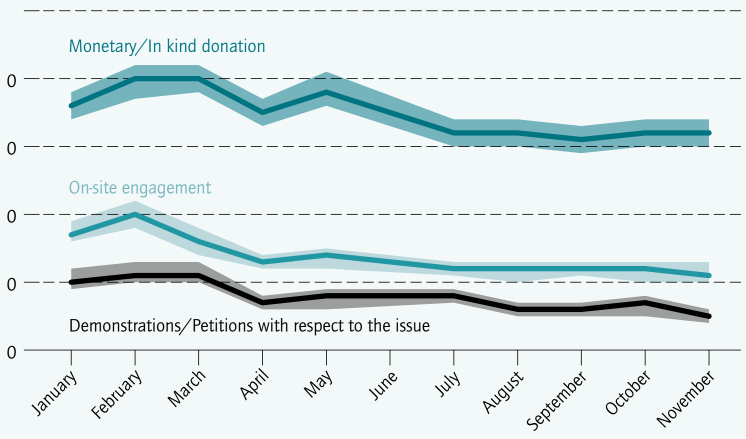
## Resolute skeptics shape public opinion strongly

Did respondents who gave decisively skeptical or optimistic answers have the greatest impact on the results, or do these reflect a majority of indecisive or ambivalent answers? Between 14 and 21 percent of respondents on average gave clearly optimistic answers with a mean value per question of over seven on a scale of 11 (Figure 8). This puts them consistently in the minority. On the other hand, the proportion of resolute skeptics—persons with low mean values below five—hovered between 40 and 57 percent in the course of the year. The proportion of indifferent or ambivalent respondents with mean values between five and seven was also relatively high: they accounted for 28 to over 40 percent of respondents.

Is there a relationship between active support of refugees and assessing the consequences of migration? Based on

Figure 5

**Planned engagement with refugees**
Relative Proportion




*Note: While "monetary donations/donations in kind" and "on-site engagement" are identified as a an engagement for refugees, "demonstrations and petitions regarding the topic" is identified as including engagement against refugees as well. Therefore due to the data, a strict separation regarding this item is not possible. The highlighted areas represent the 95-percent confidence intervals.*

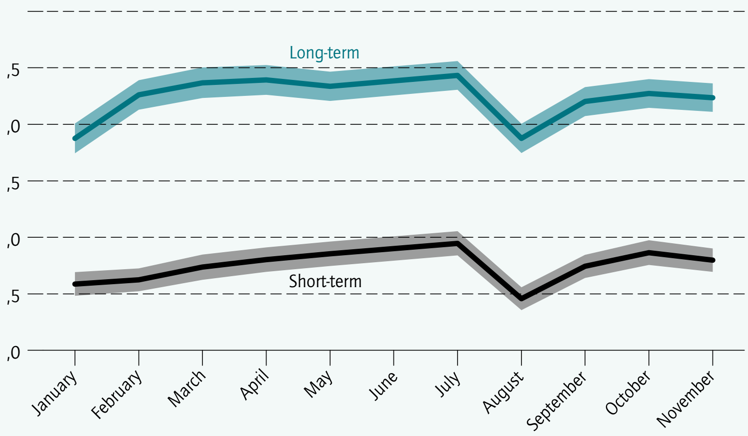
*Sources: "Barometer of public opinion about Refugees in Germany" (weighted); poll from January to November 2016; author's own calculations.*



In the course of the year, the intention to get involved decreased.

Figure 6

**Assessment of the short- and long-term consequences of the immigration of refugees**
Scale 1 (extremely negative) to 11 (extremely positive)




*Sources: "Barometer of public opinion about Refugees in Germany" (weighted); poll from January to November 2016; author's own calculations.*



The long-term consequences of immigration are assessed to be more positive than the short-term consequences.

Table 1

**On-site engagement[1] over assessment of consequences of the immigration of refugees**
Relative proportions

| Einschätzung | On-site engagement | 95-percent confidence interval |
|---|---|---|
| Explicitly negative (1 beneath 5) | 3.3 | 2.9–3.7 |
| Ambivalent (5 through 7) | 9.5 | 8.8–10.2 |
| Explicitly positive (over 7 through 11) | 23.0 | 21.6–24.4 |
| | Cramers V | 0.24 |
| | Pearson Chi2(2) | 1,100.00 (p = 0.00) |

*1 At the time of the interview, the engagement of the past 12 months was polled.*

*The estimations are based on an unweighted N of 19,695.*

*Source: "Barometer of public opinion about Refugees in Germany" (weighted); poll from January to November 2016; authors' own calculations.*



the example of active on site support, the results showed: The more optimistic the respondent, the higher the likelihood of personal contribution (Table 1). However, the group of active supporters also contained lower proportions of ambivalent and, to a certain extent, clearly skeptical persons.

## The higher the education level, the higher the likelihood of active support for refugees

What characteristics do people skeptical of the effects of refugee migration share? And which do the optimistic respondents share? Do specific population segments actively support refugees most often?

To answer these questions, we ran multivariate regression models based on all the monthly Barometer of Public Opinion surveys[13] (Table 2). They allowed us to analyze the relationships among various factors separately, such as education and income. We looked at an index of all five assessment questions[14] plus active on-site support for refugees in the past 12 months.

**13** Since attitudes and active support were surveyed in the same way in the SOEP, we were to a great extent also able to base our calculation of the following multivariate models on these data. The results were very similar to those for the data of the Barometer, indicating the overall reliability of the results.

**14** From a methodological viewpoint, it is only useful to create this type of index if it is possible to ensure that the sets of questions contained in the index are closely correlated. Cronbach's alpha in this case is 0.9, which clearly indicates that they are.

According to the analysis, women were slightly more optimistic about the effects of refugee migration in Germany than men, and single people were slightly less optimistic than married couples. Age, however, did not play a significant role. Job was a key differentiating factor. On the scale used for the survey, the blue-collar group was almost half a point more pessimistic than the reference group of salaried employees and civil servants; while respondents who were still in school or vocational training programs were half a point more optimistic. The most pronounced relationship involves level of education: the higher the level of education, the more optimistic the respondent. For example, respondents with university degrees have mean values that are an entire point higher than those who graduated from high school upon completion of ten years of schooling (*mittlere Reife*). Those with lower secondary education (*Hauptschulabschluss)* or high school dropouts were half a point more skeptical than those who graduated from high school after the tenth grade.

With regard to household characteristics and place of residence, respondents living with children and those with higher household incomes also gave the consequences of refugee migration more optimistic ratings. The same applies to residents of large cities. The residents of small towns or villages tended to be more pessimistic. With reference to place of residence, the difference between old and new federal states was the most significant. Respondents in eastern Germany were more skeptical than those in western Germany by more than half a point.[15]

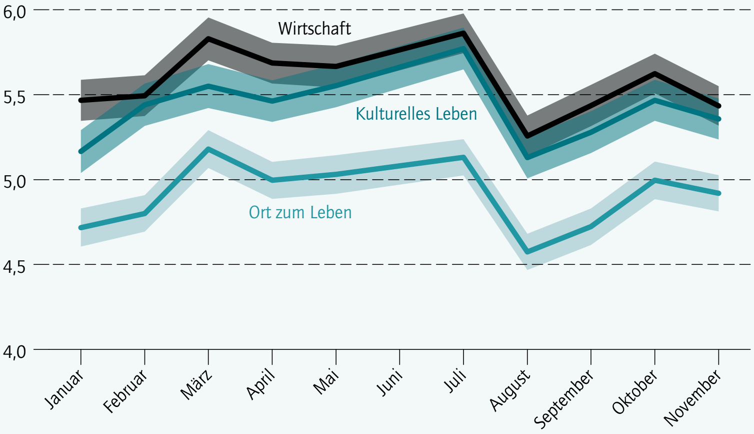
Looking at active on-site support for refugees, women were active with a significantly greater frequency than men, even if the difference in levels is slight. Respondents with children in the household tended to be more actively supportive than respondents without children, and residents of large cities were more likely to be active than others. Eastern Germans were less frequently active than western Germans.

The differences reported above are statistically significant, but the effect sizes indicating whether active support is more or less likely are in a very low range of only two to three percentage points. In contrast, and as the ratings on the issue of refugees also showed, greater differences were observed by level of education. The likelihood of actively supporting refugees on site is around ten percentage points higher for persons with a university degree than respondents without a degree or with lower secondary education or high school after the tenth grade.

Figure 7

**Assessment of the consequences of the immigration of refugees in different areas**

Scale 1 (extremely negative) to 11 (extremely positive)




*Sources: "Barometer of public opinion about Refugees in Germany" (weighted); poll from January to November 2016; authors' own calculations.*

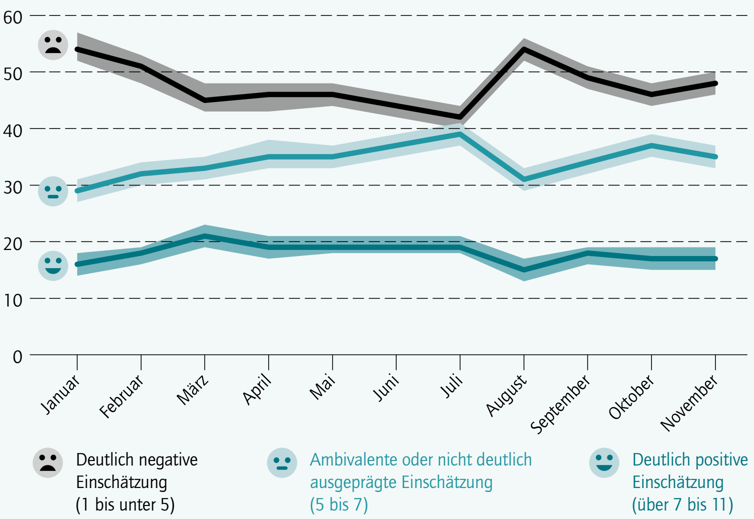


The impact on the economy is assessed the least skeptically.

Figure 8

**General Assessment of the consequences of the immigration of refugees**

Relative proportion




*The highlighted areas represent the 95-percent confidence intervals.*

*Sources: "Barometer of public opinion about Refugees in Germany" (weighted); poll from January to November 2016; authors' own calculations.*



According to the "Barometer of public opinion about refugees in Germany", the negative opinions predominated.

**15** A comparison of the coefficients for the relevant survey month in 2016 in the multivariate regression model revealed no major or systematic differences between the patterns previously reported.

Tabelle 2

**Multivariate regression models for an "index of assessment" and "on-site engagement"**

| | M1 Assessment of the consequences of the immigration of refugees | | M2 On-site engagement | |
|---|---|---|---|---|
| | Unstandardized regression coefficient | Level of significance | Marginal effect | Level of significance |
| Female | 0.11 | * | 0.02 | ** |
| Age (in categories) | | | | |
| *Reference category: 30–44* | | | | |
| under 30 | −0.14 | | 0.02 | |
| 45–59 | 0.11 | | 0.01 | |
| 60–74 | 0.11 | | 0.00 | |
| over 74 | 0.20 | + | −0.02 | |
| Higher educational level | | | | |
| *Reference category: Mittlere Reife* | | | | |
| No educational level | −0.49 | ** | −0.02 | * |
| (Fach)Abitur | 0.71 | ** | 0.04 | ** |
| (Fach)Hochschulabschluss | 1.01 | ** | 0.10 | ** |
| Other qualification | 0.03 | | 0.00 | |
| Family status | | | | |
| *Reference category: Married* | | | | |
| Single | 0.20 | ** | 0.01 | |
| Widowed | −0.17 | * | −0.01 | |
| Divorced | −0.06 | | 0.02 | |
| Residential Property | 0.01 | | 0.01 | |
| Job position | | | | |
| *Reference category: civil servants/ regular employment* | | | | |
| Unemployed | −0.16 | | −0.01 | |
| In education | 0.50 | ** | 0.01 | |
| Worker | −0.44 | ** | −0.01 | |
| Self-employed | −0.07 | | −0.01 | |
| Retirement | −0.04 | | 0.00 | |
| Not employed/other | 0.11 | | −0.01 | |
| Net household equivalent income | | | | |
| *Reference category: 1200–1500 euro* | | | | |
| under 1200 euro | −0.19 | ** | 0.00 | |
| 1500–3000 euro | 0.13 | * | −0.01 | |
| over 3000 euro | 0.01 | | 0.00 | |
| Children in the household | 0.18 | ** | 0.02 | * |
| Size of the residential estate | | | | |
| *Reference category: 20 000–100 000* | | | | |
| under 5 000 | −0.28 | ** | −0.01 | |
| 5 000–20 000 | −0.19 | ** | 0.00 | |
| 100 000–500 000 | 0.10 | | −0.01 | |
| over 500 000 | 0.11 | | 0.03 | ** |
| Eastern Germany | −0.64 | ** | −0.03 | ** |
| Month of the interview | | | | |
| *Reference category: April* | | | | |
| January | −0.26 | ** | 0.03 | * |
| February | −0.12 | | 0.03 | * |
| March | 0.07 | | 0.01 | |
| May | 0.04 | | 0.02 | |
| [June] | | | | |
| July | 0.18 | + | 0.00 | |
| August | −0.35 | ** | 0.00 | |
| September | −0.20 | * | 0.01 | |
| October | −0.04 | | 0.00 | |
| November | −0.09 | | 0.01 | |
| Constant (M1) | 4.82 | ** | | |
| (pseudo) R2 | 0.116 | | 0.060 | |
| N (unweighted) | 19.455 | | 19.455 | |

*M1: Linear regression with dependent variable "index assessed consequences of the influx of refugees", built by summation of the five assessment items and standardizing to 1–11 (maximum negative-positive). Example of interpretation: A interviewee with (Fach)Abitur reaches, holding constant all other factors, a 0,7 higher value on the Index than a interviewee with no educational degree or an Hauptschulabschluss.*

*M2: Logistic Regression with dependent variable "on-site engagement for refugees" (0/1), mean marginal effects. Example of interpretation marginal effect: The average probability for an engagement on-site would be 3 percent lower if a person from western Germany would live in eastern Germany instead, all other factors hold constant on their actual value.*

*** p<=1 percent, * p<=5 percent, + p<=10 percent.*

*Sources: "Barometer of public opinion about Refugees in Germany" (weighted); poll from January to November 2016; authors' own calculations.*

Box 2

### Comparison of the Barometer and the SOEP

Surveys on sensitive subjects such as the acceptance of refugees are always subject to social desirability and can thus yield slightly distorted findings. However, we can assume that the level of trust between respondents and interviewers in panel surveys is considerably higher than in one-time surveys such as the Barometer. This means that the SOEP data can be considered more robust.[1] For this reason, it would be useful to compare the data of the SOEP with those of the Barometer (see table).[2] We excluded respondents who are not citizens of Germany from the SOEP data for purposes of comparison because their frequency of representation in the Barometer is disproportionately low.

In the SOEP, between five and six percent of respondents indicated that they actively supported refugees on site. In the Barometer, the proportion was between nine and ten percent. The other areas measuring social engagement also recorded higher proportions in the population samples that were taken on a monthly basis.

As expected, the comparison showed that the respondents in the Barometer systematically indicated a higher level of social engagement in the refugee issue than the respondents in the SOEP. Nevertheless, the analyses of the sample population have been able to provide initial indications while tracing changes on a monthly level.

Table

#### Engagement and assessment (Barometer versus SOEP)

| | | Barometer of public opinion (February until May) | | SOEP 2016, only persons without foreign citizenship | |
|---|---|---|---|---|---|
| | SOEP 2016, only persons with German citizenship | Between… | …and | Between… | …and |
| **Engagement (Percent)** | Monetary Donation/in kind | 32.4 | 34.4 | 26.9 | 28.4 |
| | On-site engagement | 8.5 | 9.8 | 4.7 | 5.5 |
| | Demonstrations/Petitions | 5.1 | 6.2 | 4.6 | 5.4 |
| | At least one | 35.6 | 36.9 | 30.2 | 31.7 |
| **Assessments (Mean)** | Economy | 5.6 | 5.7 | 5.7 | 5.8 |
| | Cultural Life | 5.4 | 5.6 | 5.5 | 5.6 |
| | Place to live | 4.9 | 5.1 | 5.0 | 5.1 |
| | Short-term | 3.7 | 3.8 | 3.7 | 3.8 |
| | Short-term | 5.3 | 5.4 | 5.3 | 5.4 |
| | Index | 5.0 | 5.1 | 5.1 | 5.1 |

*Sources: "Barometer of public opinion about Refugees in Germany" (weighted); poll from January to November 2016; SOEP v.33 (weighted), wave 2016; authors' own calculations.*



With regard to attitudes toward refugee migration, there were matching mean values in both the SOEP and Barometer. The summarizing index is equivalent to a value of five on the scale in each case.

**1** See Jörg P. Schräpler, "Respondent Behavior in Panel Studies: A Case Study of the German Socio-Economic Panel (GSOEP)," *DIW Discussion Papers* 244 (2001).

**2** For the sake of comparability, we included only February through May, the months in which the majority of SOEP interviews were carried out in 2016.

## Green Party followers show highest active support by far

In addition to the classical socio-demographic characteristics, both the general debate on migration and specifically the issue of refugees reveal another line of conflict: party affiliation.[16] In particular, the national conservative Alternative for Germany (*Alternative für Deutschland*, AfD) and the conflict between the conservative Christian Democratic Union (*Christlich Demokratische Union*, CDU) and Christian Social Union (*Christlich-Soziale Union in Bayern*, CSU) have shaped the debate on the federal level. Further, a welcoming culture was especially palpable in autumn 2015, when the population of Germany showed a strong willingness to help migrants. For this reason, exist-

**16** Alexander Yendell, Oliver Decker, and Elmar Brähler, "Wer unterstützt PEGIDA und was erklärt die Zustimmung zu den Zielen der Bewegung?" in: Oliver Decker, Johannes Kiess and Elmar Brähler, eds., *Die enthemmte Mitte. Autoritäre und rechtsextreme Einstellung in Deutschland.* (Gießen: Psychosozial-Verlag, 2016), 137–52.

Table 3

**On-site engagement over party affiliation**
Relative Proportion

| Party | On-site engagement | 95-percent confidence interval |
|---|---|---|
| SPD (Social democrats) | 7.8 | 6.6–9.1 |
| CDU (Conservative) | 6 | 5.0–7.0 |
| CSU (Conservative only in Bavaria) | 3.5 | 1.9–5.1 |
| FDP (Liberal) | 6 | 2.7–9.2 |
| Die Grünen (Green) | 10.7 | 8.7–12.7 |
| Die Linke (far Left) | 6.8 | 4.3–8.9 |
| *NPD/REP etc. (far right)* | *4.2* | *−1.9–10.3* |
| AfD (National Conservative) | 2.9 | 1.2–4.6 |
| *Other* | *7.8* | *2.3–13.2* |
| No Party | 4 | 3.6–4.4 |
| | Cramers V | 0.09 |
| | Pearson Chi²(9) | 125.41 (p = 0.00) |

*Cursive values are based on an n<100. Those are not considered in the interpretation. The estimation is based on an unweighted N of 15315.*

*Sources: SOEP v.33 (weighted), Wave 2016; authors' own calculations*



Table 4

**Assessment of the consequences of the immigration of refugees over party affiliation**
Scale: 1 (extremely negative) to 11 (extremely positive)

| Party | Mean value | 95-percent confidence interval |
|---|---|---|
| SPD (Social democrats) | 5.8 | 5.8–5.9 |
| CDU (Conservative) | 5.4 | 5.4–5.5 |
| CSU (Conservative only in Bavaria) | 4.5 | 4.4–4.7 |
| FDP (Liberal) | 5.7 | 5.3–6.0 |
| Die Grünen (Green) | 7 | 6.9–7.1 |
| Die Linke (far Left) | 5.9 | 5.7–6.1 |
| *NPD/REP Etc. (Far right)* | *2.1* | *1.7–2.4* |
| AfD (National Conservative) | 2.9 | 2.7–3.1 |
| *Other* | *5.8* | *5.4–6.2* |
| No Party | 4.7 | 4.7–4.7 |

*Cursive values are based on an n<100. Those are not considered in the interpretation. The estimation is based on an unweighted N of 15083.*

*Sources: SOEP v.33 (weighted), Wave 2016; authors' own calculations.*



ing volunteer work was also assumed to be an explanatory factor in the respondents' attitudes and level of active on-site support for refugees in addition to party affiliation. Since these variables were not surveyed for the Barometer of Public Opinion,[17] we relied on the 2016 wave of the SOEP[18] (see Box 2).

In the SOEP sample, there was a significant relationship between party preference and active support of refugees on site. Some of the differences between the parties are extremely clear. In 2016, around nine to 13 percent of Green Party (*Bündnis90/Die Grünen*) followers indicated that they had actively provided on-site support to refugees in the past (Table 3). Among party followers, this is by far the highest proportion. With values from one to five percent, AfD followers had the lowest proportion.[19] There is also a difference between the Union parties: CDU followers tended to provide active support more frequently than those of the CSU. The remaining parties' levels of support are all very similar.

Looking at attitudes toward refugees by party showed that on average, followers of the Green Party have a significantly more positive attitude than the followers of other parties, followed by the Left Party (*Die Linke*), the Social Democratic Party (*Sozialdemokratische Partei*, SPD), and the Free Democratic Party (*Freie Demokratische Partei*, FDP) (Table 4). Here, there are significant differences between the Union parties: the mean value of CSU followers' attitude toward refugees is significantly lower than that of CDU followers. As expected, the attitude of AfD followers was clearly the most negative. The mean value for people who are not followers of any political party was around 4.7. This puts their attitude in line with that of CSU followers, clearly higher than that of AfD followers, and below the value of CDU followers.

## Habitual volunteers are more open to refugees

The SOEP surveys volunteer activity every two years.[20] For the present study, the optional answers were sum-

**17** The "Sunday question" (Which party would you vote for if federal elections were held this Sunday?) was included in the March survey. For this indicator, similar relationships such as the ones reported here were shown on the basis of the SOEP V. 33 2016.

**18** Because there is no cross-sectional weighting for the SOEP wave surveyed in 2016 yet, we used personal weighting based on the SOEP 2015 (v. 32).

**19** The values for the National Democratic Party (*Nationaldemokratische Partei*, NPD), The Republicans (*Die Republikaner*, REP) and The Right (*Die Rechte*) cannot be adequately evaluated due to low number of cases.

**20** See: Mareike Alscher and Eckhard Priller, "Zivilgesellschaftliches Engagement," in: German Federal Statistical Office and Berlin Social Science Center marized in two categories: "Did volunteer work" and "Did not do any volunteer work." The findings showed the respondents who indicated they had volunteered in earlier waves[21] to be significantly more positive about the consequences of refugee migration than other respondents. The group of habitual volunteers had a mean value between 5.6 and 5.8, while those who did not volunteer in the past had a mean value of 4.9 (see Table 5). The differentiation is stable over time. This means that even respondents who had not volunteered for several years had more positive attitudes toward refugees. Volunteering in the past is also a predictor of volunteer work in the future. There is a significant positive relationship between general social engagement in the past and active support of refugees since 2015 (see Table 6). And people who actively supported refugees in the past indicated with significantly higher frequency that they also intend to do so in the future (see Table 7). The results showed that organized civil society figures as a key resource in offsetting bottlenecks in state care and integrating refugees into German society.

Table 5

**Assessment of the consequences of the immigration of refugees over civil engagement in the past**

Scale: 1 (extremely negative) to 11 (extremely positive)

| Civil engagement (past) | Mean value | 95-percent confidence interval |
|---|---|---|
| Yes | 5.7 | 5.6–5.8 |
| No | 4.9 | 4.9–5.0 |
| | F Adj. Wald-Test (H0: diff=0) | 157.17 (p = 0.00) |

*The estimation is based on an unweighted N of 15,440.*

*Sources: SOEP v.33 (weighted), Wave 2011 2013 2015 2016; authors' own calculations.*



## Conclusion

With a view to the immigration of refugees, the residents of Germany were much more concerned last year than they were three years ago. The same applies to their concern about xenophobia. Given this context of the mainly in the year 2015 high refugee immigration, the present report studied respondents' assessments of the consequences of forced migration and their level of willingness to support refugees actively.

According to the results, the majority of German residents indicated that they saw more risks than opportunities connected to the increase in refugee migration since the middle of 2015.

In comparison to other options of being active, respondents showed the highest level of willingness to donate money for refugees. Their willingness to participate in demonstrations or petitions was the lowest—whether for or against refugees could not be determined based on the data.

Comparing regions within Germany, it becomes apparent that there is an east-west disparity in rating the consequences of refugee migration. People in western Germany are clearly more optimistic in their assessment of the consequences than those in eastern Germany. For both the assessments and active on-site support for refugees, formal education proved to be important: The higher the respondent's level of education, the more positive the rating for the consequences of refugee migration and the greater the likelihood that they actively support refugees.

Additional analyses of the SOEP data showed that traditional conflict lines such as political party affiliation also played a key role in rating the consequences of forced migration. It also became clear that a history of doing volunteer work was closely tied to a clearly more positive attitude toward refugees and a higher level of willingness to help.

The population's increased concern is a reminder to political representatives to address the refugee issue with a sustainable, convincing master plan for migration to and integration into Germany, so that refugees can find their niches in German society and institutions, and public structures are adequately prepared to accommodate forced migration in the future.

Success will come more easily if, alongside providing adequate financial means,[22] public administration and civil society join forces effectively. As the analyses have shown, regardless of the skepticism of one part of German society, a not insignificant proportion is willing to help refugees who have arrived in Germany and make it easier for them to integrate. Germany's political representatives must tap this potential and support volunteer engagement. This would greatly reinforce social solidarity. However, this does not mean that society's willingness to be active for refugees should replace the long-term tasks of the state. These processes must go hand in hand in order to leverage coordinated action in the best possible manner.

(WZB), eds., *Datenreport 2016: Sozialbericht für Deutschland*, (2016) (in German only, available online). In 2013, the proportion of volunteers was approximately 30 percent.

**21** We are referring to 2011, 2013, and 2015.

**22** For an overview of the expenses incurred in the federal budget for asylum and refugee policies in 2015 and 2016, see the January 2017 Monthly Report of the Federal Ministry of Finance.

Table 6

**Engagement for refugees on-site over civil engagement in the past**
Relative Proportion

| Civil Engagement (past) | On-site engagement | 95-percent confidence interval |
|---|---|---|
| Yes | 11.3 | 10.2–12.3 |
| No | 3.7 | 3.4–4.0 |
| | Cramers V | 0.15 |
| | Pearson Chi2(1) | 275.52 (p = 0.00) |

*The estimation is based on an unweighted N of 15675.*

*Sources: SOEP v.33 (weighted), Wave 2011 2013 2015 2016; authors' own calculations.*



Table 7

**On-site engagement for refugees[1] over planned on-site engagement**
Relative Proportion

| Engagement planned | Engaged in the past 12 months | 95-percent confidence interval |
|---|---|---|
| Yes | 90.5 | 88.6–92.5 |
| No | 7 | 6.6–7.4 |
| | Cramers V | 0.59 |
| | Pearson Chi2(1) | 5401.92 (p = 0.00) |

*The estimation is based on an unweighted N of 15860.*

*1 At the time of the interview it was referred to engagement in the last 12 months.*

*Sources: SOEP v.33 (weighted), wave 2016; authors' own calculations.*



In the future, overcoming the challenges of refugee migration while avoiding societal and political upheaval must be the goal. Status recognition, accommodation, and sustainable integration into social spheres such as education, the job market, and social networks must remain a policy priority in election year 2017. Alongside states and municipalities, the federal government is being summoned to the task at hand.

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# Study shows high enrollment in daycare and school among refugee children, but the possible need for more daycare for children under three and more language support for school-aged children

**By Ludovica Gambaro, Elisabeth Liebau, Frauke Peter, and Felix Weinhardt**

For refugee children, daycare or elementary school can play an important role in integration into German society. In the context of the arrival of more than 890,000 refugees in Germany in 2015 alone, this study focuses on daycare and school attendance among refugee children up to the age of 12. It is based on data from the IAB-BAMF-SOEP Survey of Refugees, a repre-sentative study of more than 4,500 adult refugees conducted by the Institute for Employment Research (IAB), the Federal Office for Migration and Refugees (BAMF) and the SOEP at DIW Berlin. In the survey, respondents are asked to provide information about all children living in their household.

Descriptive analyses show that more than 98 percent of elementary-school-aged refugee children attended school in 2016 but that less than half of these children received language support. In the 3 to 6 age group, findings show only minimal differences in attendance of early childhood education and care programs between refugee children and other children. But in the 0 to 3 age group, the number of refugee children in daycare is far below average. Overall, the findings present a relatively positive picture of daycare and school attendance among refugee children in Germany, but with significant room for improvement in the use of early childhood and care education programs. The results do not allow for more detailed conclusions about the quality of the daycare children attended, and thus do not show, for instance, whether attendance of daycare or educational programs is actually fostering these children's further integration.

In the year 2015 alone, over 890,000 refugees arrived in Germany—one fourth of them under the age of 16.[1] Children thus make up a substantial share of refugees in Germany, and often, their first contact with children and adults from Germany and with the German language is in the context of daycare or school. In these institutional frameworks, refugee children have the opportunity to learn German and to gain experience with the society and culture through in-teractions with German-speaking teachers, children, and parents.[2] Daycare or school attendance by children may even be an important step in their parents' integration: parents build social networks by meeting the parents of their children's friends. This can have a positive impact on parents' language acquisition and job search activities.[3]

This is the first study to examine enrollment in German educational institutions—whether daycare (Kita) or elementary school—by children of refugees. The study focuses on children up to the age of 12 who arrived in Germany accompanied by at least one adult who submit-

1 Bundesamt für Migration und Flüchtlinge (BAMF). December 2015. "Aktuelle Zahlen zu Asyl." Accessed April 5, 2017 (the same is true of the other online sources listed in this report unless otherwise specified). http://www.bamf.de/DE/Infothek/Statistiken/Asylzahlen/AktuelleZahlen/aktuelle-zahlen-asyl-node.html

2 See also, e.g., Peter, Frauke and C. Katharina Spieß. 2015. "Kinder mit Migrationshintergrund in Kindertage-seinrichtungen und Horten: Unterschiede zwischen den Gruppen nicht vernachlässigen!" DIW Wochenbericht 1/2; Spieß, C. Katharina, Franz Westermaier, and Jan Marcus. 2016. "Kinder und Jugendliche mit Fluchthinter-grund nutzen freiwillige Bildungsangebote seltener – mit Ausnahme der Schul-AGs." DIW Wochenbericht 35, and Meiner-Teubner, Christiane. 2016. "Flüchtlingskinder in der Warteschleife." DJI Impulse: Das Bulletin des Deutschen Jugendinstituts 114: 19–21.

3 Romiti, Agnese, Herbert Brücker, Tanja Fendel, Yuliya Kosyakova, et al. 2016. "Bildung und Sprache." In "IAB-BAMF-SOEP-Befragung von Geflüchteten: Überblick und erste Ergebnisse." DIW Berlin Politikberatung kompakt 116 edited by Herbert Brücker, Nina Rother, Jürgen Schupp; Eisnecker, Philipp and Diana Schacht. 2016. "Die Hälfte der Geflüchteten in Deutschland fand ihre erste Stelle über soziale Kontakte." DIW Wochen-bericht 35.

Box

**Refugee Children in the IAB-BAMF-SOEP Survey of Refugees**

Table

**Selected socio-demographic characteristics of refugee children and their anchor respondent**

| | Median (percentage. age in years) | Number of observations |
|---|---|---|
| ***Characteristics of anchor respondent*** | | |
| Age in years | 34.7 | 4,359 |
| Sex (female = 1) | 45.0 | 4,365 |
| In a partnership (yes = 1) | 91.4 | 4,399 |
| Partner residence (same household = 1) | 82.9 | 4,360 |
| Type of residence (private home = 1) | 74.0 | 4,405 |
| ***Country of origin*** | | |
| Syria | 45.3 | 4,373 |
| Afghanistan | 12.5 | 4,373 |
| Iraq | 9.4 | 4,373 |
| Eritrea | 1.5 | 4,373 |
| Middle East and North Africa (MENA) | 3.4 | 4,373 |
| Western Balkan* | 9.5 | 4,373 |
| Former USSR | 10.2 | 4,373 |
| Other African country | 4.5 | 4,373 |
| Other/stateless | 3.6 | 4,373 |
| ***Residency status*** | | |
| Ongoing proceedings | 43.4 | 4,319 |
| Recognized | 47.0 | 4,319 |
| Temp. stay of deportation | 5.8 | 4,319 |
| Other | 3.8 | 4,319 |
| ***Child characteristics*** | | |
| Age in years | 5.9 | 4,405 |
| Sex (female = 1) | 46.4 | 4,399 |
| Region (East Germany = 1) | 21.9 | 4,405 |

**Albania, Bosnia-Herzegovina, Kosovo, Macedonia, Montenegro, Serbia.*

*Source: IAB-BAMF-SOEP Survey of Refugees, weighted. Authors' calculations.*



Most of the refugee children are from Syria.

This report is based on data from the IAB-BAMF-SOEP Survey of Refugees,[1] a representative survey of a total of 4,527 adult refugees conducted by the Institute for Employment Research (IAB) and the Federal Office for Migration and Refugees (BAMF) and the SOEP at DIW Berlin, whose aim is to provide a new database on this population group.[2] Respondents to the survey are asked in the household questionnaire to provide information on all children living in their household. The present study is limited to children below the age of 12 and their use of educational and care institutions in Germany, primarily daycare and elementary school.

The sample of refugee children contains 4,166 children up to the age of 12 living in 1,773 households. The refugees in the IAB-BAMF-SOEP Survey were interviewed between June and December 2016. The sample makes it possible to draw conclusions that are representative for "the total population of refugees registered in the Central Register of Foreign Nationals who entered Germany between January 1, 2013, and January 31, 2016, and applied for asylum"[3]. The data have not yet been processed completely at the time of writing this report. Some of the data's potentials for analysis—for instance, of the relationships among respondents in a household—cannot currently be utilized.

**1** For more information on the sample itself, but also on the biographies of the refugees, see Brücker, Herbert, Nina Rother, and Jürgen Schupp (2016): IAB-BAMF-SOEP-Befragung von Geflüchteten 2016: Studiendesign, Feldergebnisse sowie Analysen zu schulischer wie beruflicher Qualifikation, Sprachkenntnissen sowie kognitiven Potenzialen. DIW Berlin Politikberatung kompakt 123.

**2** See also Brücker, Herbert, Nina Rother, Jürgen Schupp, Christian Babka von Gostomski, et al. (2016): "Flucht, Ankunft in Deutschland und erste Schritte der Integration." DIW Wochenbericht 46.

**3** See Box 1 in Brücker et al. 2016, (ibid).

ted an asylum application. The descriptive study is based on a representative sample of children with a refugee background in a survey conducted jointly by the Institute for Employment Research (IAB), the Federal Office for Migration and Refugees (BAMF), and the SOEP at DIW Berlin (see inset text).[4]

**4** See Kroh, Martin, Herbert Brücker, Simon Kühne, Elisabeth Liebau, et al. 2016. "Das Studiendesign der IAB-BAMF-SOEP-Befragung von Geflüchteten." In "IAB-BAMF-SOEP-Befragung von Geflüchteten: Überblick und erste Ergebnisse." DIW Berlin Politikberatung kompakt 116, edited by Herbert Brücker, Nina Rother, Jürgen Schupp, 3–10.

## Institutional framework: The right to daycare in Germany and the laws on compulsory schooling

According to the German Federal Ministry for Family Affairs, Senior Citizens, Women and Youth (BMFSFJ), refugee children are legally entitled to a space in a public daycare facility if they have a temporary residence permit as defined in article 55 of the Asylum Procedure Act (AsylVfG) and if the family has left the reception center (where refugees are housed temporarily upon arrival in Germany) and lives in a post-reception refugee shelter

As a rule, in each household, an "anchor respondent" provides information about educational participation of all children in the household. Beyond this, if information on a child's nationality, date of entry to Germany, or residency status is not available, the anchor respondent's information is used for the children. The anchor respondent is usually one of the child's biological parents. There is a small group of children with older anchor respondents, probably relatives or grandparents: On average the accompanying adults are 35 years old, and the minimum age is 18 and the maximum age 83 (see Table).

Almost three-quarters of the children live in private apartments or houses and around one quarter in group housing. 91 percent of the children live in households with an accompanying adult who is in a relationship, and 90 percent of these children live in two-partner households.[4] At the time of writing, however, it is not possible to determine whether these are the child's biological parents. Just one in every six children is the only child living in a household. The majority of children, almost one third, live with one or two siblings.

Forty-eight percent of the children in the study are refugees from Syria. Another 13 percent are from Afghanistan and 10 percent are from Iraq; close to 10 percent each are from the Western Balkan states and from the countries of the former USSR. Other countries of origin play a minor role in the sample. Aside from the large share of Syrian children, the group is heterogeneous with numerous countries of origin.

**4** A small percentage live with an accompanying adult whose partner lives in Germany (4 percent) or is still living abroad (5 percent).

in the municipality to which they have been assigned.[5] According to a 2016 study by the German Youth Institute (DJI), families are legally entitled to send their children to daycare as soon as they enter Germany.[6] This would mean that children of refugees had the legal right to daycare beginning at age one. A further study by the DJI found evidence of regional differences, however, indicating that some German states only provide daycare to refugee children after a period of several months and after families have moved out of the temporary reception center.[7]

For children aged 6 and older, school attendance is compulsory in most states, depending on the rules of the state in which the children live.[8] The regulations on school attendance—in contrast to those on daycare—thus appear not to be conditional on asylum status or the specific housing situation. The only exception is in Bremen and Schleswig-Holstein, where, for instance, the housing situation is taken into consideration.[9] These state-level differences are documented in the 2017 annual report of the Expert Council of German Foundations on Integration and Migration.[10]

Despite the fact that school attendance is compulsory in Germany, it is conceivable that school attendance differs between refugee children and all other children in the same age group. The programs aimed at fostering their integration into schools, for instance, appear to differ from state to state. Bavaria offers special classes in German as a second language, while North Rhine-Westphalia offers preparatory and remedial classes, and Berlin places refugee children in "welcome classes." It is unclear to what extent these educational offerings actually differ in content, or whether they differ primarily in name.[11] Determining the precise institutional differences between the different programs providing support to refugee children and promoting their integration into schools and daycare is beyond the scope of this report.

**5** Bundesministerium für Familien, Senioren, Frauen und Jugend (BMFSFJ). 2016. "Rechtliche Rahmenbedingungen: Frühe Bildung: Gleiche Chancen." http://www.fruehe-chancen.de/themen/integration/rechtliche-rahmenbedingungen/

**6** A legal study by the DJI concludes that the use of daycare by refugee children is just as clearly defined under the law as it is for German children, and that no matter what asylum status refugee children have, "they generally have the right to benefits and support programs in daycare and childcare facilities under §§22 ff. SGB VIII" haben. See also Meysen, Thomas, Janna Beckmann, and Nerea González Méndez de Vigo. 2016. "Flüchtlingskinder und ihre Förderung in Tageseinrichtungen und Kindertagespflege: Rechtsexpertise im Auftrag des Deutschen Jugendinstituts," DJI Munich, 9.

**7** See also Meiner-Teubner 2016, (ibid).

**8** Mona Massumi, Nora von Dewitz, Johanna Greißbach, Henrike Terhart et al. (2015): Neu zugewanderte Kinder und Jugendliche im deutschen Schulsystem: Bestandsaufnahme und Empfehlungen. In: Mercator-Institut für Sprachförderung und Deutsch als Zweitsprache und vom Zentrum für LehrerInnebildung der Universität zu Köln.

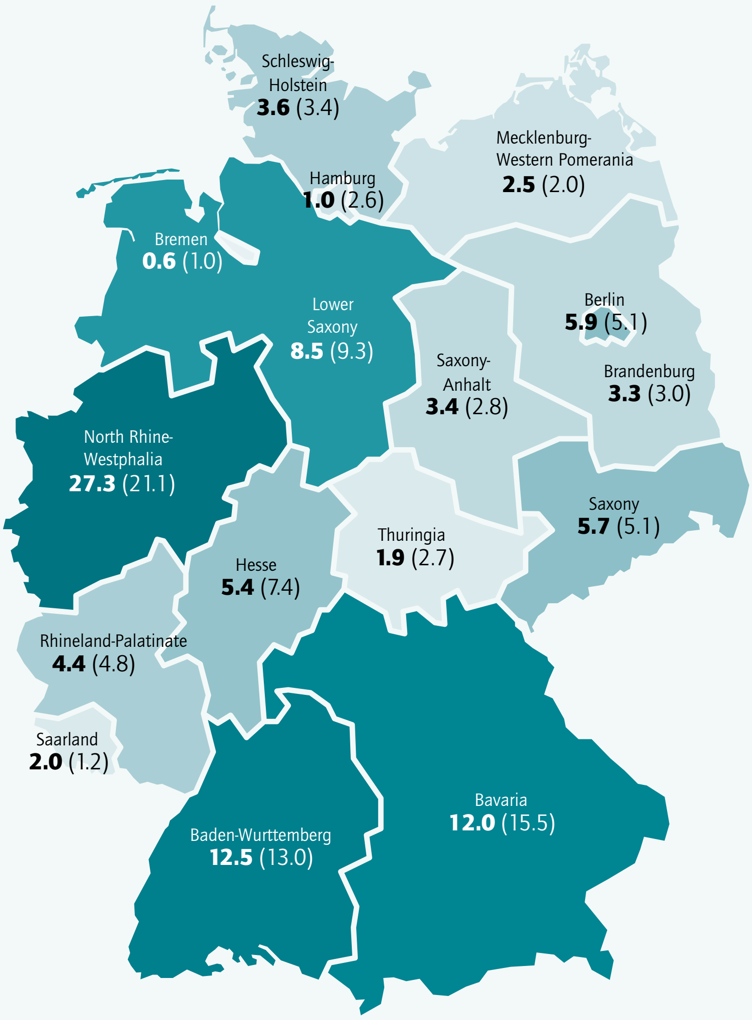
**9** Massumi et al. 2015, (ibid).

**10** See also Figure B3 in: Sachverständigenrat deutscher Stiftungen für Integration und Migration. 2017. "Chancen in der Krise: Zur Zukunft der Flüchtlingspolitik in Deutschland und Europa" Jahresgutachten 2017.

**11** An overview of all the federal states can be found on page 12 in Massumi et al. 2015, (ibid).

Figure 1

**Distribution of the children below age 12 among Germany's federal states, and assignment of refugees to states by Königstein Key**
In percentages




*Source: IAB-BAMF-SOEP Survey of Refugees, weighted. Authors' calculations. BAMF Easy distribution of asylum seekers according to Königstein Key (available online).*



The distribution of children up to age 12 corresponds largely to the Königstein Key.

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## Few studies to date on educational participation of refugee children

The use of daycare differs across Germany both regionally and by socioeconomic factors[12], but it is often lower among children with a migration background. Differences in enrollment in early childhood education and care have declined in recent years among children both with and without a migration background and especially in the 3-to-6 age group. Children under the age of 3 who speak very little German at home have lower levels of daycare enrollment than children from households where German is spoken.[13] Few systematic analyses have been conducted to date on children who arrived in Germany in previous waves of refugees in the 1990s.[14]

Based on the existing findings, it seems likely on the one hand that children who have arrived in Germany as refugees since 2013 have lower educational enrollment than others. The regionally inconsistent and potentially unclear legal situation presents refugee children with additional hurdles to overcome to enter daycare. On the other hand, it is conceivable that these can be overcome thanks to the high level of public attention on refugee issues, the existing organizational networks, and the special advisory services that are available. Furthermore, school enrollment may be delayed even when attendance is compulsory. Refugee children may, for instance, have health issues to overcome or may need time to adapt to their new social environment before being able to go through everyday school routines. At an administrative level, schools have to create capacities and design programs to accommodate refugee children. For all these reasons, one cannot expect all refugee children to enroll in school immediately upon arrival in Germany.

More general statements about the situation of refugee children in Germany can only be formulated on the basis of more reliable data. Until recently, findings on the educational and care situation of refugee children were extremely limited.[15] The German Youth Institute carried

**12** See also Schober, Pia, C. Katharina Spieß. 2012. "Frühe Förderung und Betreuung von Kindern: Bedeutende Unterschiede bei der Inanspruchnahme besonders in den ersten Lebensjahren." DIW Wochenbericht 43, 17-28, and for a more comprehensive assessment, Wissenschaftlicher Beirat für Familienfragen. 2016. Migration und Familie, Kindheit mit Zuwanderungshintergrund, Wiesbaden.

**13** See also Bildungsberichterstattung. 2016. Bildung in Deutschland 2016. Ein Indikatorengestützter Bericht mit einer Analyse zu Bildung und Migration, Bielefeld, and Peter et al. 2015, (ibid), and Wissenschaftlicher Beirat 2016, (ibid).

**14** Aside from the present report, there is only one other report on Germany examining the use of voluntary educational institutions in Germany (which includes daycare): Spieß et al. 2016, (ibid).

**15** For an overview of the research on forced migration, see: Institut für Migrationsforschung und Interkulturelle Studien (IMIS) der Universität Osnabrück und Internationales Konversionszentrum in Bonn (Bonn International Center for Conversion (BICC) 2017. Verbundprojekt "Flucht: Forschung und Transfer. Flüchtlingsforschung in Deutschland." https://flucht-forschung-transfer.de/

out a survey of 100 accompanied and unaccompanied minor refugees between the ages of 14 and 18 who had been in Germany for both shorter and longer periods of time.[16] Their findings show that these young refugees are willing and highly motivated to attend school and learn German. However, they face major challenges in getting their bearings in their new surroundings, which often seem—and in some cases are—dangerous and unwelcoming.[17]

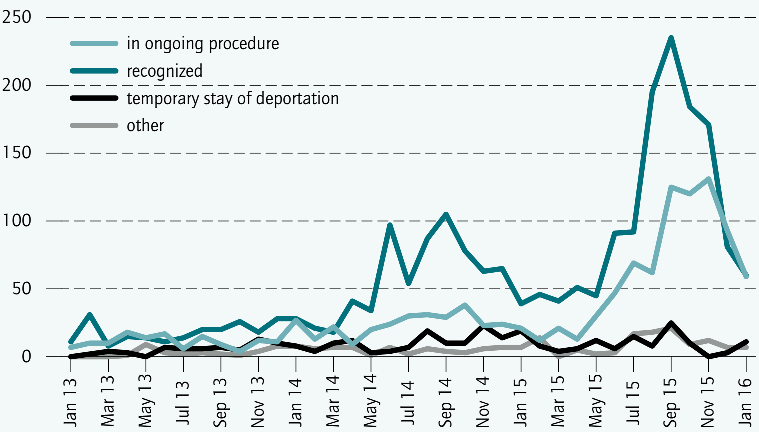
## New sample provides basis for the first generalized statements about school and daycare attendance among refugee children

This report uses data from the IAB-BAMF-SOEP Survey of Refugees, a representative survey of more than 4,500 adult refugees who arrived in Germany between 2013 and January 2016 and who have applied for asylum. The sample has been created as a joint project of the Institute for Employment Research (IAB) and the Federal Office for Migration and Refugees (BAMF) and the SOEP at DIW Berlin (see inset text).[18] The IAB-BAMF-SOEP Survey of Refugees is a household survey that compiles information about all children living in a household below the age of 18. It does not cover children who have come to Germany unaccompanied. These make up only a small percentage of all refugee children up to the age of 12. The database thus allows for generalized statements about school and daycare attendance by refugee children below the age of 12.

The 4,166 refugee children below the age of 12 in the IAB-BAMF-SOEP Refugee Sample are distributed across Germany's federal states according to the Königstein Key[19] quota system (Figure 1). Since data collection took place as many as three years after the refugees' arrival

Figure 2

**Number of refugee children in the sample by month of arrival and residency status at time of survey**




*Number of refugee children in the sample by month of arrival and residency status at time of survey*

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Large numbers of refugee children came to Germany in the summer months of 2014 and 2015.

in Germany, many of the children were already in longer-term living situations at the time of the survey; some of the children were born in Germany.

In Figure 2, the refugees' residency status at the time of the survey is shown in relation to their date of arrival in Germany.[20] The results clearly show the two waves of immigration in the summer months of 2014 and 2015. Most of the refugee children covered by the survey have an officially recognized residency status. Residency status correlates strongly with the country of origin; most of the children with an official residency status are from Syria. It comes as no surprise that a large portion of the many refugees who arrived in summer 2015 are still applications of the the decision process. As a result, these refugees still have not received a final decision on their asylum claim (Figure 2).

**16** Huber, Anna, and Claudia Lechner. 2015–2017. Projekt "Unbegleitete und begleitete minderjährige Flüchtlinge – Lebenslagen, Bedarfe, Erfahrungen und Perspektiven aus Sicht der Jugendlichen". www.dji.de/minderjaehrige-fluechtlinge.

**17** The Leibniz Institute for Educational Trajectories (LIfBi) is currently planning to create a larger database on the educational trajectories of refugees in German in the framework of the project "ReGES – Refugees in the German Education System". The study will survey refugee children and teenagers in four of Germany's federal states. Data and findings are not yet available. See: https://www.lifbi.de/en-us/furtherstudies/reges.aspx.

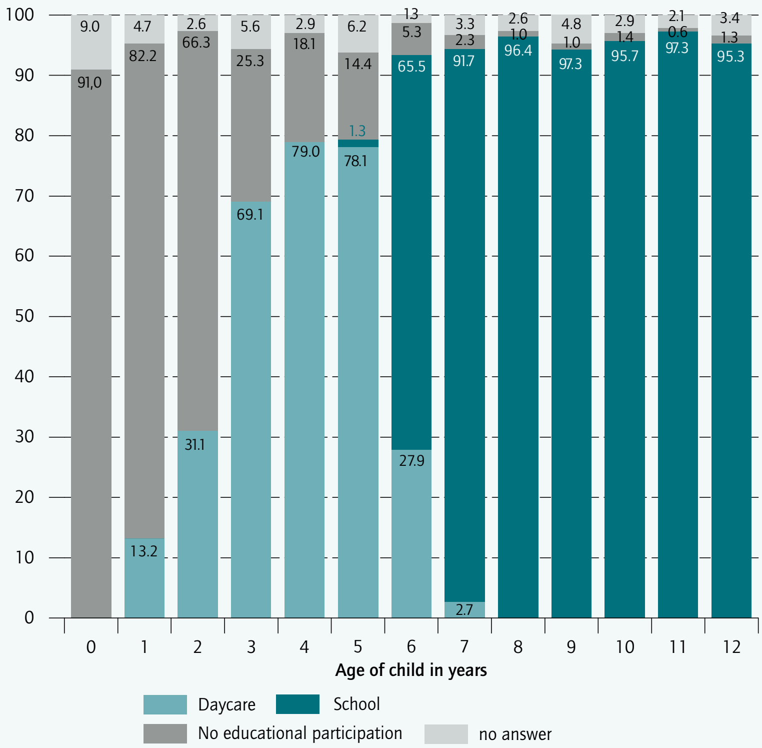
**18** See also Brücker et al. 2016, (ibid), and Brücker, Herbert, Nina Rother, Jürgen Schupp, Christian Babka von Gostomski et al. 2016. "Flucht, Ankunft in Deutschland und erste Schritte der Integration." DIW Wochenbericht 46.

**19** The "Königstein Key" determines how many asylum-seekers each of Germany's federal states must accept. It is based on tax revenues (weighs two thirds of the calculation) and population (weighs one third of the calculation). See http://www.bamf.de/EN/Service/Left/Glossary/_function/glossar.html?lv3=1504234&lv2=1450778.

**20** Date of entry, residency status, and nationality are information that relate to the child's accompanying adult (anchor respondent) and added here to the child sub-sample in the IAB-BAMF-SOEP Survey.

Figure 3

**Educational participation by refugee children up to age 12**
In percentages




*Many refugee children between 3 and 6 are in daycare, most over the age of 6 attend school..*



Many refugee children between 3 and 6 are in daycare, most over the age of 6 attend school.

## Clear age differences in daycare attendance by refugee children

School and daycare attendance by refugee children is clearly age-dependent (Figure 3). In the case of daycare, the results show an age-dependent pattern, with attendance rates of around 14 percent among 1-year-olds, rising to almost 78 percent among 4 and 5-year-olds.

### High daycare attendance among children over the age of three

Data on daycare attendance typically separate children into two groups: those under the age of 3 and those between the ages of 3 and 6. This is due largely to the probability of significant differences in daycare attendance between the two groups. While over 90 percent of all older children in Germany attend daycare, barely one-third of children under the age of 3 do (Figure 4). The picture is similar for refugee children: The probability of attending daycare in this group increases significantly over the age of 2 (Figure 3).

Looking at Germany as a whole, refugee children attend daycare at a lower rate than the average for this age group in Germany. Slightly below 80 percent of refugee children over the age of 3 attend daycare as compared to 95 percent of children in Germany overall. In the under-three age group, the difference between refugee children and all children is even greater, at 16 and 28 percent, respectively (Figure 4).

There are also major differences between East and West in daycare and school attendance among children below the age of 3 (East Germany 47%, West Germany 24%). If we look exclusively at children of refugees, there is a substantial East-West difference in both age groups. In East Germany, daycare attendance is high among refugee children in the under-three age group, but it is much higher in West Germany in the over-three age group: 63 percent and 84 percent, respectively. In contrast, daycare attendance is much higher in West Germany in the over-three age group: 63 percent of refugee children attend daycare in East Germany and 84 percent in the West.

### Regression analysis shows correlations with type of accommodation among children in the over-three age group

The East-West differences reported above may be the result of factors that are described below with the use of multivariate regression analyses[21] for both age groups (below-three and above-three). Typical factors influencing children's daycare attendance, such as parental employment and education, or urban-rural differences, are outside the scope of the present study since we used preliminary data that do not yet contain all relevant factors (see inset text). Other factors can be used to this end, however, such as those describing the specific situation of refugees, residency status, type of accommodation, and duration of stay.

The results of multivariate regressions show that in the under-three age group, only the age of the child and whether the family lives in East or West Germany show a statistically significant, positive correlation with daycare attendance. The child's sex does not play a statistically significant role. Among refugee children between the ages of 3 and 6, the results show that along with age

**21** The multivariate regression analysis makes it possible to study how the relationships among a variety of factors affect the probability of attending daycare. We controlled for the influence of all factors in the dataset that are considered relevant and thus reduced distortions due to spurious correlations to a certain extent.

and the region in which they live, the duration of their stay in Germany and the type of accommodation they live in also show statistically significant positive correlations with daycare attendance. Daycare attendance is substantially higher among refugee children in this age group who live in private housing rather than group accommodations, those who have already lived in Germany for some time, and those living in West Germany.

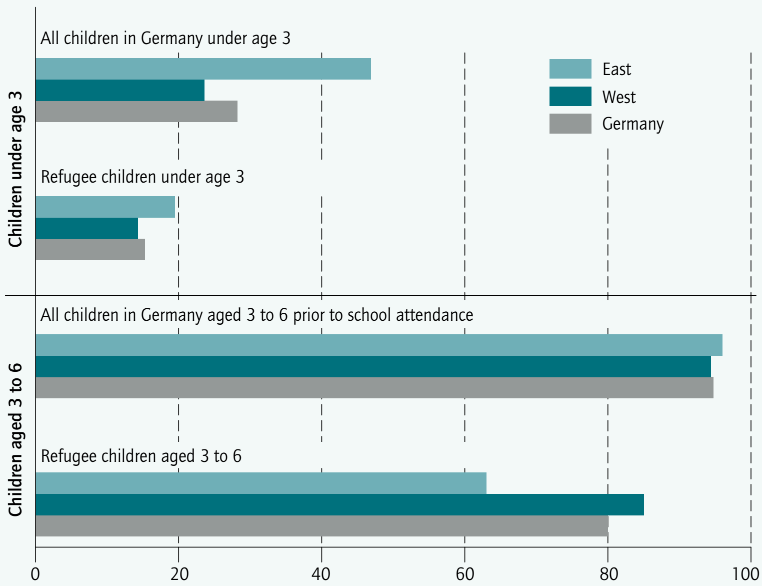
Overall, the results show that daycare attendance among refugee children—as with all other children—is statistically correlated with the age of the children and the region in which they live; among older children, the same is true for type of accommodation and duration of stay in Germany. At increasing ages, and especially above the age of 3, many refugee children attend daycare. In the group of refugee children under the age of 3, the probability of attending daycare is higher in East Germany than in West Germany. Among refugee children between the ages of 3 and 6, the rate of daycare attendance is higher in the West than in the East. This finding stands in contrast to the East-West difference among children in this age group in Germany overall.

These differences should be interpreted with care, however, as they may be related to factors that are not contained in the preliminary data, such as differences between rural and urban areas or differing capacities of daycare institutions.

Figure 4

**Percent of children in daycare**

In percentages




*Sources: For refugee children: IAB-BAMF-SOEP Survey of Refugees. For all children in Germany (as of March 2015): Autorengruppe Bildungsberichterstattung. 2016. Bildung in Deutschland 2016, Table C3-2A (available online).*



Enrollment in daycare is lower among refugee children, especially those below age 3.

## Almost all refugee children between the ages of 6 and 12 attend school

In contrast to daycare attendance, which is voluntary in Germany, school attendance is generally compulsory. There may, however—as mentioned above—be a number of reasons for children of refugees being unable to start school immediately upon arrival.

The study shows that 98 percent of refugee children between the ages of 6 and 12 attend school. Over 78 percent of children attend elementary school and 22 percent secondary school.[22] Furthermore, for a small share of refugee children—around 5 percent—there are no data on school attendance available or the children were listed as not attending school.[23] Although this percentage seems low, special attention will be paid to this group in future waves of the IAB-BAMF-SOEP Survey of Refugees. It will be important to understand, for instance, whether these children are not going to school due to psychological issues or due to a lack of institutional capacities.

## Less than half of refugee children in elementary schools receive language support

Looking at the group of refugee children attending elementary schools, results show that slightly less than half of these children are receiving language support and around 23 percent are attending "refugee classes". Comparing, for instance, the three federal states with the highest percentages of refugees—Baden-Württemberg, Bavaria, and North Rhine-Westphalia—regional differences become evident.

In Baden-Württemberg, a very small percentage of refugee children in elementary schools attend a "refugee class" or preparatory course: just 17 percent, compared to 25 percent in both North Rhine-Westphalia and Bavaria. Ultimately, however, all regional differences have to be treated with caution, since there is no further information

**22** This pattern can be explained by the fact that in most federal states, children begin attending secondary school starting in the fifth grade. Only in Berlin, Brandenburg, Mecklenburg-Western Pomerania do students generally make the transition to secondary school at the end of sixth grade.

**23** Looking only at the data on attendance of educational institutions for this group of children, almost 98 percent of children are in school. Just 2 percent of refugee children were reported not to be attending school or daycare (Figure 3).

available on the educational quality of refugee classes or other regional educational programs for refugees. Furthermore, the data are based on information provided by the children's caregivers, in most cases their parents.

## Conclusions

The present report describes the educational situation of young children of refugees based on representative data from the IAB-BAMF-SOEP Survey of Refugees, and explains daycare and school attendance in this group across all of Germany. Overall, the results present a positive picture of educational participation in the 4,166 refugee children up to age 12 in the study.

Among refugee children in the 3 to 6 age group, almost 80 percent are in daycare. But among those under the age of 3, only one in six attends daycare. Attendance is lower among refugee children than among children in Germany overall, especially in the under-three age group. Nearly all refugee children of elementary school age attend school. It should be noted, however, that slightly less than half of these children are not receiving any form of language-learning assistance. There are regional differences in attendance of specific classes for refugees.

Attendance of daycare or school alone does not guarantee successful integration: above all, it fosters acquisition of the German language. The present analysis solely describes attendance of school and daycare programs by refugee children; conclusions about the quality of the programs available are outside the scope of this study. Further analyses are also necessary to explicitly consider the particular challenges faced by refugee children and the quality of support programs needed.

The foundations for successful integration and social participation of refugee children should be laid at an early age, since young people's entire educational success depends on their educational and care situation in early childhood. Failures to meet these needs in early childhood are difficult to compensate for at later stages of children's development. It is therefore important for those involved in the provision of early childhood care and education to work together to give children of refugees access to high-quality care and educational programs.

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**JEL:** I21, J13

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# Income, social support networks, life satisfaction: lesbians, gays, and bisexuals in Germany

**By Martin Kroh, Simon Kühne, Christian Kipp and David Richter**

Towards the very end of this legislative period, a cross-caucus parliamentary majority gave same-sex marriage the green light – progress for the legal equality of homosexuals in Germany. This report focuses on the life situations of homosexual and bisexual people in Germany. The careers they pursue, for example, differ from those of heterosexuals. Hourly wages are an area of significant disparity: homosexual and bisexual men earn less per hour than heterosexual men with the same qualifications in comparable professions. While differences in personality structure are virtually nonexistent, homosexuals and bisexuals describe themselves as less satisfied with their lives and under more psychological stress. An analysis based on the data from the Socio-Economic Panel (SOEP) at the German Institute for Economic Research yielded these and other results. The SOEP is one of the few representative population surveys in Germany that collects information on the sexual orientation of participants. Expanding the scope of regular social reporting to include data on sexual orientation would make it possible to better document differences in life situations and to more effectively identify where action is needed – such as in fighting discrimination.

Equal rights for homosexuals have been a hot topic of debate in Germany for some time now, but representative population survey data on lesbians, gays, and bisexuals (abbreviated as "LGBs," see Box 1) are relatively rare. This is surprising because the European Union's Charter of Fundamental Rights prohibits discrimination based on sexual orientation,[1] and EU institutions have repeatedly advised member states to monitor the equality of LGBs in various areas of life.[2]

Box 1

### Collecting LGB statistics

In the present report, we call people who self-identify as sexually attracted to members of their own sex "LGB" (lesbian, gay, and bisexual). The SOEP report was based on the responses of 459 homosexuals and bisexuals and 39,100 heterosexual respondents (unweighted number of cases). Due to the comparatively low number of LGB cases, we did not systematically differentiate among lesbians, gays, and bisexuals within the LGB group. We concentrated primarily on comparing LGB respondents on the one hand with heterosexual respondents on the other.

Further consideration of gender identity would permit a more detailed differentiation into LGBTIQ: lesbian, gay, bisexual, trans, intersex, and queer. However, even with the overall number of cases in the SOEP, statistically robust statements that can be made involving sexual orientation and gender identity are limited.

**1** Charter of Fundamental Rights of the European Union (2000). (Available online, accessed August 8, 2017; the same also applies for all other online sources mentioned in this report unless stated otherwise).

**2** See for example European Parliament, "Resolution of 4 February 2014 on the EU roadmap against homophobia and discrimination on grounds of sexual orientation and gender identity," (available online).

Box 2

### On surveying sexual orientation in the SOEP

The sexual orientation of respondents to the Socio-Economic Panel (SOEP), a recurring annual representative survey of private households in Germany,[1] is measured based on two strategies.

Since the first survey in 1984, the SOEP has included information on the composition of participating households (Household Questionnaire) and the individual information of the respondents (Individual Questionnaire), both of which are updated annually. More specifically, it includes the relational structure of all persons living in the household. In this way, it is possible to identify kinship (e.g., mother/child) and partnerships (e.g., wife/husband) among the members of a household. Information on the respondent's sex and that of their partner in the household allows for distinguishing between different- and same-sex couples. We considered the SOEP survey period from 2010 to 2016 for our analyses. People who had a partner of the same sex in one of the years in this period were assigned to the LGB group. People who lived with a partner of a different sex for at least two years and had never had a partner of the same sex were assigned to the heterosexual group.[2]

The approach described above does not allow for statements about people who are not in a relationship or couples who "live apart together." And bisexual respondents in stable partnerships with a person of the opposite sex are incorrectly grouped with heterosexuals. These are the main reasons why a direct question about sexual orientation was integrated into the SOEP core sample questionnaire in the 2016 survey. Participants were asked whether they consider themselves heterosexual, homosexual (lesbian or gay), bisexual, or none of the above.[3]

Yet the direct question about sexual orientation is not without possible sources of error. In 2016, almost 13 percent of respondents refused to answer the question, either by refusing to answer outright or by selecting the answer "None of the above." Because we can assume that LGB respondents in particular decided not to answer the question due to their fear of rejection by the interviewer or in order to criticize the question itself,[4] we applied a correction factor when calculating the proportion of LGBs in the adult population. It gives a higher weighting to respondents who possess the typical characteristics of those who refused to answer. For example, this applies to older people, to

**1** Gert G. Wagner et al., "Das Sozio-oekonomische Panel (SOEP): Multidisziplinäres Haushaltspanel und Kohortenstudie für Deutschland – Eine Einführung (für neue Datennutzer) mit einem Ausblick (für erfahrene Anwender)", *AStA Wirtschafts- und Sozialstatistisches Archiv* no. 2.4 (2008): 301–328.

**2** People who indicated for one year only that they had had a partner of a different sex could be either hetero or bisexual. For this reason, we determined that two years of information on heterosexual partnerships would be an adequate filter for reducing the number of bisexual respondents that were incorrectly grouped with heterosexuals. Nor is it sufficient to use information on partners of different sexes for the same person as a criterion for distinguishing between bisexual respondents and homosexual respondents, since both bisexuals and homosexuals could have a stable relationship with a partner of the same sex.

**3** The exact wording of the question is: "In the context of relationships, the question of sexual orientation arises. Would you describe yourself as ...?" The available answers were "Heterosexual or straight (that is, attracted to the opposite sex), "Homosexual (gay or lesbian, that is, attracted to the same sex)", "Bisexual (attracted to both sexes)", "Other" and "No answer/ Prefer not to say".

**4** On possible problems involved in sensitive survey subjects, see: Roger Tourangeau and Ting Yan, "Sensitive Questions in Surveys," *Psychological Bulletin*, 133(5) (2007): 859–883.

However, even seemingly trivial facts, such as the total number of LGBs living in Germany, are based on rough estimates at best (see Box 2). And based on the 2016 microcensus, the German Federal Statistical Office (*Statistisches Bundesamt*) reported that 0.46 percent of cohabiting couples in Germany are of the same sex[3], but little is known about how many persons living without a partner—around one-third of the adult population[4]—are hetero-, bi-, or homosexual.

The Socio-Economic Panel (SOEP) at the German Institute for Economic Research (DIW Berlin) is attempting to close this research gap by not only collecting data on the sex of two partners in a surveyed household but also requesting voluntary information on respondents' sexual orientation. The SOEP encompasses a wide range of subjects, including everything from employment, social

**3** The German Federal Statistical Office reported 95,000 cohabitating same-sex couples and 20,612,000 cohabitating couples in Germany in total. See Destatis (2017): Gleichgeschlechtliche Lebensgemeinschaften. (accessible online, last access August 24th, 2017); und Destatis (2017): Paare nach Lebensform (accessible online, last access August 24th, 2017);.

**4** Elle Krack-Roberg et al., "Familie, Lebensformen und Kinder," *Datenreport 2016: Sozialbericht für Deutschland*, (PDF, German Federal Statistical Office (Destatis), Wiesbaden, 2016) (available online).

people with a partner in the household, and to specific survey modes.[5]

Another possible source of error is incorrect information provided intentionally to meet presumed societal expectations. This is why the analyses and estimates presented in this report refer solely to LGBs who live openly as such.

In all likelihood, the extent of incorrect information and the resulting underestimation of the proportion of LGB respondents vary across age groups (see Table). Not unexpectedly, at 25 percent, the proportion of 17- to 29-year-olds among LGBs in the SOEP sample is twice as high as the proportion of this age group among heterosexual respondents. The reverse holds true among respondents age 60 and over: 15 percent of the LGBs and 34 percent of the heterosexuals in the sample are in that age group. The average LGB age is 42, which is significantly lower than that of heterosexuals at 52.[6]

Differences in the life situations of hetero and LGB respondents could simply be due to the measured differences in age. In order to enable comparisons between LGBs and heterosexuals despite that fact, we used the "Propensity Score Weighting" method by age group. We weighted the subsample of heterosexual respondents to make their age distribution correspond to that of the relevant distribution of the LGB subsample. Weighted in this way, the data allow for comparison between LGBs and heterosexuals of the same age. For informational purposes, the tables also contain the values for heterosexual respondents without adjustment for age.

To classify the SOEP study participants as hetero, bi-, or homosexual, we used both self-reported information on sexual orientation as well as information on the sex of current and former partners.

5 Initial analyses indicate that in a face-to-face survey situation, respondents refuse to provide information on their sexual orientation less often than respondents who complete the interview on their own. However, in face-to-face interviews, the frequency of LGB identification decreases. A similar pattern is evident when a third person is present during the interview.

6 Although a biological mechanism of sexual orientation should be independent of age, the age-dependent differences indicate that a social process is involved in the reported identification with a sexual orientation.

Table

**Gender and age**

Share in percent

| | Heterosexual (1) | LGBs (2) | Difference (1–2) |
|---|---|---|---|
| Women | 51 | 53 | |
| Age (mean) | 51,9 | 41,6 | ** |
| 17 to 29 | 13 | 25 | ** |
| 30 to 44 | 24 | 33 | ** |
| 45 to 59 | 30 | 27 | |
| 60 and over | 34 | 15 | ** |

*Significance levels: *: p < 0.05; **: p < 0.01.*

*Sources: Socio-Economic Panel v33.beta; authors' own calculations.*

*Example: 17- to 29-year-olds make up 13 percent of the heterosexual adult population and 25 percent of the homosexual and bisexual adult population.*



networks, health, and wellbeing to personality structures. This allows for an overview of differences and similarities in heterosexual and LGB respondents in various areas of life.

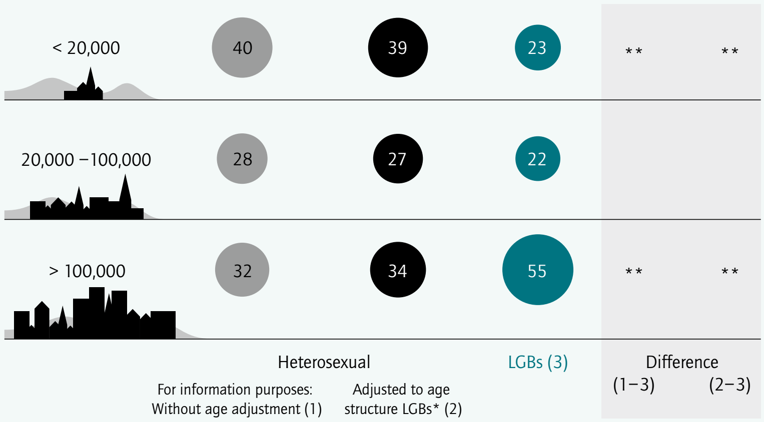
## More lesbians, gays, and bisexuals live in Germany than recorded in official statistics

Based on the 2016 microcensus, the German Federal Statistical Office has released its most up-to-date figure: 95,000 same-sex couples living together in one household—an increase of 53 percent in ten years. However, related to all cohabiting couples in Germany in 2016, same-sex couples only represent a proportion of 0.46 percent. In other Western countries that publish comparable data, the proportion is in some cases two times higher. For example, the United States Census Bureau reported a proportion of one percent same-sex couples; Statistics Canada reported 0.9 percent, and the value for France is 0.6 percent.[5]

5 For an overview, see Andrea Lengerer, "Quality of Official Data on Cohabiting Same-Sex Couples in Germany," presentation at 7th Conference of the European Survey Research Association (ESRA), 2017. For information on the US, see: Daphne Lofquist et al., "Households and Families: 2010," *2010 Census Briefs*, (PDF, United States Census Bureau, Washington, D.C., 2013). (available online; accessed July 22, 2017) and Martin O'Connell and Sarah Feliz, "Same-sex couple household statistics from the 2010 census," *Social and economic household statistics division working paper* 2011-26 (2011). (available online; accessed July 22, 2017) For a discussion on methodology in determining these values for the US, see Theresa J. DeMaio, Nancy Bates, and Martin O'Connell, "Exploring Measurement Error Issues in Reporting of Same-Sex Couples," *Public*

Figure 1

**Municipality size classes**
Share in percent




*Significance levels: *: p < 0.05; **: p < 0.01.*

*Sources: Socio-Economic Panel v33.beta; authors' own calculations.*



LGBs live in small municipalities less often than heterosexuals.

In the 2016 SOEP survey, the estimated number of same-sex couples in private households was 0.9 percent. Due to sampling error, which leads to uncertainty in the estimates, the value lies between 0.7 percent (lower estimate) and 1.1 percent (upper estimate) of all cohabiting couples in Germany. When respondents' partnership information from earlier SOEP surveys is added, the proportion rises above 1 percent.

With this method, LGBs who do not currently have a partner or do not cohabit with their partner are not recorded. Survey-based studies must rely solely on the voluntary self-disclosure of sexual orientation (see Box 2). On the basis of this information, we estimated that approximately 1.9 percent of adults in Germany self-identify as homo- or bisexual (lower estimate 1.6 percent; upper estimate 2.2 percent). At just below three percent, the proportion of LGBs who live alone is significantly higher than that of LGBs cohabiting with a partner (1.3 percent). And at 2.8 percent, people under 45 self-identify as LGB more frequently than people over 60 (just below one percent).

In the UK and Australia, where self-reported information on sexual orientation is collected in large household surveys similar to the SOEP, the estimated proportion of LGBs in the population is somewhat higher than in Germany. In the UK, LGBs make up an estimated 2.3 percent of the population, based on data from 2012 and the UK Household Longitudinal Study (UKHLS). In Australia, based on data from the Household, Income and Labour Dynamics in Australia (HILDA) survey, LGBs make up an estimated 2.6 percent of the population.[6]

It is important to remember that these are estimates of the number of people who are in openly homosexual living situations or who identified as such in an interview situation, not those with homosexual tendencies in the general population. The latter figure is probably considerably higher, but there are virtually no studies to date that could provide a reliable estimate.[7]

## Most registered civil partnerships in Germany are in Berlin

More than half of lesbians, gays, and bisexuals in Germany live in major cities with over 100,000 residents, compared to only around one-third of heterosexuals (Figure 1). The sample size of the microcensus conducted by the German Federal Statistical Office is not large enough to deliver a reliable estimate of the proportion of same-sex couples in Germany's large cities. However, registry office data on registered civil partnerships (*Lebenspartnerschaften*) and marriages of same-sex couples show that in 2015, the most same-sex unions by far were in Berlin (834), followed by Cologne (291) and Hamburg (251) (Figure 2). Of all civil partnerships and marriages registered in Berlin, 5.7 percent were of same-sex couples. This puts Germany's capital city at the top of the five largest German cities when it comes to the proportion of registered civil partnerships, followed by Cologne and Frankfurt/Main with five percent each. Schleswig-Holstein and Saarland are the federal states with the highest proportion of new registered civil partnerships (both over two percent).[8]

*Opinion Quarterly* 77 (2013): 145–158. For information on Canada, see Heather Lathe et al., "Same-sex couples in Canada in 2016," (PDF, Census in Brief Statistics Canada, Ontario, 2017). (available online; accessed July 22, 2017). For information on France, see Clara Cortina and Patrick Festy, "Same-sex couples in the census," (News article, Institut National D'Études Démographiques, Paris, 2017). (available online; accessed July 22, 2017)

**6** For the calculation, the unweighted numbers of LGBs were considered in relation to the sum of respondents who identify themselves as either LGB or hetero. See Mark Wooden, *The Measurement of Sexual Identity in Wave 12 of the HILDA Survey – and Associations with Mental Health and Earnings*, (Melbourne, University of Melbourne, 2014). For an overview, also see Gary J. Gates, "How Many People are Lesbian, Gay, Bisexual and Transgender?" (PDF, The Williams Institute/University of California, Los Angeles, 2011). (available online; acessed July 22, 2017)

**7** Based on a widely cited Internet survey, Dalia Research estimates the proportion of LGBT (lesbian, gay, bisexual, and transsexual) people in Germany at 7.4 percent—far more than all other estimates. We do not have any information on the survey's sampling and measurement errors. See Dalia Research, "Counting the LGBT Population," (Website, Dalia Research, Berlin, 2017). (available online; accessed July 22, 2017)

**8** At 1.8 percent of all same-sex marriages or registered civil partnerships in 2015, the proportion of newly established same-sex partnerships throughout Germany is four times higher than the proportion of same-sex couples among

## LGBs are less likely to be in a relationship and more likely to have support networks outside the family

According to the SOEP data, lesbians, gays, and bisexuals are less likely to be in a relationship than heterosexuals (Figure 3). Both the proportion of singles and the proportion of individuals "living apart together" are higher in the LGB community. While around 70 percent of all respondents in same-sex relationships reported living with their partner in the same household, the proportion among heterosexual couples of the same age is over 10 percent higher.

Ten percent of homosexual and bisexual respondents indicated that they live in a household with a child under 14. Among heterosexuals in the same age range, the proportion was 27 percent.[9] This does not necessarily presume a parent/child relationship.

While 28 percent of cohabiting heterosexuals live in single-income households, the proportion is significantly lower among homosexual couples at 18 percent. The proportion of dual-income households is accordingly higher among same-sex couples.

### Social support networks

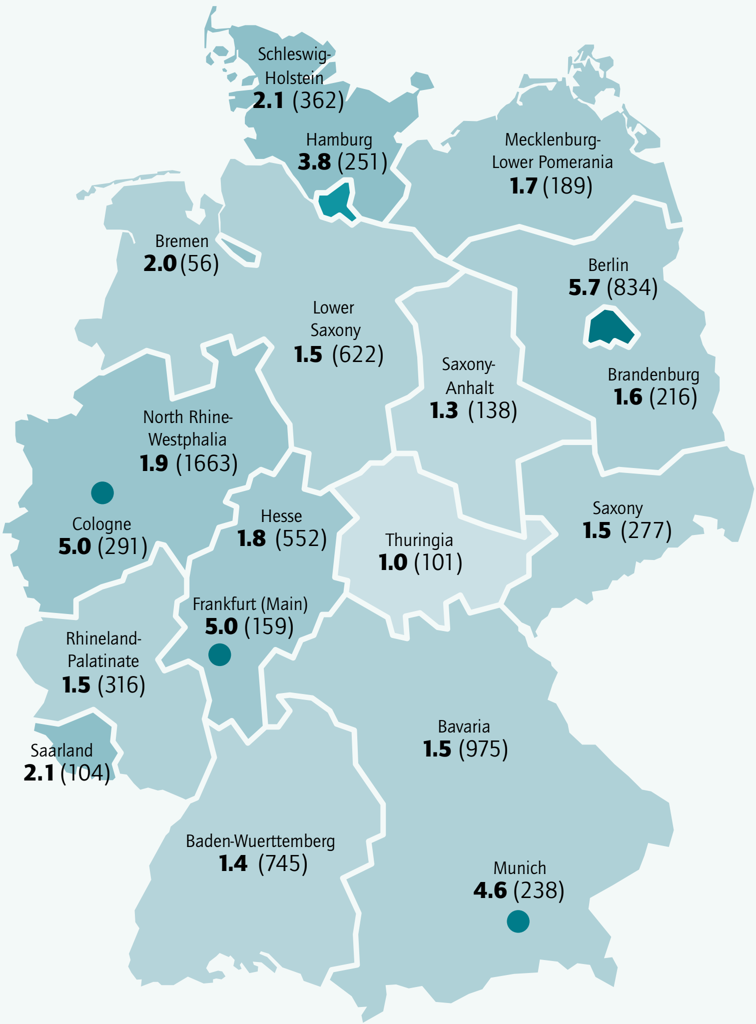
At regular intervals, SOEP respondents report on their social support networks: the "persons with whom they share their thoughts and feelings or talk about things they would not tell just anyone," or "who they would ask for help in the hypothetical case of requiring long-term care after a serious accident, for example."

There is no statistically significant difference between LGBs and heterosexuals when it comes to the existence of a support network (see Table 1). Only around six percent of LGB respondents and approximately four percent of heterosexuals reported that they do not have a confidant with whom they share their personal thoughts and feelings. Nine and five percent, respectively, indicated that they would have no one to turn to for help if they needed long-term care. And regardless of their sexual orientation, most respondents viewed their partner as an important source of support. Around 90 percent

Figure 2

**Newly registered civil partnerships in 2015**

By large cities and federal states, share in percent, absolute figures in brackets




*Percentage of the total number of (heterosexual) marriages and newly formed (homosexual) civil partnerships.*

*Sources: DESTATIS, Federal Statistical Office (available online); Bavarian State Office for Statistics and Data Processing; Cologne Registry Office; City of Frankfurt.*



Berlin, Cologne and Frankfurt/Main are the German cities with the most registered same-sex partnerships.

shared personal thoughts and feelings in their partnership and approximately 80 percent would ask their partner for help if in need of long-term care.

Statistically significant differences between LGBs and heterosexuals emerged from the questions on the importance of family and the importance of friends and acquaintances. The proportion of homosexual and bisexual respondents who said family members (parents, siblings, children and

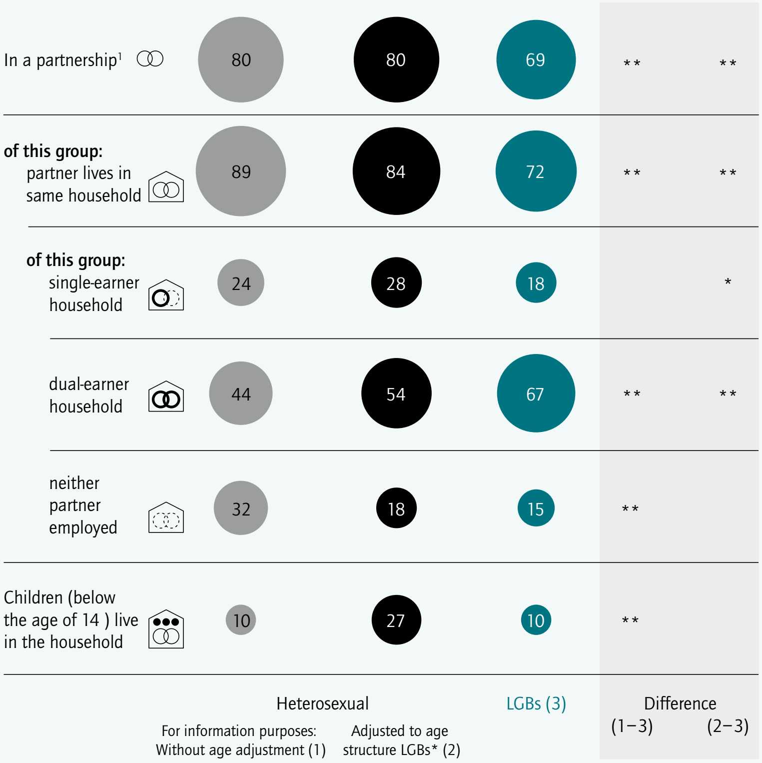
all couples in the 2016 microcensus (0.46 percent). This discrepancy can be due to many reasons, for example, differences in age. However, it could also be due to the underrepresentation of same-sex couples in surveys.

**9** Based on the 2012 microcensus on cohabiting same-sex and different-sex couples, this difference is higher (authors' calculations based on the Scientific Use File), in particular because the proportion of heterosexual couples that live with children in one household is higher. This tendency is also apparent when heterosexual SOEP respondents are limited to the group of persons living in partnerships.

Figure 3

**Forms of cohabitation**

Share in percent




*Significance levels: *: p < 0.05; **: p < 0.01.*

*Sources: Socio-Economic Panel v33.beta; authors' own calculations.*

*1 Since we use respondents' answers regarding relationships, if given, to measure sexual orientation, our analysis overestimates the overall number of people in a relationship.*



Dual-earner households are more prevalent among LGBs than heterosexual couples.

Table 1

**Social support networks**

Share in percent

| | Heterosexual | | LGBs (3) | Difference (1–3) | Difference (2–3) |
|---|---|---|---|---|---|
| | For information purposes: Without age adjustment (1) | Adjusted to age structure LGBs (2) | | | |
| *Confidants[1]:* | | | | | |
| No one | 4 | 4 | 6 | | |
| Partner (if any)[2] | 92 | 91 | 89 | | |
| Family | 68 | 72 | 61 | | ** |
| Friends and acquaintances | 40 | 46 | 59 | ** | ** |
| *Support if need for care should arise[1]:* | | | | | |
| No one | 6 | 5 | 9 | | |
| Partner (if any)[2] | 81 | 80 | 82 | | |
| Family | 63 | 67 | 56 | * | ** |
| Friends and acquaintances | 29 | 28 | 36 | | * |
| Number of close friends | 4.1 | 4.2 | 4.3 | | |

*1 Data on respondents' social support networks was collected with the questions: "In the following, we list people who might be important to you in some way. Who is most important to you when it comes to the following: Who do you share your thoughts and feelings with or talk to about things you would not tell just anyone?" and "Hypothetically, who would you ask for help if you needed long-term care, for instance, after a serious accident?" Respondents could name up to five persons in response to each question.*
*2 Only including respondents who stated that they were in a relationship.*

*Significance levels: *: p < 0.05; **: p < 0.01.*

*Sources: Socio-Economic Panel v33.beta; authors' own calculations.*



other relatives) were their confidants (61 percent) or persons who they would turn to if they needed long-term care (56 percent) was around ten percentage points lower in each case than it was for heterosexual respondents of the same age (72 percent and 67 percent respectively). At the same time, the proportion of persons who counted friends and acquaintances among their support network was ten percent higher for LGBs than for heterosexuals (59 percent vs. 46 percent said friends and acquaintances were their confidants and 36 percent vs. 28 percent would turn to friends if they needed long-term care).[10]

## LGBs pursue different careers and earn less

### Education, gainful employment, and occupational status

On average, SOEP respondents who identified themselves as lesbian, gay, or bisexual had somewhat higher educational levels than heterosexual respondents: more LGB respondents had university entrance qualifications as opposed to intermediate secondary or lower secondary school diplomas (Table 2). Forty-seven percent of LGBs reported having university entrance qualifications,

**10** Karsten Hank and Veronika Salzburger, "Gay and Lesbian Adults' Relationship With Parents in Germany," *Journal of Marriage and Family* 77 (2015) found that based on data from pairfam – The German Family Panel, there is no difference in the ties between hetero- and homosexual children and their parents in the long term. However, other studies suggest that when homosexuals or bisexuals come out, this often has an adverse effect on relationships within the family.

Table 2

**Education and career**
Share in percent

| | Heterosexual | | LGBs (3) | Difference (1–3) | Difference (2–3) |
|---|---|---|---|---|---|
| | For information purposes: Without age adjustment (1) | Adjusted to: Age structure LGBs (2) | | | |
| *Education* | | | | | |
| Tertiary or Polytechnical Degree | 21 | 21 | 26 | | |
| University Entrance Qualification | 10 | 15 | 21 | ** | * |
| Intermediate Secondary/Lower Secondary with Vocational Training | 50 | 43 | 32 | ** | ** |
| Intermediate Secondary/Lower Secondary without Vocational Training | 14 | 14 | 16 | | |
| No Secondary Diploma/in Vocational Training | 4 | 8 | 6 | | |
| *Career* | | | | | |
| Non-Employed (e.g., retired, in training) | 34 | 22 | 18 | ** | |
| Unemployed | 6 | 6 | 9 | | |
| Occupational position (employed people) | | | | | |
| Blue-collar worker | 25 | 23 | 11 | ** | ** |
| White-collar worker | 58 | 61 | 78 | ** | ** |
| Self-employed | 10 | 9 | 9 | | |
| Civil servant | 7 | 6 | 2 | ** | ** |
| *Sectors* | | | | | |
| Resource Extraction, Production, and Manufacturing | 18 | 17 | 11 | * | |
| Construction, Architecture, Surveying, and Building Technology | 6 | 5 | 6 | | |
| Natural Science, Geography, and Information Science | 5 | 5 | 3 | * | |
| Transportation, Logistics, Security and Safety | 14 | 13 | 8 | * | |
| Commercial Services, Trade, Marketing, Hotels and Tourism | 13 | 15 | 13 | | |
| Company Organization, Bookkeeping, Law and Administration | 18 | 18 | 21 | | |
| Health, Social Services, Teaching and Education | 21 | 23 | 27 | | |
| Humanities and Social Sciences, Media, Arts, and Culture | 3 | 4 | 8 | | |
| Other | 1 | 1 | 2 | | |

*Significance levels: *: $p < 0.05$; **: $p < 0.01$.*

*Sources: Socio-Economic Panel v33.beta; authors' own calculations.*



compared to 36 percent of heterosexuals. These differences have a certain level of statistical uncertainty but appear to be reliable, as our analyses of the 2012 microcensus showed a similar pattern. It is striking that such a low percentage of LGBs completed vocational training after graduating with an intermediate or lower secondary diploma.

In contrast to heterosexuals, homosexual and bisexual workers are less often employed as blue-collar workers (11 vs. 23 percent) and more often as white-collar workers (78 percent vs. 61 percent for heterosexuals). And at two percent, the proportion of civil servants in the LGB community is particularly low (for heterosexuals, six percent). Looking at the results by sector, comparatively few LGBs indicated that they were employed in manufacturing or in the transportation, logistics, security and safety sector.[11]

## "Sexuality pay gap" among men

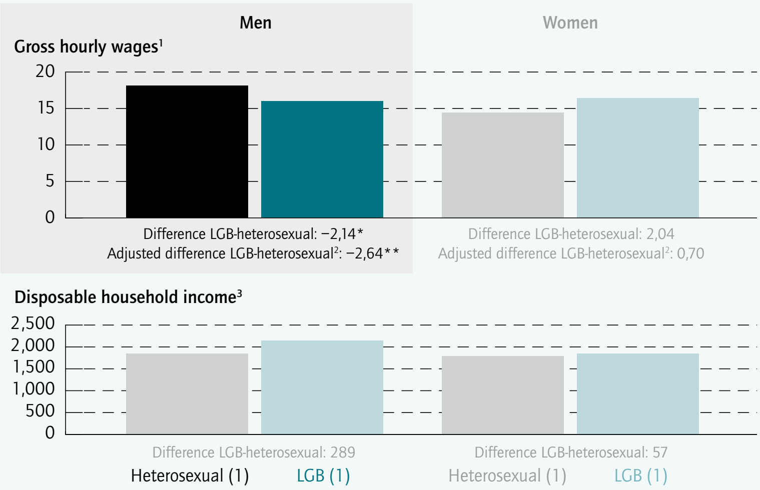
We also compared homosexuals and bisexuals to heterosexuals with regard to their gross hourly wages (measured by actual hours worked[12]) (Figure 4). Heterosexual

**11** The sampling error is quite high due to the low number of cases, but in our own analyses of the 2012 Microcensus Scientific Use File, we find similar differences by sector.

**12** Even if contractual instead of actual working hours are used to calculate hourly wages in the SOEP, homosexual and bisexual men still have lower hourly wages, but the difference from those of heterosexual men is not as large. The extent to which average hours worked exceed contractual working hours is significantly higher among homosexual and bisexual men than among heterosexual men.

Figure 4

**Sexuality pay gap in gross hourly wages**
Values in euros




*1 Gross hourly wages calculated based on actual number of hours worked as reported by respondent.*
*2 Controlling for age, occupational status, sector, full-time/part-time, experience in full-time/part-time work, and qualifications.*
*3 Sum of a household's net monthly income weighted by household size and composition (new OECD scale).*

*Significance levels: *: p < 0.05; **: p < 0.01.*

*The grey background indicates significant results.*
*All estimates for heterosexuals are adjusted to the age structure of LGBs.*

*Sources: Socio-Economic Panel v33.beta; authors' own calculations.*



Gay and bisexual men earn less than heterosexual men.

men earn considerably higher hourly wages (average hourly wage of 18.14 euros) than heterosexual women (14.40 euros), bi-/homosexual women (16.44 euros) and bi-/homosexual men (16.00 euros). These differences persisted even when we statistically controlled for differences in qualifications, occupational status, professional experience, working time models, and sectors. The difference between men rose to 2.64 euros when we controlled for the higher education levels of homosexual and bisexual respondents. The hourly wages of bi-/homosexual women did not differ from those of bi-/homosexual men or heterosexual women with any statistical significance.

Alongside the well-documented gender pay gap[13] (women earning lower wages), the data indicate a sexuality pay gap that affects homosexual and bisexual men to a significant extent. The observed sexuality pay gap in Germany is similar to that in other Western countries.[14]

Because there are more dual-income households in the LGB community and the households are smaller than those of heterosexuals on average, the wage difference does not pose a disadvantage with regard to disposable household income.

## LGBs are less satisfied with their lives and more likely to suffer from depression

Previous research has found that LGBs have a lower sense of wellbeing and higher risk of psychological problems.[15] It is argued that due to their sexual orientation, LGBs are stigmatized and discriminated against, triggering a condition of chronic stress. However, there is a positive relationship between social and self-image based on the extent of one's "outness"—that is, the degree to which a person's actual homosexual self-image matches the image that he/she presents to society.[16]

As a measure of psychological health, the SOEP provides a value that is a weighted combination of the answers to five individual questions, for example: "In the past four weeks, how often have you felt down and gloomy?" or "[...] how often have you felt that you achieved less than you wanted to at work or in everyday activities due to mental health or emotional problems?" The scale of answers is standardized to yield a mean of 50 points and around 68 percent of respondents had a value in the 40- to 60-point range.[17] Every two years, SOEP respondents are also asked whether they were ever diagnosed with a depressive disorder.

In the SOEP, the value for general life satisfaction is based on the question, "How satisfied are you with your life, all things considered?" The answers are ratings on a scale of zero (completely dissatisfied) to ten (completely satis-

**13** See the definition of the gender pay gap in the DIW glossary (in German only, available online). For studies, see Anne Busch and Elke Holst, "Verdienstdifferenzen zwischen Frauen und Männern nur teilweise durch Strukturmerkmale zu erklären." *DIW Wochenbericht* no. 15 (2008): 184–190; Claudia Gather and Elke Holst, "Gender Income Gap bei Führungskräften und Selbständigen" *spw* no. 209, issue 4 (2015): 37–44; Elke Holst and Anne Busch, "The Gender Pay Gap in Germany." In eds. Bruce Headey and Elke Holst, *A Quarter Century of Change: Results from the German Socio-Economic Panel (SOEP)*, (Berlin: German Institute for Economic Research, 2008): 81–86. (available online; accessed July 22, 2017)

**14** Marieka Klawitter, "Meta-Analysis of the Effects of Sexual Orientation on Earnings," *Industrial Relations* 54 (1) (2015): 4–32.

**15** Ilan H. Meyer, "Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence," *Psychology of Sexual Orientation and Gender Diversity*, 1(S) (2013): 3–26.

**16** Laura A. King and Nathan Grant Smith, "Gay and Straight Possible Selves: Goals, Identity, Subjective Well-Being, and Personality Development," *Journal of Personality* 72 (2004): 967–994.

**17** Hanfried H. Andersen et al., "Computation of Standard Values for Physical and Mental Health Scale Scores Using the SOEP Version of SF-12v2," *Schmollers Jahrbuch: Journal of Applied Social Science Studies*, vol. 127 (1) (2007).

fied). Based on the same scale, respondents also give their answers on life satisfaction in various areas of life, such as gainful employment, living situation, and family life.

In general, the SOEP data for Germany tend to confirm the international findings of lower wellbeing among LGBs (see Table 3).[18] In comparison to heterosexuals, LGB answers indicate somewhat lower satisfaction with life in general (a rating of 7.0 vs. 7.4). Further, gay and bisexual men report higher psychological stress than heterosexual men (not presented in the form of a table broken down by gender). LGBs also report having ever been diagnosed with a depressive disorder twice as often as heterosexuals (20 percent vs. ten percent).[19]

LGBs are less satisfied with their health and family life than heterosexuals—a finding in line with previously reported findings.

However, there are no differences in physical health.

Table 3

**Health and Life Satisfaction**

Average values by group

| | Heterosexual | | LGBs (3) | Difference (1–3) | Difference (2–3) |
|---|---|---|---|---|---|
| | For information purposes: Without age adjustment (1) | Adjusted to age structure LGBs* (2) | | | |
| Physical health (PCS)** | 48.2 | 51.1 | 51.4 | ** | |
| Mental health (MCS)** | 50.0 | 49.7 | 48.0 | * | |
| Life satisfation | 7.2 | 7.4 | 7.0 | | * |
| Depressive disorder | 9.5 | 10.5 | 19.6 | ** | ** |
| *Satisfaction in different areas²:* | | | | | |
| Partnership | 8.0 | 8.1 | 8.0 | | |
| Work | 6.9 | 7.1 | 6.8 | | |
| Household income | 6.8 | 6.7 | 6.3 | * | * |
| Personal income | 6.3 | 6.2 | 5.9 | * | |
| Standard of living | 7.5 | 7.5 | 7.2 | | |
| Family life | 7.9 | 7.9 | 7.2 | ** | ** |
| Health | 6.5 | 6.9 | 6.4 | | ** |

*1 Composite indicator according to SF12. Scale is normed so that the median is 50 and around 68% of cases lie between 40 and 60.*
*2 Scale from 0 to 10. For the wording of the question, see main text.*

*Significance levels: *: $p < 0.05$; **: $p < 0.01$.*

*Sources: Socio-Economic Panel v33.beta; authors' own calculations.*



## Virtually no differences in personality structure

In psychological research, a person's personality is often mapped using a five-factor structure (the "Big Five" traits), consisting of: openness, conscientiousness, extraversion, agreeableness, and emotional stability.

In the existing body of scientific studies conducted on the personalities of LGBs or heterosexuals, almost no differences emerged.[20]

According to the SOEP data, among men in Germany only two of the five traits show differences (Table 4). Gay and bisexual men reported being somewhat less emotionally stable than heterosexual men (3.7 vs. 4.0). This finding is in line with their higher perceived psychological stress. They also reported being somewhat more open to new experiences than heterosexual men and women (5.0 vs. 4.5 and 4.6). The difference in openness could also be caused by the SOEP survey procedure: men who are more open than average may have been more likely to provide information on their sexual orientation to the same sex.

With regard to the traits of conscientiousness, extraversion, and agreeableness, there was no statistical difference for men.

In addition, the study found no personality differences for women: lesbians, bisexual women, and heterosexual women all reported similar values for all of the Big Five traits.

## Political attitudes: strong support for the Green Party and the Left Party among LGBs

LGBs are somewhat more interested in politics than heterosexuals. They also reported long-term party identifi-

**18** In the Netherlands Kinship Panel Study (NKPS) as well, 180 respondents in same-sex relationships report lower life satisfaction than the 9,869 respondents in [different-sex] relationships. See Samantha L. Tornello, Katya Ivanova, and H.M.W. Bos, "Same-Sex and Mixed-Sex Couples in the Netherlands: The Association Between Life Satisfaction and Relationship Dynamics," *Journal of Family Issues* (2017).

**19** This difference in the prevalence ratio is almost as high for men (gay and bisexuals 13.5 percent, heterosexuals: 7.2 percent) as for women (lesbians and bisexuals: 25 percent, heterosexuals: 11.6 percent). The values reported on the basis of SOEP data for the occurrence of depressive disorders roughly correspond with the findings of the Study on the Health of Adults in Germany (*Studie zur Gesundheit Erwachsener in Deutschland*, DGES) of the Robert-Koch-Institut. There a prevalence of depressive disorders is reported for 7.8 percent of men and 15.4 percent of women. See M.A. Busch et al., "Prävalenz von depressiver Symptomatik und diagnostizierter Depression bei Erwachsenen in Deutschland", *Bundesgesundheitsblatt*, 56 (2013): 733–739.

**20** A national representative study from New Zealand found differences between homosexual and heterosexual men on two of the Big Five traits and only on one of the five traits between homosexual and heterosexual women. See Lara M. Greaves et al., "Personality across sexual identity and gender in a national probability sample in New Zealand," *Sex Roles* 1–10 (2017).

Table 4

**Personality**
Averages by Group

| | Men | | | | | Women | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Heterosexual | | | | | Heterosexual | | | | |
| | For information purposes: Without age adjustment (1) | Adjusted to age structure LGBs (2) | LGBs (3) | Difference (1–3) | Difference (2–3) | For information: Without age adjustment (1) | Adjusted to age structure LGBs (2) | LGBs (3) | Difference (1–3) | Difference (2–3) |
| *"Big Five"*[1]: | | | | | | | | | | |
| Openness | 4.4 | 4.5 | 5.0 | ** | ** | 4.6 | 4.6 | 4.8 | | |
| Emotional stability | 3.9 | 4.0 | 3.7 | ** | ** | 3.7 | 3.7 | 3.7 | | |
| Extraversion | 4.8 | 4.8 | 4.8 | | | 5.0 | 5.0 | 4.9 | | |
| Agreeableness | 4.8 | 4.8 | 4.8 | | | 4.7 | 4.8 | 4.7 | | |
| Conscientiousness | 4.8 | 4.9 | 5.0 | | | 4.8 | 4.8 | 4.9 | | |

*1 The questions were preceded by the text: "Below are different qualities that a person can have. You will probably find that some apply to you perfectly and that some do not apply to you at all. With others, you may be somewhere in between." Then the personality traits were described: "I see myself as someone who is sometimes rude to others," "... gets nervous easily," and so on. Respondents rated their agreement with the statements on a scale from 1 to 7.*

*Significance levels: *: p < 0.05; **: p < 0.01.*

*Sources: Socio-Economic Panel v33.beta; authors' own calculations.*



cation with statistically greater frequency (68 percent vs. 56 percent). The distributions also vary, possibly due to differences in life situations and party platforms (Table 5). Significantly fewer LGBs who reported long-term party identification support the Christian Democrats (*Christlich Demokratische Union*, CDU, and *Christlich-Soziale Union in Bayern*, CSU) (21 percent vs. 35 percent of all persons with long-term party identification). However, support for the Green Party (*Bündnis90/Die Grünen*) and the Left Party (*die Linke*) is higher among LGBs than among heterosexuals (27 percent vs. 16 percent and 13 percent vs. seven percent, respectively).

## Conclusions

The SOEP data show that, contrary to existing stereotypes, homosexual and bisexual people are no different than heterosexuals when it comes to personality. However, the two groups differ in some aspects of their life situations: LGBs pursue different professions than heterosexuals; they earn lower wages, more often live alone, and count on their relatives for support less frequently, relying more on friends. The study presented here provides only initial findings that could offer a point of departure for more in-depth analyses.

From the perspective of the social sciences and economics, it would be desirable to factor in the sexual orientation of respondents when reporting on social issues in Germany. This is already widespread practice in the United States, for example. This could allow better documentation of life situations and help to identify areas where action is crucially needed—for instance, in fighting discrimination. The European Council already advises member states to "collect and evaluate relevant data in order to monitor and eliminate all direct or indirect discrimination due to sexual orientation or gender identity."[21] In a similar vein, within the context of the "EU Roadmap against homophobia and discrimination on grounds of sexual orientation and gender identity," EU institutions have repeatedly called upon EU member states to "regularly survey relevant comparable data on the situation of LGBTI persons in the EU."[22]

Implementing these measures by supplementing the federal government's current reporting on social issues with the traits of sexual orientation and gender identity would require an expansion of the existing empirical database for Germany. For example, it would be necessary to

**21** Council of Europe, "Recommendation CM/Rec(2010)5 of the Committee of Ministers to member states on measures to combat discrimination on grounds of sexual orientation or gender identity," (Web page, Council of Europe, Brussels, 2010). (available online, accessed July 22, 2017)

**22** European Parliament, "Resolution of 4 February 2014."

add special samples to existing nationwide longitudinal studies such as the SOEP, along with the corresponding selection and projection frameworks.

Particularly with regard to the reported wage differences, which cannot be explained by differences in qualifications, experience, sectors, or work time models, the findings presented here indicate a need for action in the political sphere to promote equality between LGBs and heterosexuals.

The low frequency of vocational training as opposed to tertiary education among LGBs and the differences in wages reported here are not enough to prove that LGBs face discrimination in the job market. However, since these differences cannot be explained by different levels of qualifications or professional experience, it is essential to find the reasons for the wage differences. To the extent that LGBs are indeed being discriminated against, not only the legal methods of countering discriminatory hiring and wage policies but also corporate culture itself must be improved to hold diversity in high regard.

Table 5

**Political attitudes**
Share in percent

| | Heterosexuell | | LGBs (3) | Difference (1–3) | Difference (2–3) |
|---|---|---|---|---|---|
| | For information purposes: Without age adjustment (1) | Adjusted to age structure LGBs (2) | | | |
| Political interest[1] | | | 44 | | * |
| Long-term party identification[2] | 62 | 56 | 68 | | ** |
| *of that number*[3]: | | | | | |
| SPD | 31 | 29 | 25 | | |
| CDU/CSU | 38 | 35 | 21 | ** | ** |
| FDP | 3 | 3 | 3 | | |
| B90/Green Party | 13 | 16 | 27 | ** | ** |
| Left Party | 7 | 7 | 13 | * | * |
| Rep/DVU/NPD | 1 | 1 | 3 | | |
| AfD | 3 | 4 | 4 | | |
| Other | 3 | 4 | 5 | | |

*1 To measure political interest, respondents were asked the following question: "Generally speaking, how interested are you in politics?" The four response categories range from "very interested" to "disinterested". For the table, the two lower categories were condensed into "no" and the two upper categories into "yes".*
*2 To measure party identification, respondents were asked the following question: "Many people in Germany lean towards one party in the long term, even if they occasionally vote for another party. Do you lean towards a particular party?"*
*3 Percentage of respondents with party affiliation (sums to 100).*

*Significance levels: *: p < 0.05; **: p < 0.01.*

*Sources: Socio-Economic Panel v33.beta; authors' own calculations.*



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# Minimum wage not yet for everyone: on the compensation of eligible workers before and after the minimum wage reform from the perspective of employees

**By Patrick Burauel, Marco Caliendo, Alexandra Fedorets, Markus M. Grabka, Carsten Schröder, Jürgen Schupp, and Linda Wittbrodt**

Calculations based on data from the Socio-Economic Panel (SOEP) show that after the introduction of a statutory minimum wage in Germany in January 2015, the wage growth of eligible employees with low wages accelerated significantly. Before the reform, the nominal growth in contractual hourly wages in the lowest decile, the bottom tenth of the pay distribution, was less than two percent in the long-term two-year average, while from 2014 to 2016 it was around 15 percent. Nevertheless, in the first half of 2016, around 1.8 million employees who were eligible for the minimum wage of 8.50 euros gross per hour still earned contractual hourly wages below this level. In 2015, the count was approximately 2.1 million workers, and in the year before the introduction of the minimum wage, almost 2.8 million. The figures for 2015 and 2016 reported here are thus higher than corresponding figures from company surveys.

Despite the disproportionate increase in wages in the lowest wage decile, many workers are still not earning the minimum wage. The objectives of the German Minimum Wage Act (*Mindestlohngesetz*) are often not being met, especially among the marginally employed. Instruments for better enforcement of the Minimum Wage Act include more frequent inspections, stricter sanctioning, more effective grievance procedures for workers, and stricter requirements for the documentation systems (especially timekeeping).

One objective of the general statutory minimum wage introduced on January 1, 2015, was to increase hourly wages and earnings for workers with low wages and establish an hourly gross minimum wage. Here we examine to what extent these goals were achieved by the first half of 2016. To do so, we describe changes in hourly wages among eligible employees over the period before and after the reform, and calculate the proportion of these persons still earning less than the minimum wage.

The empirical analysis relies on Socio-Economic Panel (SOEP) data collected by DIW Berlin in partnership with Kantar Public (formerly *TNS Infratest Sozialforschung*).[1] The SOEP data[2] from 2015 and 2016 enable a first look at the development of hourly wages as reported by employees in the German labor market *after* the minimum wage was introduced. The use of SOEP's weighting factors makes it possible to calculate results for the total population (Box 1).

This report differs from analyses that use information provided by companies.[3] The Minimum Wage Commission, for example, based its findings heavily on the Structure of Earnings Survey 2014 (VSE 2014), which is man-

**1** SOEP is an annual survey of private households. It began in West Germany in 1984 and expanded its scope to include the new federal states in 1990; cf. Gert G. Wagner; Joachim R. Frick and Jürgen Schupp (2007): The German Socio-Economic Panel Study (SOEP) – Scope, Evolution and Enhancement. *Schmollers Jahrbuch*, Vol. 127(1), 139–169.

**2** The SOEP survey data for the survey year 2016 were released to the research community in November 2017 by the SOEP Research Data Center at DIW Berlin.

**3** Oliver Bruttel, Arne Baumann, and Ralf Himmelreicher, "The Statutory Minimum Wage in Germany: Structure, Distribution and Effects on Employment," *WSI Mitteilungen*, no. 7 (2017): 473–481 (in German).

Box 1

### Data basis and restrictions

#### Data basis

The SOEP is a representative sample of all people living in private households in Germany, encompassing approximately 15,000 households per year. Since the same households are surveyed every year, the study enables a descriptive look at the individual situation after the minimum wage was introduced on January 1, 2015, and in 2016, as well as a comparison with the situation in previous years.[1]

The fieldwork for the SOEP survey begins in February of each year. About half of all households that participated in the 2015 survey had been surveyed by the end of April. The fieldwork in 2016 was already almost 90 percent completed in May.[2]

#### Interpretation restrictions

The following information should be taken into account when interpreting the results presented here.

**1** The analyses are based on data from all SOEP sub-samples, which participated in the survey in both 2014 and 2015. The analyses were weighted in each case. For the methodology of the cross-sectional and longitudinal weighting model in SOEP, see: Martin Kroh, Rainer Siegers, and Simon Kühne, "Gewichtung und Integration von Auffrischungsstichproben am Beispiel des Sozio-oekonomischen Panels (SOEP)," in Nonresponse bias. Qualitätssicherung sozialwissenschaftlicher Umfragen (Wiesbaden: Springer VS, 2015) 409–444 (in German).

**2** See Simon Huber, "An Overview of the SOEP Samples," in SOEP Wave Report 2016 (Berlin, 2017) 28–36 (available online).

First, the results are based on a random sample of all persons living in private households in Germany. Migrants (such as contract workers or agricultural workers (pickers)) are systematically excluded from the analyses, as are people living in institutions or dormitories.

The sample results from the SOEP data are extrapolated to the distribution of the population according to special evaluations of the microcensus. The results presented in the report are based on weighting factors for the years 2014, 2015, and 2016, and include all samples of the SOEP, except for the results of the IAB-BAMF-SOEP sample of refugees first surveyed in 2016.

Second, it should be noted that the SOEP is based on survey data and does not directly ask respondents for information regarding hourly wages. However, the SOEP does ask about monthly wages and weekly working hours. Accordingly, measurement errors (for instance, in contractual or actual working hours, or in the amount of monthly income) or refusals to respond may influence the results. Missing answers to questions on monthly earnings are replaced ("imputed"[3]) in the SOEP by means of statistical methods. Due to the associated statistical uncertainties, we decided against using imputed incomes in this report. The resulting lower extrapolated case numbers were adjusted by re-scaling.

**3** On the various imputation procedures used in the SOEP, see: Joachim R. Frick, Markus M. Grabka, and Olaf Groh-Samberg, "Dealing with incomplete household panel data in inequality research," *Sociological Methods & Research*, no. 41 (2012): 89–123.

datory for employers, and a voluntary Earnings Survey 2015 (VE 2015) conducted by the Federal Statistical Office[4] (*Statistisches Bundesamt*, Destatis). In 2014, around four million eligible employees earned less than 8.50 euros per hour (see Table 1, first line). In 2015, this figure was around 1.4 million, and in 2016, it was still 1.1 million workers.[5] These numbers have so far played a minor role in the public debate on the effectiveness and impact of the minimum wage.[6]

It is noteworthy that these figures on the high number of employees who were still not paid in accordance with

**4** The Earnings Survey 2015 is a voluntary follow-up survey to the Structure of Earnings Survey 2014 that was conducted by the Federal Statistical Office in spring 2014. The official survey for 2015 is based on data from over 6,000 companies and provides detailed information at the individual level of the employees on the basis of information provided by the employer. While there was an obligation to provide information for the Structure of Earnings Survey 2014, the written survey in 2015 was conducted voluntarily with a participation rate of almost 13 percent of all companies contacted. The response rate for the Earnings Survey 2016 only amounts to 6.3 percent (see Federal Statistical Office, "Earnings Survey 2016" (2017) (in German).)

**5** The official Earnings Survey reported a lower number of 751,000 employees in 2016. However, this number is based on the fact that employees with wages of only up to 8.45 euros per hour were reported as earning less than minimum wage. Cf. Federal Statistical Office, "Earnings Survey 2016," (2017), 29, table 9 (in German).

**6** So far, based on empirical studies, awareness of the high non-compliance rates with the statutory minimum wage has only come for the marginally employed. See Spiegel.de, March 23, 2017 (available online) as well as Toralf Pusch and Hartmut Seifert, "Unzureichende Umsetzung des Mindestlohns bei Minijobbern," *Wirtschaftsdienst*, no. 3 (2017): 187–191 (in German).

Table 1

**Workers with hourly wages below 8.50 euros**

| | | 2014 | | | 2015 | | | 2016 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 95-%-confidence interval lower bound | Point estimate | 95-%-confidence interval upper bound | 95-%-confidence interval lower bound | Point estimate | 95-%-confidence interval upper bound | 95-%-confidence interval lower bound | Point estimate | 95-%-confidence interval upper bound |
| **For comparison StaBu[1]** | **Million persons** | | **3.974** | | | **1.364** | | | **1.055** | |
| Workers eligible for the minimum wage[2] | | | | | | | | | | |
| Contractual hourly wages | Million persons | 2.591 | 2.784 | 3.068 | 1.848 | 2.073 | 2.335 | 1.576 | 1.828 | 2.045 |
| | Percent | 9.9 | 10.8 | 11.9 | 7.3 | 8.2 | 9.1 | 6.1 | 7.0 | 7.7 |
| Actual hourly wages | Million persons | 3.329 | 3.574 | 3.871 | 2.531 | 2.791 | 3.067 | 2.297 | 2.559 | 2.783 |
| | Percent | 13.0 | 13.9 | 15.0 | 10.1 | 11.1 | 12.1 | 8.9 | 9.8 | 10.7 |
| Workers eligible for the minimum wage and sector-specific minimum wages[2] | | | | | | | | | | |
| Contractual hourly wages | Million persons | 3.035 | 3.246 | 3.521 | 2.352 | 2.587 | 2.854 | 1.951 | 2.214 | 2.432 |
| | Percent | 10.0 | 10.7 | 11.6 | 7.6 | 8.5 | 9.2 | 6.3 | 7.1 | 7.7 |
| Actual hourly wages | Million persons | 4.140 | 4.360 | 4.688 | 3.416 | 3.734 | 4.019 | 2.979 | 3.273 | 3.513 |
| | Percent | 13.6 | 14.3 | 15.4 | 11.2 | 12.2 | 13.1 | 9.6 | 10.4 | 11.2 |
| All employed people[2] | | | | | | | | | | |
| Contractual hourly wages | Million persons | 5.155 | 5.447 | 5.831 | 4.375 | 4.741 | 5.013 | 3.967 | 4.366 | 4.659 |
| | Percent | 15.5 | 16.4 | 17.4 | 13.1 | 14.1 | 15.0 | 11.6 | 12.6 | 13.4 |
| Actual hourly wages | Million persons | 7.535 | 7.905 | 8.322 | 6.767 | 7.207 | 7.586 | 6.233 | 6.681 | 7.056 |
| | Percent | 19.8 | 20.7 | 21.7 | 17.8 | 18.8 | 19.8 | 15.9 | 17.0 | 18.0 |

*1 Source: Information from the Federal Statistical Office based on the 2014 Structure of Earnings Survey and the 2015 and 2016 Earnings Surveys.*
*2 Source: SOEPv33; own calculations using weighting factors. On the delimitation of the sample and the wage concept, see Boxes 1 and 2.*



The percentage of workers who were eligible for the minimum wage but earned less than 8.50 euros per hour was around 10.8 percent before the reform, and fell to seven percent in the first half of 2016.

the law after the minimum wage reform are based on information provided by companies. However, this number can be partly explained by transitional regulations and measurement uncertainties. Violations of the Minimum Wage Law could nonetheless also play an important role.[7] To investigate this assumption more closely, it is crucial to analyze information provided by employees themselves.

The calculations presented here rely on two wage concepts that can be examined with the SOEP data. We calculate, first, a contractual hourly wage based on the contractual working hours and, second, an actual hourly wage based on actual working hours per week (see Box 2). Actual hourly wages make it possible to record adjustments in the time worked, such as unpaid overtime.

7 See Federal Statistical Office, "Earnings Survey 2016," (2017) (in German).

## Wage growth in the lower segment has accelerated since the reform

Wage developments in the lower segment of the wage distribution were especially weak in the years prior to the statutory minimum wage. This is evidenced by the nominal development of the contractual hourly wages for eligible employees across the deciles of the wage distribution[8] and over a period of two years (see Figure 1), such as between 2012 and 2014 or between 2014 and 2016.[9]

The decile-specific wage development between 2014 and 2016 differs significantly from that in the period before the reform. Until 2014, the two-year long-term growth rates in deciles six through ten were around 3.5 percent. The growth rates were under two percent in the lowest

8 To construct the deciles, eligible employees are sorted in ascending order according to their wages and then divided into ten equally sized groups. Then, the average wage for the decile is calculated for a point in time and compared with the average in the same decile two years later.

9 We have chosen two-year windows to allow a direct comparison between 2014 and 2016, and because the annual changes are often very small. Even with a one-year observation, the picture shown does not change.

Box 2

**Hourly wage concepts and eligibility**

### Calculating hourly wages

The SOEP does not ask respondents to report hourly wages directly because most work contracts specify a monthly wage, not an hourly wage. However, the SOEP does ask for information on both income earned in the previous month and the number of weekly working hours. This can be used to calculate the hourly wage by multiplying the weekly working hours by the average number of weeks in a month[1] and then dividing the monthly gross individual earnings by the result.

A key advantage of the SOEP compared to other data sources is that the individual questionnaire asks employees not only for their monthly income in their main job, but also for their contractual and actual working hours. In contrast to official statistical sources—which, for instance, in the case of the Microcensus only provide contractual working hours—the SOEP allows actual hourly wages to be determined. This makes it possible to identify potential adjustments in response to the minimum wage, such as unpaid overtime work.

The calculation of hourly wages on the basis of actual hours worked,[2] which is often used in the literature on low incomes, may underestimate wages because it does not take factors such as later payment for overtime work into account. Conversely, basing calculations solely on contractual working hours would ignore overtime work and could lead to an overestimation of hourly wages.

Information on secondary jobs is not included in the present analysis because the data on these jobs do not tell whether the respondent is in dependent employment or self-employed, and only include information on the average actual working hours.

1 This amounts to 4.3 in the analysis carried out here. In the 2016 Earnings Survey, the Federal Statistical Office used a factor of 4.345.

2 Moritz Heumer, Hagen Lesch, and Christoph Schröder, "Mindestlohn, Einkommensverteilung und Armutsrisiko," *IW-Trends*, no. 1 (2013): 19–36 (in German).

### Who qualifies for the minimum wage?

A minimum wage of 8.50 euros an hour was introduced across Germany on January 1, 2015. However, the law also provides for a number of exemptions. These exemptions apply mainly to the long-term unemployed, unskilled youths under 18, employees working in industries where there is already a sector-specific minimum wage, and certain groups of interns and trainees. Since the SOEP contains detailed monthly data from the previous year, the long-term unemployed can be identified in the first six months of employment. They are excluded from the eligible population in the analyses. Youths under 18 are also excluded. Trainees and interns are counted as a single group among the exemptions, as the type and duration of the internship cannot be clearly determined in the SOEP. Based on current occupational activity, employees from industries with existing collective wage agreements can also be identified.[3] Those working in industries that already have a minimum wage are excluded from the group of eligible employees.[4] If a sector-specific minimum wage is less than 8.50 euros, it must be adjusted to the statutory minimum by January 1, 2017.

The *eligible* group focused on in this report thus consists of all workers who are neither exempt nor self-employed. Groups that indicate that they are employed in private households are also taken into account in the calculations, unlike in the 2014 earnings survey from Destatis. The same potentially applies to people who have an informal job, as they cannot be distinguished from formally employed persons in the SOEP.

3 In the SOEP, self-reported data are used to classify employees by industry. In this process, information about respondents' field of work and industry information is used. It should be noted, however, that respondents may simplify their job or industry and fail to distinguish it enough to accurately identify industries with specific minimum wages.

4 Excluded are individuals in one-euro-jobs, those who work over 50 hours a week, and those who began their job in the last month.

three deciles. Between 2014 and 2016, the two-year wage growth in the lowest three deciles was significantly higher than in the previous periods: Wages in the lowest decile have risen by about 15 percent. The actual hourly wages show a similar trend reversal.

This positive development can also be expressed in euro amounts (see Table 2). While the contractual hourly wage in the lower decile (Q10) averaged 6.63 euros in 2014, it rose to 7.58 euros in 2016. For the lower two deciles, the corresponding values are approximately 7.90 and 8.70 euros. Actual hourly wages show a similar picture. In the two lower deciles, wages increased from approximately 7.40 euros in 2014 to 8.20 euros in 2016.

Looking at the tail of the wage distribution beneath the threshold value of 8.50 euros in 2014, there was also a positive development for both wage concepts. In terms of the contractual minimum wage, for example, the hourly wage rose from approximately 6.80 to 7.60 euros.

Wage changes can be depicted even more precisely with Pen's parades (Figure 3). These graphs (parades) show the relationship between wage level and position in the hourly wage distribution, with employees sorted in ascending order of their hourly wage. The higher the Pen's parade, the higher the wage at the specified point in the wage distribution.

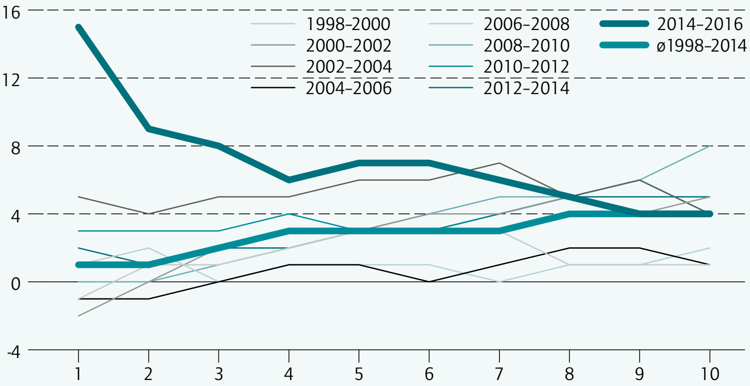
Wage growth in the lower 40 percentiles in the period from 2014 to 2016 was significantly higher than in the period from 2012 to 2014. In particular, employees up to the fifth percentile reported higher wage increases.

## Still about 1.8 million employees with contractual hourly wages of less than 8.50 euros in the first half of 2016

Although the average development, irrespective of the wage concept considered, was very positive in the lower range of the wage distribution between 2014 and 2016, about 1.8 million of all eligible employees still earned a contractual hourly wage of less than 8.50 euros per hour (see Table 1, Figure 2) in the first half of 2016, according to SOEP data. This corresponds to a proportion of approximately seven percent of all qualified employees. Although the rate fell again by more than one percentage point from 2015 to 2016, it remained at an unexpectedly high level.

Figure 1

**Nominal growth in contractual hourly wages over two years by decile, in percent**




*Sources: SOEPv33; authors' own calculations using weighting factors. On the delimitation of the sample and the wage concept see Boxes 1 and 2.*



Between 2014 and 2016, contractual hourly wages for the bottom 20 percent of workers eligible for the minimum wage increased substantially more than in every other two-year period between 1998 and 2014.

Table 2

**Average wages in lower quantiles, workers eligible for the minimum wage**

In euros per hour

| | | 2014 | | | 2015 | | | 2016 | | | Change in percent | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 95-%-confidence interval lower bound | Point estimate | 95-%-confidence interval upper bound | 95-%-confidence interval lower bound | Point estimate | 95-%-confidence interval upper bound | 95-%-confidence interval lower bound | Point estimate | 95-%-confidence interval upper bound | 2014–2015 | 2015–2016 |
| Contractual hourly wage | Bottom decile | 6.54 | 6.63 | 6.73 | 7.03 | 7.14 | 7.26 | 7.44 | 7.58 | 7.73 | 7.71 | 6.12 |
| | Up to minimum wage in 2014 | 6.73 | 6.82 | 6.92 | 7.19 | 7.32 | 7.43 | 7.44 | 7.58 | 7.73 | 7.26 | 3.65 |
| | Bottom two deciles | 7.83 | 7.94 | 8.04 | 8.33 | 8.46 | 8.59 | 8.63 | 8.74 | 8.84 | 6.57 | 3.28 |
| Actual hourly wage | Bottom decile | 6.06 | 6.16 | 6.24 | 6.50 | 6.61 | 6.73 | 6.96 | 7.08 | 7.20 | 7.36 | 7.07 |
| | Up to minimum wage in 2014 | 6.70 | 6.78 | 6.88 | 7.11 | 7.24 | 7.35 | 7.47 | 7.57 | 7.67 | 6.66 | 4.62 |
| | Bottom two deciles | 7.33 | 7.43 | 7.54 | 7.77 | 7.89 | 8.01 | 8.11 | 8.21 | 8.31 | 6.13 | 4.09 |

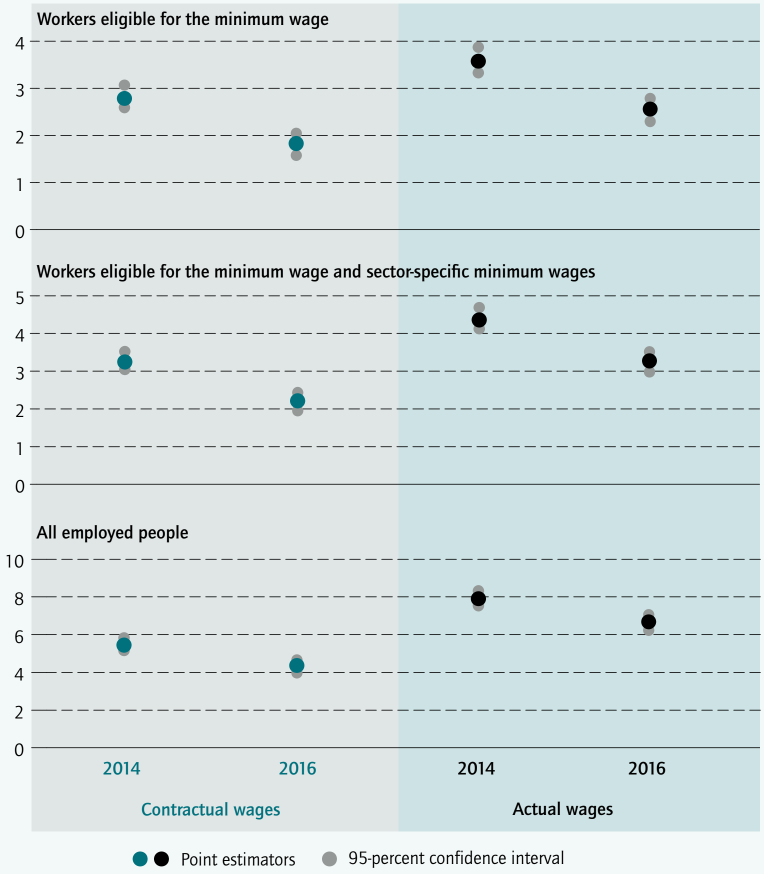
*Sources: SOEPv33; authors' own calculations using weighting factors. On the delimitation of the sample and the wage concept, see Boxes 1 and 2. Bootstrap confidence interval with 200 repetitions.*



In 2014, employees in the bottom tenth of the wage distribution who were eligible for the minimum wage earned between 6.44 and 6.66 euros per hour; two year later between 7.31 and 7.62 euros.

Figure 2

**Workers with an hourly wage below 8.50 euros**
In millions of workers




*Sources: SOEPv33; authors' own calculations using weighting factors. On the delimitation of the sample and the wage concept see Boxes 1 and 2.*



Of all workers eligible for the minimum wage in Germany in 2016, between 1.6 and 2.0 million earn contractual wages less than 8.50 euro an hour.

Looking at actual working hours, the estimated number of eligible workers with a wage less than 8.50 euros—which is always higher than the number according to the contractual wage concept—decreased to approximately 2.6 million in 2016 from approximately 2.8 million in 2015 (2016 rate: around ten percent; 2015 rate: around 11 percent).[10]

Including employees from industries with sector-specific minimum wages, the figure is 2.2 million (around seven percent) for the contractual and 3.3 million (around ten percent) for the actual hourly wage.

## Features of the Federal Statistical Office's Earnings Survey and the robustness of SOEP results

The question arises how it is possible that, according to SOEP respondents, between about 1.8 and 2.6 million eligible workers were paid less than minimum wage in the first half of 2016, depending on the wage concept used.

As is well known, survey data may be subject to measurement errors. It can therefore not be ruled out that respondents either overestimate their working hours or underestimate their monthly gross pay.[11] However, also according to the Structure of Earnings Survey 2014, approximately four million workers were earning less than 8.50 euros an hour before the reform. This number, which is based on compulsory information from companies, is at a similar level to the SOEP figure of about 4.4 million workers, even if the actual hourly wage concept takes account of employees in industries that are subject to special regulations after the reform according to the Sub-contracted Foreign Workers Act (*Arbeitnehmerentsendegesetz*, AEntG).[12] Only after the reform did the case numbers differ significantly based on information provided by companies and employees; the Earnings Survey shows a significantly higher accumulation in the wage group earning the minimum wage or slightly above (8.50 to 8.59 euros).[13] However, since 2015, the numbers are no longer based on a Structure of Earnings Survey with *mandatory* participation for companies, but rather on the *voluntary* Earnings Survey (*Verdiensterhebung*, VE). It cannot be ruled out that there was a selection process into participation, especially as only about 13 percent of the companies

**10** According to the Panel Study Labor Market and Social Security (*Panel Arbeitsmarkt und Soziale Sicherung*, PASS) of the Federal Employment Agency (*Bundesagentur für Arbeit*, BA), the proportion of minimum-wage employees whose actual hourly wage was under the minimum wage was 19.6 percent in 2014 and 14.4 percent in 2015. Cf. Toralf Pusch and Miriam Rehm "The German Minimum Wage: Effects on Job Quality and Employees' Work Satisfaction," *WSI Mitteilungen*, no. 7 (2017): 491–498 (in German).

**11** John Bound, Charles Brown, and Nancy Mathiowetz, "Measurement Error in Survey Data." In *Handbook of Econometrics*, Vol. 5. (Oxford: North-Holland, 2001), 3705–3843 and for the tendency to overestimate income in the lower part of wage distribution see Kim, C., & Tamborini, C. R. (2014). Response Error in Earnings: An Analysis of the Survey of Income and Program Participation Matched With Administrative Data. *Sociological Methods & Research*, 43(1), 39-72.

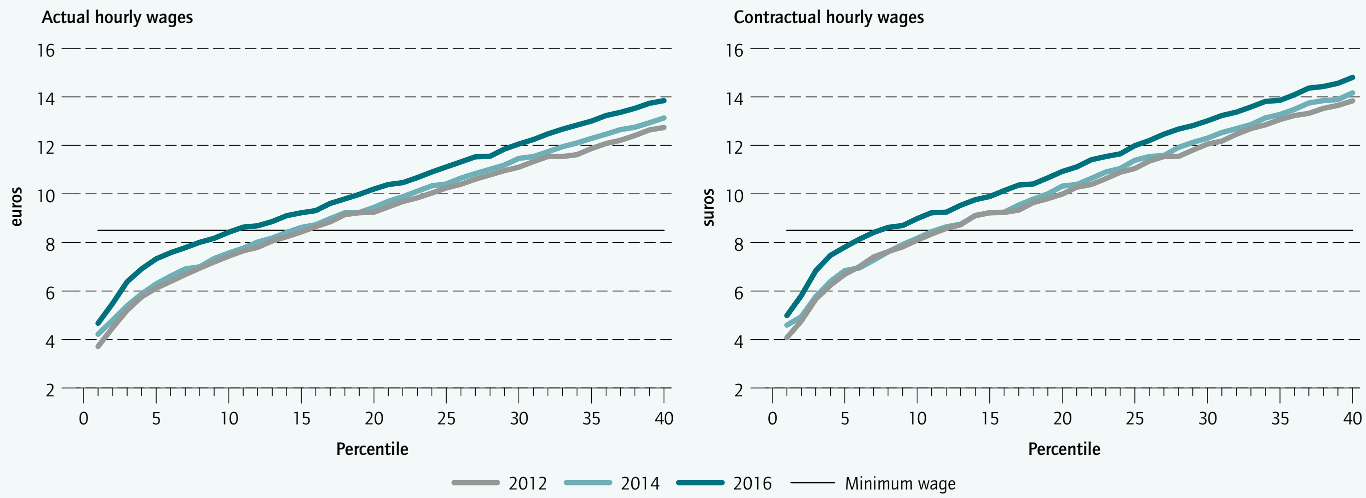
**12** For a comparative discussion of both data sources, see: Matthias Dütsch, Ralf Himmelreicher, and Clemens Ohlert, "Zur Berechnung von Bruttostundenlöhnen–Verdienst(struktur)erhebung und Sozio-oekonomisches Panel im Vergleich," *SOEPpapers on Multidisciplinary Panel Data Research*, no. 911 (2017) (in German).

**13** According to the Earnings Survey in 2015, 1.712 million employees earned between 8.50 and 8.59 euros an hour; in 2016, it was 1.586 million.

Figure 3

**Pen's parades for contractual and actual hourly wages**

Average wages in the bottom 40 percentiles of the wage distribution




*Sources: SOEPv33; authors' own calculations using weighting factors. On the delimitation of the sample and the wage concept see Boxes 1 and 2.*



For employees in the lower segment of the wage distribution who are eligible for the minimum wage, contractual and actual hourly wages have risen substantially since the reform.

from the original sample actually participated.[14] Approximately 40 percent of the companies in the VE 2015 reported employees' contractual working hours instead of actual working hours.[15] In addition, information on 2,000 companies without employees subject to social insurance but with marginally paid employees (total number of businesses in the VE 2016: 9,968), "was gathered from data from the Federal Labor Office (*Bundesagentur für Arbeit*, BA) and imputed from the VSE 2014 and VE 2015."[16] This raises the question to what extent calculations based on this voluntary information from companies are indeed generalizable and interpretable as a trend and whether or not they give a clear picture of the implementation of the minimum wage law in employment practice. To obtain reliable information on this question, it would have to be made obligatory for employers to provide documentation on the start time, end time, and duration of employees' daily working hours that has been confirmed by the employees themselves.

Different approaches to estimating the robustness of the SOEP-based results relating to the sample and possible measurement errors confirm the general findings presented here (see Box 3). Even in a conservative scenario, the contractual hourly wage for employees earning less than 8.50 euros an hour in 2016 results in a confidence band between about 829,000 and 1,148,000 employees.

In addition to the eligible employees, there are other groups of workers who earn less than 8.50 euros gross per hour (see Table 1), including freelancers, family workers, and trainees (see Box 2). Here, the estimate for 2016, depending on the hourly wage concept, is around 4.4 million and 6.7 million employed persons.

## Significant differences between different occupational groups

The proportion of eligible employees still earning less than the minimum hourly wage in 2016 varies widely between different occupational and population groups. It is therefore worth taking a more differentiated look at the

**14** See Federal Statistical Office, "Earnings Survey 2015. Abschlussbericht einer Erhebung über die Wirkung des gesetzlichen Mindestlohns auf die Verdienste und Arbeitszeiten der abhängig Beschäftigten" (Wiesbaden) (in German). The response rate was only 6.3 percent for the VE 2016 (Federal Statistical Office, "Earnings Survey 2016," (2017), 6 (in German).

**15** Oliver Bruttel et al., "The Statutory Minimum Wage in Germany: Structure, Distribution and Effects on Employment," WSI-Mitteilungen, 7/2017, 473–481 (in German).

**16** Federal Statistical Office, "Earnings Survey 2016," (2017), 7 (in German). Imputation means that missing values are estimated and filled using statistical methods.

Box 3

### On the robustness of the results

The finding that based on contractual hourly wages there are around 1.8 million eligible employees in Germany who earn less than 8.50 euros per hour, even after the introduction of the minimum wage, are based on survey data. In such analyses, it should be noted that measurement and memory errors (such as a tendency to round up or down to the closest exact euro amount) may occur, and some participants may refuse to answer. Furthermore, the SOEP is only a subset of the population, which creates a random error.

In order to check the statistical random error and how idiosyncracies of individual observations affect the results, we tested robustness for key results using a resampling method[1] (bootstrapping). The 95 percent confidence interval for the number of eligible employees with contractual (actual) hourly wages below 8.50 euros in the spring of 2015 is between approximately 1.85 (2.53) and 2.34 (3.07) million, and in the spring of 2016, between 1.58 (2.30) and 2.05 (2.78) million eligible employees (see Table).

In order to test how inaccuracies in monthly wages or hourly data affect the results, we have varied the critical value of 8.50 euros (see Table Box 3).

Assuming that persons who, according to our calculations, earn 5 or 10 percent less than 8.50 euros per hour (equivalent to 8.08 or 7.65 euros) are paid according to the minimum wage, the contractually agreed hourly pay shows that in 2015, approximately 1.6 or 1.4 million persons still reported wages below the minimum wage. In 2016, approximately 1.4 or 1 million eligible employees reported they were earning less than 8.50 euros per hour. For the actual hourly wage, these numbers were 2.3 or 1.8 million in 2015 and 2.0 or 1.5 million in 2016, respectively. If there were a systematic *under*estimation of hourly wages, the calculated values would be higher.

**1** See Bradley Efron, "Bootstrapping Methods: Another Look at the Jackknife," *Annals of Statistics*, no. 7 (1979): 1–26.

characteristics of these groups. To do so, the proportion of eligible employees who earned less than 8.50 euros gross per hour in 2014 and 2016 is broken down by features such as gender, age, professional education, and employment characteristics (see Table 3). For the purpose of comparability with the data according to VSE 2014, we use the concept of the actual hourly wage.

While the proportions in the VSE are consistently slightly lower, the structural patterns between the groups are similar. For example, in both data sets, the proportion of men earning less than the minimum wage is significantly lower than that of women. The percentage is significantly lower among full-time workers than among the marginally employed, and lower for employees of larger companies than of smaller companies. The table also shows that the proportion of workers paid less than minimum wage has fallen in all subgroups. For example, according to SOEP, while only about nine percent of men earned an hourly wage less than the minimum wage in 2014, this was true for about 20 percent of women. The proportion of those earning less than 8.50 euros in 2016 decreased to around 7 percent and 13 percent for men and women, respectively; around twice as many women as men earn below the minimum wage. Around sixty-two percent of people in marginal employment earned low wages in 2014. Although this percentage decreased significantly by 2016, it was still around 40 percent.[17] Wages below 8.50 euros per hour were relatively common in eastern Germany. There, in 2014, the proportion of those earning less than minimum wage was at around 22 percent, while in western Germany it was only 12 percent. Yet the proportion also fell by 2016 in both regions, to around nine percent in western Germany and around 15 percent in eastern Germany.

## Average wages are rising

In terms of contractual wages, male employees who worked in industries without industry-specific minimum wages earned on average almost 20 euros an hour in 2014, around 4.60 euros more than female employees (see Table 4). Wages increased in the 18–44 age group before stagnating and declining among workers 66 years

**17** According to the Panel Study Labor Market and Social Security, the proportion of marginally employed workers with an hourly wage of less than 8.50 euros fell from 60.9 percent in 2014 to 48.5 percent in 2015. See Toralf Pusch and Hartmut Seifert, "Mindestlohngesetz. Für viele Minijobber weiterhin nur Minilöhne," *Policy Brief WSI*, no. 9 (2017) (in German).

Table Box 3

**Robustness tests of estimated percentages with wages below 8.50 euros per hour**

| | | 2014 | | | 2015 | | | 2016 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 95-%-confidence interval lower bound | Point estimate | 95-%-confidence interval upper bound | 95-%-confidence interval lower bound | Point estimate | 95-%-confidence interval upper bound | 95-%-confidence interval lower bound | Point estimate | 95-%-confidence interval upper bound |
| Workers eligible for the minimum wage | | | | | | | | | | |
| Contractual hourly wages, 8.50 × 0.95 | Million persons | 2.040 | 2.248 | 2.520 | 1.458 | 1.649 | 1.879 | 1.152 | 1.351 | 1.520 |
| | percent | 8.0 | 8.7 | 9.7 | 5.7 | 6.5 | 7.3 | 4.4 | 5.2 | 5.8 |
| Contractual hourly wages, 8.50 × 0.90 | Million persons | 1.751 | 1.928 | 2.187 | 1.163 | 1.339 | 1.547 | 0.829 | 0.999 | 1.148 |
| | percent | 6.7 | 7.5 | 8.4 | 4.6 | 5.3 | 6.0 | 3.2 | 3.8 | 4.4 |
| Actual hourly wages, 8.50 × 0.95 | Million persons | 2.685 | 2.934 | 3.217 | 2.012 | 2.252 | 2.512 | 1.793 | 2.021 | 2.280 |
| | percent | 10.4 | 11.4 | 12.4 | 8.0 | 8.9 | 9.9 | 7.0 | 7.8 | 8.6 |
| Actual hourly wages, 8.50 × 0.90 | Million persons | 2.265 | 2.487 | 2.741 | 1.577 | 1.786 | 2.029 | 1.277 | 1.462 | 1.640 |
| | percent | 8.8 | 9.7 | 10.6 | 6.23 | 7.1 | 7.8 | 4.9 | 5.6 | 6.3 |
| Eligible workers + industry-specific minimum wages | | | | | | | | | | |
| Contractual hourly wages, 8.50 × 0.95 | Million persons | 2.386 | 2.598 | 2.862 | 1.815 | 2.040 | 2.262 | 1.447 | 1.660 | 1.845 |
| | percent | 7.9 | 8.6 | 9.4 | 5.9 | 6.7 | 7.4 | 4.6 | 5.30 | 5.9 |
| Contractual hourly wages, 8.50 × 0.90 | Million persons | 2.036 | 2.228 | 2.486 | 1.470 | 1.679 | 1.892 | 1.079 | 1.280 | 1.436 |
| | percent | 6.7 | 7.4 | 8.1 | 4.8 | 5.5 | 6.2 | 3.4 | 4.08 | 4.6 |
| Actual hourly wages, 8.50 × 0.95 | Million persons | 3.329 | 3.560 | 3.872 | 2.703 | 2.954 | 3.229 | 2.331 | 2.604 | 2.868 |
| | percent | 11.0 | 11.7 | 12.5 | 8.8 | 9.6 | 10.4 | 7.5 | 8.29 | 9.1 |
| Actual hourly wages, 8.50 × 0.90 | Million persons | 2.777 | 2.993 | 3.272 | 2.147 | 2.383 | 2.639 | 1.749 | 1.973 | 2.196 |
| | percent | 9.1 | 9.8 | 10.6 | 7.0 | 7.8 | 8.6 | 5.5 | 6.28 | 6.9 |
| All employed people | | | | | | | | | | |
| Contractual hourly wages, 8.50 × 0.95 | Million persons | 4.418 | 4.739 | 5.100 | 3.766 | 4.110 | 4.375 | 3.371 | 3.716 | 3.996 |
| | percent | 13.4 | 14.25 | 15.3 | 11.2 | 12.21 | 13.0 | 9.8 | 10.73 | 11.5 |
| Contractual hourly wages, 8.50 × 0.90 | Million persons | 4.025 | 4.308 | 4.653 | 3.334 | 3.673 | 3.906 | 2.928 | 3.263 | 3.555 |
| | percent | 12.1 | 12.95 | 14.0 | 10.0 | 10.91 | 11.6 | 8.6 | 9.42 | 10.3 |
| Actual hourly wages, 8.50 × 0.95 | Million persons | 6.550 | 6.967 | 7.352 | 5.861 | 6.269 | 6.580 | 5.384 | 5.807 | 6.167 |
| | percent | 17.3 | 18.24 | 19.2 | 15.3 | 16.33 | 17.2 | 13.9 | 14.81 | 15.7 |
| Actual hourly wages, 8.50 × 0.90 | Million persons | 5.876 | 6.222 | 6.620 | 5.153 | 5.533 | 5.872 | 4.619 | 4.944 | 5.313 |
| | percent | 15.4 | 16.29 | 17.3 | 13.5 | 14.41 | 15.3 | 11.8 | 12.61 | 13.5 |

*Sources: SOEPv33; authors' own calculations using weighting factors. On the delimitation of the sample and the wage concept, see Boxes 1 and 2. Bootstrap confidence intervals with 200 repetitions.*



In a conservative scenario, robustness tests show around 1 million employees who are eligible for the minimum wage but still paid below this level.

Table 3

**Jobs with hourly wages below 8.50 euros, employees eligible for the minimum wage**

| | VSE (2014) | SOEP | | |
|---|---|---|---|---|
| | Percentage | Percentage 2014 (actual working hours) | Percentage 2016 (actual working hours) | Decline in percent |
| Total | 11.3 | 13.9 | 9.8 | 29.5 |
| Women | 14.2 | 19.5 | 13.2 | 32.3 |
| Men | 8.4 | 8.5 | 6.5 | 23.5 |
| Age in survey year | | | | |
| 18–24 | 26.9 | 34.0 | 28.9 | 15.0 |
| 25–34 | 10.5 | 14.9 | 9.0 | 39.6 |
| 35–44 | 8.7 | 11.7 | 7.2 | 38.5 |
| 45–54 | 8.7 | 11.0 | 8.6 | 21.8 |
| 55–65 | 11.6 | 12.2 | 8.9 | 27.0 |
| 66 or older | 31.8 | 38.0 | 30.9 | 18.7 |
| Employment type | | | | |
| Full-time employment | 4.2 | 9.0 | 6.2 | 31.1 |
| Part-time employment | 10.5 | 15.4 | 14.7 | 4.5 |
| Marginal employment | 38.7 | 61.5 | 43.3 | 29.6 |
| Limitation on term of employment | | | | |
| Unlimited | 10.5 | 11.7 | 8.2 | 29.9 |
| Limited | 16.8 | 25.5 | 19.2 | 24.7 |
| Occupational qualifications | | | | |
| No vocational training | 24.3 | 19.7 | 15.6 | 20.8 |
| With vocational training | 11.1 | 16.2 | 10.0 | 38.3 |
| University degree | 2.4 | 4.3 | 3.9 | 9.3 |
| Company size (employees) | | | | |
| Fewer than 5 | 24.4 | 42.6 | 33.3 | 21.8 |
| 5–9 | 19.6 | 29.7 | 23.6 | 20.5 |
| 10–19 (SOEP) | | 22.1 | 17.7 | 19.9 |
| 20–99 | | 16.4 | 11.7 | 28.7 |
| 100–199 | | 10.7 | 6.6 | 38.3 |
| 200–1999 | | 7.6 | 4.7 | 38.2 |
| 2000+ | | 7.4 | 4.1 | 44.6 |
| 10–49 (VSE) | 16.3 | | | |
| 50–99 | 11.8 | | | |
| 100–249 | 9.8 | | | |
| 250–999 | 7.3 | | | |
| 1000+ | 3.8 | | | |
| Region | | | | |
| Western Germany | | 11.9 | 8.6 | 27.7 |
| Eastern Germany | | 22.3 | 15.4 | 30.9 |
| Nationality | | | | |
| German | | 13.0 | 8.9 | 31.5 |
| Foreign | | 23.1 | 17.7 | 23.4 |

*Sources: SOEPv33; authors' own calculations using weighting factors. On the delimitation of the sample and the wage concept, see Boxes 1 and 2.*

*Source for VSE: Mindeslohnkommission (2016): Erster Bericht zu den Auswirkungen des gesetzlichen Mindestlohns, Figure 2. For VSE only employees above the age of 18 years, without vocational trainees, interns, employees in semi-retirement, people in youth homes, or working in workshops for sheltered workshops or one-euro jobs.*



Women, East Germans, people in marginal employment and workers in small firms are more often paid below 8.50 per hour.

and older. Furthermore, with a salary of approximately 8.70 euros in 2014 and 9.50 euros in 2015, marginally employed persons earned significantly less than part-time (approximately 16.80 or 17.20 euros) or full-time workers (approximately 19 or 20 euros). Average wages were higher among those with higher levels of educational attainment and in companies with higher numbers of employees, and lower among those with fixed-term contracts. Overall, employees working in western Germany earned more than those in eastern Germany, and German citizens earned more than foreign citizens.

Contractual hourly wages in all groups are increasing over time. The percentage increase is particularly high among marginally employed persons, employees at small companies, women, persons without vocational training, and foreign citizens.

The above-mentioned findings for the contractual hourly rate also apply structurally to the actual hourly wage. However, the average values are consistently lower with this measurement concept.

## Challenges in implementing the minimum wage were to be expected

Even before the introduction of the minimum wage in Germany, critics predicted difficulties[18] in implementing the reform.[19] In particular, the lack of adequate timekeeping and documentation requirements for employers posed problems for the enforcement of minimum wages. This applied especially to workers in the mini-job sector, who often have no written employment contracts. The new documentation requirements introduced with the minimum wage reform have been the subject of numerous lawsuits, in particular by employers, since they are found to have significantly increased the administrative burden.

The calculations presented in this report confirm that the number of workers with hourly wages less than 8.50 euros varies depending on which measuring concept is used for the hourly wages. Looking at the specified contractual working hours, considerably more employees are paid according to the law. This makes it clear that while many employees have a contract according to which

**18** This also includes employees pushed into pseudo-self-employment.

**19** Cf. Karl Brenke and Gert Wagner, "Mindestlohn" (2013) (available online). There were also criticisms due to the experiences of other countries in implementing a minimum wage law; cf. Thorsten Schulten, "Herausforderungen für die Umsetzung des allgemeinen gesetzlichen Mindestlohns in Deutschland." In *Umsetzung und Kontrolle von Mindestlöhnen: Europäische Erfahrungen und was Deutschland von ihnen lernen kann.* (working paper no. 49, study commissioned by the Society for Innovative Employment Promotion in NRW, GIB: Bottrup, 2014, 40–50) (in German).

Table 4

**Average hourly wages among employees eligible for the minimum wage, by group**

| | SOEP | | | | | |
|---|---|---|---|---|---|---|
| | 2014 | 2016 | | 2014 | 2016 | |
| | Average contractual hourly wage in euros | Average contractual hourly wage in euros | Change in percent | Average actual hourly wage in euros | Average actual hourly wage in euros | Change in percent |
| Total | 17.88 | 18.74 | 4.8 | 16.28 | 17.16 | 5.4 |
| Women | 15.54 | 16.59 | 6.8 | 14.27 | 15.33 | 7.4 |
| Men | 20.13 | 20.83 | 3.5 | 18.22 | 18.93 | 3.9 |
| Age in survey year | | | | | | |
| 18–24 | 11.12 | 11.60 | 4.3 | 10.52 | 10.80 | 2.7 |
| 25–34 | 16.25 | 17.03 | 4.8 | 14.76 | 15.63 | 5.9 |
| 35–44 | 19.15 | 20.06 | 4.8 | 17.4 | 18.23 | 4.8 |
| 45–54 | 18.9 | 19.61 | 3.8 | 17.16 | 17.90 | 4.3 |
| 55–65 | 19.09 | 20.18 | 5.7 | 17.43 | 18.60 | 6.7 |
| 66 or older | 12.06 | 12.11 | 0.4 | 11.46 | 11.69 | 2.0 |
| Employment type | | | | | | |
| Full-time employment | 18.98 | 19.78 | 4.2 | 17.35 | 18.15 | 4.6 |
| Part-time employment | 16.82 | 17.21 | 2.3 | 14.92 | 15.41 | 3.3 |
| Marginal employment | 8.69 | 9.49 | 9.2 | 8.18 | 9.15 | 11.9 |
| Limitation on term of employment | | | | | | |
| Unlimited | 18.46 | 19.32 | 4.7 | 16.81 | 17.67 | 5.1 |
| Limited | 14.70 | 15.05 | 2.4 | 13.31 | 13.86 | 4.1 |
| Occupational qualifications | | | | | | |
| No vocational training | 14.37 | 15.40 | 7.2 | 13.38 | 14.29 | 6.8 |
| With vocational training | 16.14 | 16.99 | 5.3 | 14.85 | 15.69 | 5.7 |
| University degree | 24.23 | 25.09 | 3.5 | 21.53 | 22.57 | 4.8 |
| Company size (employees) | | | | | | |
| Fewer than five | 10.84 | 11.19 | 3.2 | 10.1 | 10.70 | 5.9 |
| 5–9 | 12.48 | 14.15 | 13.4 | 11.54 | 13.04 | 13.0 |
| 10–19 (SOEP) | 13.86 | 14.5 | 4.6 | 12.78 | 13.47 | 5.4 |
| 20–99 | 16.22 | 16.52 | 1.8 | 14.53 | 15.13 | 4.1 |
| 100–199 | 17.22 | 17.82 | 3.5 | 15.88 | 16.44 | 3.5 |
| 200–1999 | 18.68 | 19.94 | 6.7 | 17.21 | 18.39 | 6.9 |
| 2000+ | 21.94 | 22.80 | 3.9 | 19.77 | 20.62 | 4.3 |
| Region | | | | | | |
| Western Germany | 18.53 | 19.39 | 4.6 | 16.88 | 17.75 | 5.2 |
| Eastern Germany | 15.12 | 15.89 | 5.1 | 13.79 | 14.52 | 5.3 |
| Nationality | | | | | | |
| German | 18.22 | 19.07 | 4.7 | 16.57 | 17.43 | 5.2 |
| Foreign | 14.56 | 15.92 | 9.3 | 13.57 | 14.79 | 9.0 |

*Sources: SOEPv33; authors' own calculations using weighting factors. On the delimitation of the sample and the wage concept, see Boxes 1 and 2.*



Actual average hourly wages have risen over time, especially among workers in marginal employment, employees in small firms, women, people without vocational training, and foreign citizens.

they are employed at minimum wage, they are effectively working longer hours.[20] This was already reported by various news outlets shortly after the minimum wage was introduced.[21] Reports showed, for instance, that employees were being paid less or not at all for time spent in preparation, waiting, and on standby, and in

**20** See the possibilities of adapting working time in the introduction of the minimum wage. Jürgen Schupp, "Wer profitiert vom Mindestlohn? (Kommentar)," *DIW Wochenbericht*, no. 6, 112 (2014) (available online) (in German).

**21** See "Umgehungsstrategien der Arbeitgeber: Popcorn statt Mindestlohn," *Spiegel Online*, September 15, 2015, available online) and Inga Höltmann, "Wie Unternehmen den Mindestlohn umgehen," *Tagesspiegel*, April 4, 2015, (available online) (both in German).

Box 4

### Multi-topic surveys on the minimum wage

In June/July 2015, a representative multi-topic survey on the perceptions of the minimum wage reform took place, commissioned by the SOEP. Approximately 2,000 respondents were asked about their views on the reform, individual labor market characteristics, and experiences of employers' efforts to avoid paying the minimum wage. Respondents were asked two questions about their degree of agreement or disagreement with the introduction of the minimum wage again in June/July 2016 and August/September 2017.

All in all, the survey shows a constant, very high level of approval of the reform of around 87 percent among adult Germans.[1] If one takes a closer look at the 10 to 12 percent of respondents who are not in favor of the minimum wage, it turns out that in the year of its introduction, about a third of this group was fundamentally against the minimum wage. This proportion sunk in 2016 and again in August/September 2017 and is now around 17 percent. Conversely, the proportion of people in the group rejecting the minimum wage who consider the current minimum wage too low, even after the January 1, 2017, adjustment, has increased. In the summer of 2015, around one-third of the respondents considered the minimum wage to be too low, compared with almost three quarters in late summer 2017 (see Table).

**1** Results of telephone surveys on behalf of the German Trade Union Confederation (*Deutscher Gewerkschaftsbund*, DGB) show similarly high approval levels (available online).

The multi-topic surveys also asked whether the participants themselves were affected by employers' efforts to avoid paying the minimum wage (such as unpaid overtime) or if they knew someone in their personal environment who was affected by such measures. In all three years, in response to these survey-methodically sensitive questions, around every fifth adult responded that they were either personally affected or knew someone in their immediate circle of acquaintances whose wages had been affected by employers' efforts to avoid paying the minimum wage.[2] Without attempting to extrapolate this group, the analysis nonetheless makes it clear that within the population, the view that employees are not being paid in accordance with the Minimum Wage Act is widespread. This should be considered a social issue both by those designing labor market policy and by those conducting research on minimum wages.

**2** Concrete examples of such circumvention strategies were also provided by a qualitative study carried out by the SOEP in the summer of 2015, involving six focus groups of employed and non-working persons in the low-income sector. See Axel Glemser, Astrid Kunert, and Simon Huber, "Einführung und Auswirkung des gesetzlichen Mindestlohns in Deutschland," *SOEP Survey Papers*, no. 474, series C (in German).

some cases were being paid by piece rates rather than hourly rates. Additionally, employers sometimes negotiated with employees over payments in kind or deducted the cost of work materials from wages.[22] Furthermore, it was reported[23] that the planned provision of additional customs inspection posts to monitor compliance with the minimum wage law had not progressed sufficiently, making enforcement of the law more difficult. In August 2015, for example, the federal government confirmed problems regarding the supply of personnel[24] and documentation on the part of employers.[25] Additionally, customs inspections are time-intensive, which is why they are applied in a risk-based manner,[26] that is, they are more likely to occur where major violations are expected.[27] The existing procedure thus does not guarantee a systematic

**22** See question from the Alliance 90/The Greens parliamentary group (Bundestag document 18/7525 (2016): 14 (in German)).

**23** See the federal government's answer to the Left party's question regarding the effects of the statutory minimum wage (Bundestag document 18/5807 (2015) (in German)).

**24** In the question from the Alliance 90/The Greens parliamentary group from 02/15/2016 (Bundestag document 18/7525), the federal government confirmed that numerous members of the Tax Enforcement Unit for Undeclared Work were delegated to other areas.

**25** Practices observed to prevent the payment of minimum wages include: incorrect hourly records, setting up work time accounts incorrectly, identification of working hours as breaks, non-compensation of set-up times, and pre- and post-processing or flat-rate remuneration without taking into account the minimum wage and working hours; see Bundestag document 18/7525 (2016): 14 (in German).

**26** See Bundestag document 18/11475 (2016): 19 (in German).

**27** See German Bundestag document 18/7525, federal government's answer, (2016): 1 (in German).

Table Box 4

**Agreement with and objections to the uniform statutory minimum wage**

| "In January 2015, with only a few exceptions, a uniform statutory minimum wage of 8.50 euros per hour [in 2017 with the addition: which was increased to 8.84 euros per hour in January 2017] went into effect in Germany. Do you think it was a good idea to introduce the minimum wage?" | June–July 2015 | June–July 2016 | August–September 2017 |
|---|---|---|---|
| | | in percent | |
| I think it was a good idea | 87 | 89 | 87 |
| I don't think it was a good idea | 10 | 8 | 11 |
| No answer | 3 | 3 | 3 |
| **Percent of total (case number)** | **100 (2.013)** | **100 (2.000)** | **100 (2.000)** |
| BASIS: Respondents who donot think the minimum wage was a good idea: "Why don't you think it was a good idea to introduce the minimum wage?" | | | |
| I am opposed to the minimum wage in general | 32 | 23 | 17 |
| I think that a minimum wage of 8.50 euros/hour is too high | (11) | (11) | (3) |
| I think that a minimum wage of 8.50 euros/hour is too low | 34 | 55 | 73 |
| Other reasons | 22 | (12) | (6) |
| **Percent of total (case number)** | **100 (197)** | **100 (165)** | **100 (211)** |
| "There has been discussion surrounding the introduction of the minimum wage about employers who use various methods to avoid paying the minimum wage (such as requiring employees to work unpaid overtime, giving them added work responsibilities, or increasing performance expectations). Have you been affected by such methods yourself or do you know someone who has?" | | | |
| Yes, I have been affected | 5 | 6 | 4 |
| Yes, someone I know has been affected | 17 | 13 | 17 |
| No, I have not been affected, and I do not know anyone who has | 76 | 80 | 77 |
| No answer | 2 | 2 | 2 |
| **Percent of total (case number)** | **100 (2.013)** | **100 (2.000)** | **100 (2.000)** |

*Sources: CAPI-BUS, Minimum Wage Module; SOEP/DIW Berlin.*



Popular support for the minimum wage is high.

and comprehensive assessment of whether or not the minimum wage law is actually being applied. According to the federal government, 1,600 additional posts are planned for the Tax Enforcement Unit for Undeclared Work (*Finanzkontrolle Schwarzarbeit*, FKS) by 2019.[28]

Other data sources as well as the experiences of other countries in implementing the minimum wage also indicate[29] that some employers take advantage of the aforementioned (un)permissible "adaptation measures" (see Box 4). It is argued that more must be done in order to support people with a low hourly wage since the burden to prove non-compliance by employers is on them alone. Proposed measures include, among other things, the obligation for employers to record the starting time, ending time, and number of hours worked.[30]

## Conclusions

The introduction of the minimum wage at the beginning of 2015 was a turning point for the German labor market that raised high expectations but also drew skepticism and sharp critique. The official employment figures available to date and causal analyses for the period

**28** See Bundestag document 18/4719, federal government's answer, (2015): 1 (in German).

**29** See Schulten, "Herausforderungen für die Umsetzung des allgemeinen gesetzlichen Mindestlohns in Deutschland," 40–50 (in German).

**30** Marc Amlinger and Throsten Schulten, "Praxis und Wirkung des Mindestlohns, Stellungnahme anlässlich der Anhörung des Bundestagsausschusses für Arbeit und Soziales," Bundestag document 18(11)558 (2016).

from 2015 to 2017 indicate neither major job losses nor a sharp increase in the number of unemployed.[31] Accordingly, in July 2016, the Minimum Wage Commission decided to raise the minimum wage to 8.84 euros beginning January 1, 2017.

Currently, it would certainly be premature to make a final assessment on the impact of the introduction of minimum wages on real job creation and wage distribution.[32] Expert reports are currently being prepared by several research institutes on behalf of the Minimum Wage Commission based both on company information and on data from employee surveys, and will be used in the Commission's assessment. The descriptive results presented here from the employee perspective document, on the one hand, that especially lower wage groups have benefited disproportionately from an increase in their hourly wages since 2014. On the other hand, the results indicate that a substantial proportion of employees still earned less than the statutory minimum wage in 2016.

The results suggest that the minimum wage law is not implemented one-to-one in practice and indicate that there is a need to improve the inspection and sanctions mechanisms. At the same time, research is required to continue the comprehensive evaluation of the reform with causal analytical methods in order to make a comprehensive statement on the short-, medium-, and long-term effects of the minimum wage.[33]

In light of the fact that in July 2018, the Minimum Wage Commission will once again decide on whether to adjust the minimum wage level, in accordance with its mandate, calls for an easing of documentation obligations and employer inspections are increasing, as are demands for a significant increase in the minimum wage.

There remains a difficult-to-answer hypothetical question: Would the actual employment effects on the labor market have been different if, on January 1, 2015, all the workers entitled to the benefit had actually received the legal minimum wage they were due? It is still too early to answer this question with a "declaration of no employment policy objection" for the minimum wage at the present time.

The results presented here suggest that for many workers, raising the statutory minimum wage would do less to improve their pay situation than effectively enforcing the law. This is especially true when one considers that low wages can lead to long-term biographical risks (affecting, e. g., pensions and other retirement provisions).

**31** See, for example, Mario Bossler, and Hans-Dieter Gerner, "Employment effects of the new German minimum wage," *IAB Discussion Paper* (2016); and Marco Caliendo et al., "The Short-Run Employment Effects of the German Minimum Wage Reform," IZA Discussion Paper (2017).

**32** In its most recent annual report, the German Council of Economic Experts (*Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung*) also points to the favorable economic conditions since the introduction of the minimum wage and leaves the question open as to whether these conditions will continue in the event of a slowdown in the economy. SVR, "Für eine zukunftsorientierte Wirtschaftspolitik," *Jahresgutachten*, no. 8, (Stuttgart: Metzler-Poeschel, 2017): number 785 (in German).

**33** The link between the informal economy and the minimum wage is socially relevant, largely unexplored, and could be an interesting contribution to future reports by the Minimum Wage Commission. For an up-to-date overview of estimated quantities and structures, see: Dominik H. Enste, "Schwarzarbeit und Schattenwirtschaft – Argumente und Fakten zur nicht angemeldeten Erwerbstätigkeit in Deutschland und Europa," *IW Report*, no. 9 (2017) (in German).

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**JEL:** B41, C83, D31, J31

**Keywords:** Minimum wage, inequality, employment, SOEP

PART 4

# SOEP Service Activities & Knowledge Transfer in 2017

2017

# SOEP in the Media in 2017

On March 20, International Day of Happiness, the German magazine Spiegel published a cover story entitled “Are we ever doing well!”. The article used SOEP data to examine how reported life satisfaction in Germany has changed over the last 30 years. And according to the data, people are happier now than they have been in a long time.

Happiness research has become one of the most important fields of research with the SOEP. As of today, SOEP data have been used in more than 700 studies on subjective well-being, satisfaction, and happiness. In 2017, media interest was high in the SOEP-based research on happiness—as well as in SOEP-based findings on the topic of income.

On the latter topic, a number of articles warning of a “divided country” were published following the release of the federal government’s Poverty and Wealth Report, which is based largely on indicators using SOEP data. SOEP researchers Markus Grabka and Jürgen Schupp responded to these in an article in the journal *Wirtschaftsdienst* by explaining why the report’s findings do not stand in contradiction with the statement “Germans are doing better than ever”.

The media also showed considerable interest in the question of how much Germany’s super-rich are earning. In October, *Wirtschaftswoche* reported on the High-Income Sample that SOEP experts are building with funding from the Federal Ministry of Labour and Social Affairs (BMAS).

The *Süddeutsche Zeitung* focused on the other end of the income spectrum in a story published in early December, entitled “Employers cheating to avoid paying the minimum wage”. It was based on an article published the same day in the *DIW Wochenbericht* analyzing SOEP data. According to the findings, there were more people working below the minimum wage in recent years than previously. This report was followed by a series of articles and interviews with SOEP researcher Alexandra Fedorets.

Social inequality in our society has been a focus of SOEP research since the beginning of the study over 30 years ago. SOEP analyses of inequality deal not only with the distribution of work, income, and education in the overall population, but also with how social resources are distributed among specific population groups. As in previous years, these subjects continued to attract significant media interest in 2017. There was extensive coverage of recent findings from the IAB-BAMF-SOEP Survey of Refugees on with the educational level of refugees: according to these studies, almost two thirds of recent refugees to Germany have completed secondary school. Media interest was similarly high in a SOEP-based *DIW Wochenbericht* on the “sexual pay gap,” showing that homosexual and bisexual men are paid less for their work than heterosexuals.

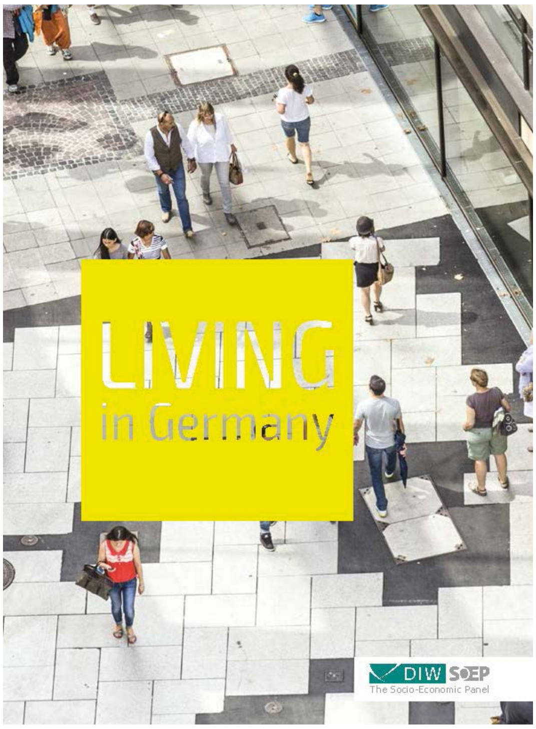
For a selection of media coverage on the SOEP, see: http://www.diw.de/soep-in-den-medien (in German only). We also share press articles on our SOEP Facebook page: http://www.facebook.com/soepnet.de.

# SOEP Brochure: Living in Germany

Our brochure, Living in Germany, is designed to provide readers with a compact source of information on the topics currently being researched with the SOEP data and the range of questions the SOEP data can be used to address. It presents some of the most important recent findings based on SOEP data, and introduces some of the researchers from around the world who are using the data. The brochure also covers the general topics of the SOEP survey, the history and evolution of the study, and its perspectives for the future. The brochure, which is an updated version of the one published almost ten years ago on the SOEP's 25th anniversary, is available online in PDF or ePub formats (in English and German). We would be pleased to send you a printed copy (upon request to: soepmail@diw.de).

PDF

ePub



# Seventh Conference for Social and Economic Data



left: Christine Kurka at the SOEP stand

right: Knut Wenzig presenting the SOEP's research portfolio in form of a "Pecha Kucha"

The seventh Conference for Social and Economic Data, entitled "Research. Data. Infrastructure" took place in Berlin on February 8–9, 2017. As in previous years, this year's conference discussed the most important challenges currently facing researchers and policy makers and the resulting demands for the research infrastructure. As part of the conference, more than 20 research data centers presented their work. One of these was the SOEP:

Martin Kroh (SOEP Survey Management, Humboldt-Universität zu Berlin) presented findings from the IAB-SOEP migration surveys and the IAB-BAMF-SOEP Survey of Refugees at the forum "New Data for Migration and Integration Research: Data Infrastructure and Research Potentials."

Knut Wenzig (SOEP Data Management) gave an entertaining and informative presentation of the SOEP's research portfolio in the form of a "Pecha Kucha", a Japanese form of presentation consisting of 20 slides, each containing one image. The presenter is strictly limited to speaking for 20 seconds per slide, and thus for a total of 6 minutes and 40 seconds.

And finally, Christina Kurka (SOEP guest program and event management) and Janina Britzke (SOEP documentation) provided information about new developments in the SOEP at a stand at the conference.

# Invitation to Bellevue Palace: A visit with the German President

from left to right: SOEP respondent, Jürgen Schupp, President Frank-Walter Steinmeier, SOEP interviewer, and Gert G. Wagner

(© Bundesregierung / Jesco Denzel)

President Frank-Walter Steinmeier honored respondents to the SOEP longitudinal study for their commitment and social engagement at an event held at Bellevue Palace in late June 2017. President Steinmeier invited SOEP Director Jürgen Schupp, DIW Executive Board Member Gert G. Wagner, as well as one SOEP interviewer and one respondent to attend. With this invitation, President Steinmeier honored the more than 30,000 respondents who have been taking part in the study for years or even decades and thanked them for the time they contribute to the SOEP study.

Important topics of discussion included research findings based on the SOEP data, particularly in the analysis of trends in the distribution of income and wealth in Germany, and on the living situations of refugees. President Steinmeier also wanted to hear first-hand from the SOEP interviewer and the SOEP respondent about the experience of conducting and participating in the SOEP survey. Jürgen Schupp and Gert G. Wagner explained the importance of studies like the SOEP for the research infrastructure worldwide, and the importance of the Leibniz Association for research policy: it provides an institutional umbrella for close cooperation between universities and important research infrastructures like the National Educational Panel Study (NEPS) and the German part of the European Social Survey (ESS). In their discussion, Schupp and Wagner emphasized that the regular funding provided by the Federal Ministry of Education and Research (BMBF) and state-level governments through the Leibniz Association but also the Max Planck Society and the Helmholtz Association of German Research Centres to fund major studies in the social sciences is an outstanding model of research policy internationally.

President Frank-Walter Steinmeier is the third federal president of Germany after Horst Köhler and Joachim Gauck to have invited representatives of the SOEP to report on the study at Bellevue Palace.

# SOEP at the seventh ESRA Conference in Lisbon

From left to right: Julia Bringmann, Jannes Jacobsen, Christine Kurka, David Richter, Simon Kühne, Knut Wenzig, Jürgen Schupp, Janina Britzke, Jan Goebel, and Martin Kroh

The seventh conference of the European Survey Research Association (ESRA) was held in Lisbon, Portugal, from July 17 to 21, 2017. The conference was hosted by the University of Lisbon's School of Economics and Management (ISEG), Centre for Research in Social Sciences and Management (CSG), and the Institute for Social Sciences (ICS).

The SOEP had an exhibition stand at the conference, where Janina Britzke and Christine Kurka provided information to attendees about the wide range of analyses that can be carried out with SOEP data in the areas of survey methodology and migration. They also offered participants the opportunity to go through the paper version of the personal questionnaire used in the SOEP Refugee Sample in 2016; test the relaunch of SOEPinfo (https://paneldata.org); and take the grip strength test, a recognized tool for measuring respondents' health. The latter attracted substantial interest among visitors, some of whom came back repeatedly to try it again.

As at previous ESRA conferences, a number of SOEP staff members presented their research findings and applications of new survey methods in different SOEP samples, and some chaired sessions. Presentations addressed recent developments in the SOEP, including question order effects in household surveys, different methodologies for measuring working hours in Germany, and the role of metadata in survey data management.

There was high interest among conference attendees in the session "Integrating migrants into representative cross-sectional and longitudinal survey


designs (I&II)" chaired by SOEP Director Jürgen Schupp. The aim of the session was to identify good practices for designing and running cross-sectional and longitudinal surveys that include migrants and refugees, and to discuss specific problems and obstacles that arise when integrating these populations into existing survey designs. There was a lively discussion on challenges, shortcomings, and sampling difficulties, and on potential strategies for overcoming these problems. In his presentation of the IAB-BAMF-SOEP Refugee Survey, which started with its first wave in 2016, Jannes Jacobsen (SOEP) focused on the sampling design and response behavior, and provided insights into the practical implementation of a large-scale sample of refugees in Germany.

List of presentations at ESRA Conference in Lisbon by SOEP staff:

- **The German Socio-Economic Panel (SOEP): Overview and new developments**
  Jan Goebel
- **Prevalence and Magnitude of Question Order Effects in Household Surveys**
  David Richter, Martin Kroh
- **Capturing actual work hours and preferred work hours in Germany—Methodical differences in SOEP and the Mikrozensus**
  Julia Bringmann, Elke Holst
- **The Sampling Design of the IAB-BAMF-SOEP Refugee Survey**
  Martin Kroh, Simon Kühne, Manuel Siegert (Federal Office for Migration and Refugees (BAMF-FZ)), Jannes Jacobsen
- **Translations into rare languages and foreign languages skills of refugees in Germany**
  Jürgen Schupp, Jannes Jacobsen
- **Measuring Sexual Orientation in Household Panel Surveys**
  Martin Kroh, David Richter, Simon Kühne
- **Interpersonal Inferences and Interviewer Effects in Face-to-Face Surveys**
  Simon Kühne
- **Structured Derivation of Variables from Occupational Classifications with Stata**
  Daniel Bela (LIfBi), Knut Wenzig

# SOEP Service

## SOEPcampus 2017

SOEPcampus is a flexible, modular training program that aims to familiarize first-time users with the dataset and the type of analyses it allows. The training program currently ranges from a 90-minute basic introduction to a three-day workshop, covering the general aims and content of the survey, data collection methods, the structure of the data, sample development, and the sample selection and weighting strategy, as well as an overview over the study documentation and the data information system paneldata.org.

Additionally, we offer sessions with a particular topic focus as well as more practically oriented hands-on sessions, in which frequent questions about data handling are addressed. All formats provide room to discuss questions about the dataset and documentation material with SOEP staff members. In 2017, the SOEP held a total of eleven SOEPcampus workshops in Basel, Berlin, Bochum, Dortmund, Florence, Frankfurt, Gießen, Göttingen, Mannheim, Muenster, and Leipzig. Upcoming SOEPcampus events are regularly announced on our website: **www.soep.de/soepcampus.**

The SOEP is also part of the Doctoral Study Network for Ph.D. Courses, a group of several northern German universities and research institutes that have joined together to improve doctoral-level education and training. For example, the International Research Workshop "Methods for Ph.D." is organized annually for doctoral students at these institutions, and takes place at the Academy of Sankelmark and the University of Southern Denmark.

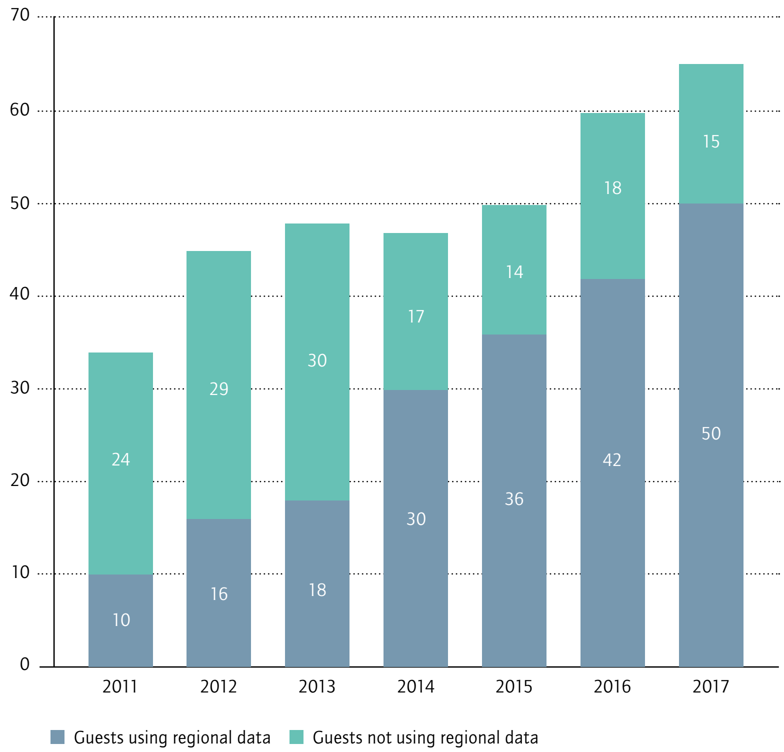
## SOEP-in-Residence 2017

The SOEP provides data users with a range of services around the SOEP data, from the standard Scientific Use File, a special mode of online access (via SOEPremote), to assistance over the SOEP Hotline. Users may also avail themselves of the opportunity to conduct research during a stay in the SOEP department at DIW Berlin as part of the "SOEP-in-Residence program." A visit to the SOEP allows visiting researchers all the benefits of the SOEP research environment, including input and support from staff experts and the logistical infrastructure of the SOEP Research Data Center. Research visits can be arranged to work on ongoing research projects or to address special research questions and topics. For researchers interested in using small-scale coded geodata, there is no getting around a research stay at the SOEP—the data are only available for use on site at the SOEP Research Data Center. Research visits to the SOEP's fieldwork organization, Kantar Public, may also be arranged.

In recent years, an increasing number of SOEP's data users have been taking advantage of the service in Berlin, and the demand for visiting scholar posts is constantly rising. Since the beginning of the SOEP-in-Residence Program in 2009, the SOEP team has hosted some 450 guests from different countries, including the UK, the US, Austria, France, Italy, Poland, Hungary, Israel, Spain, the Netherlands, Luxembourg, South Korea, Sweden, Australia, and Germany. The vast majority of visitors were from other German cities, who came to work with the geodata. In 2017, we had some 65 visiting researchers (some of them repeatingly), 77 percent of whom used the SOEP geodata. Classifying the guests by subject area, the following picture emerges: economics had the largest proportion at 49 percent, followed by sociology (35 percent). The remaining subject areas of political science, urban planning, psychology, and "other" are represented at below 10 percent each.

Figure 1

**Number of guests per year and type of data used**




# SOEP User Survey 2017

From November 20, 2017, to January 3, 2018, SOEP users had the opportunity to take part in our annual SOEP User Survey and contribute their opinions, requests, and ideas for the further development of the services provided by the SOEP. In addition to standard questions about our various services and infrastructural work, this year's user survey also included questions focusing on optimizing user friendliness. We are grateful to the 757 users who participated in the survey for their valuable feedback and many suggestions.

Working with the SOEP data for the first time often poses a major challenge to our users. In order to increase user friendliness and address the specific problems users face, we wanted to start by clearly defining our SOEP user community. Around 63 percent of respondents worked with the SOEP for the first time in 2016 or 2017 and can therefore be considered "new users." We refer to the approximately 37 percent of respondents who had used the SOEP data for the first time before 2016 as "old users." Our new users are, on average, 31 years old, female (53 percent), and work in economics (62 percent) as doctoral students (35 percent) or research assistants (29 percent). Old users are approximately seven years older, and the majority are male (65 percent) and professors (33 percent) or research assistants (39 percent) in economics (43 percent) and sociology (42 percent).

## SOEP Service

This year, SOEP User Survey respondents were asked to rate the SOEP on a series of quality criteria (**Figure 1**) using a seven-point Likert scale. We then compared users' expectations for each criterion with their ratings of the SOEP's performance. The SOEP exceeded users' expectations in areas such as punctuality of data release, information on new studies and projects, and the possibility to submit questions to SOEP-IS, and performed below users' expectations in the area "understandable data generation process".

Figure 2

**Which of the following aspects are improtant to you in connection with the SOEP, and to what extent is the SOEP successful in addressing these aspects? (n=451), in mean values**

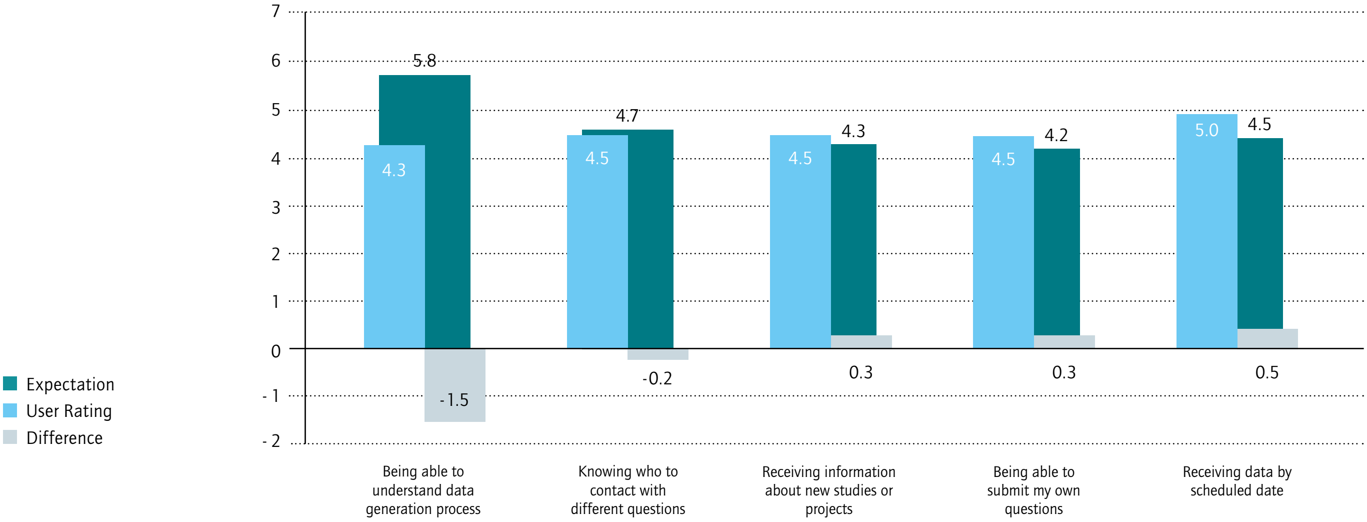
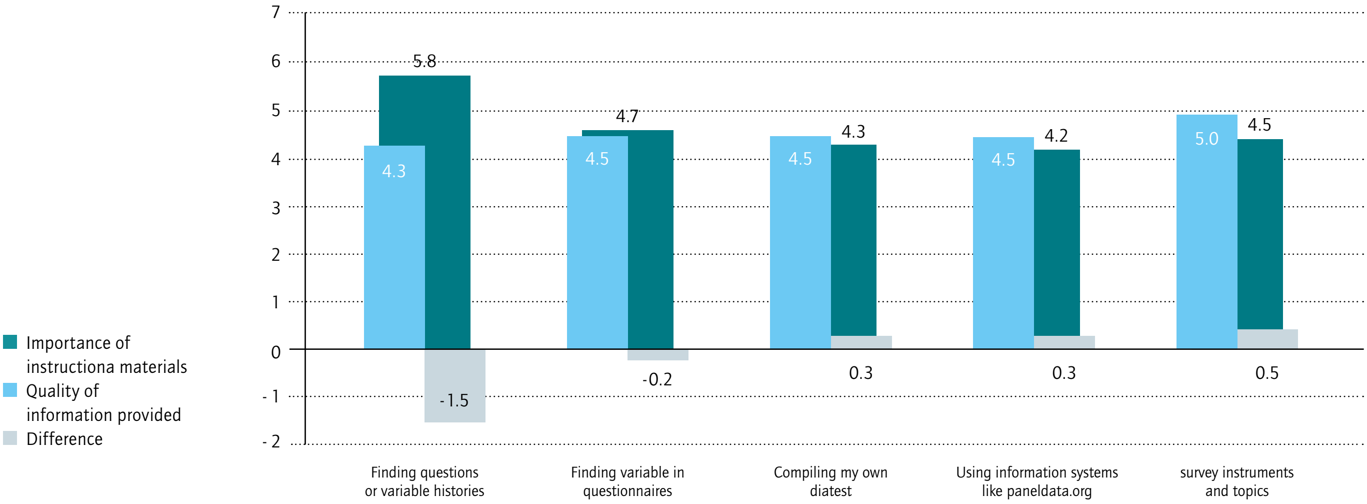



Figure 3

**What instructional materials would you as a user like to have, and how do you rate the quality of the information currently provided? (n=552), in mean values**

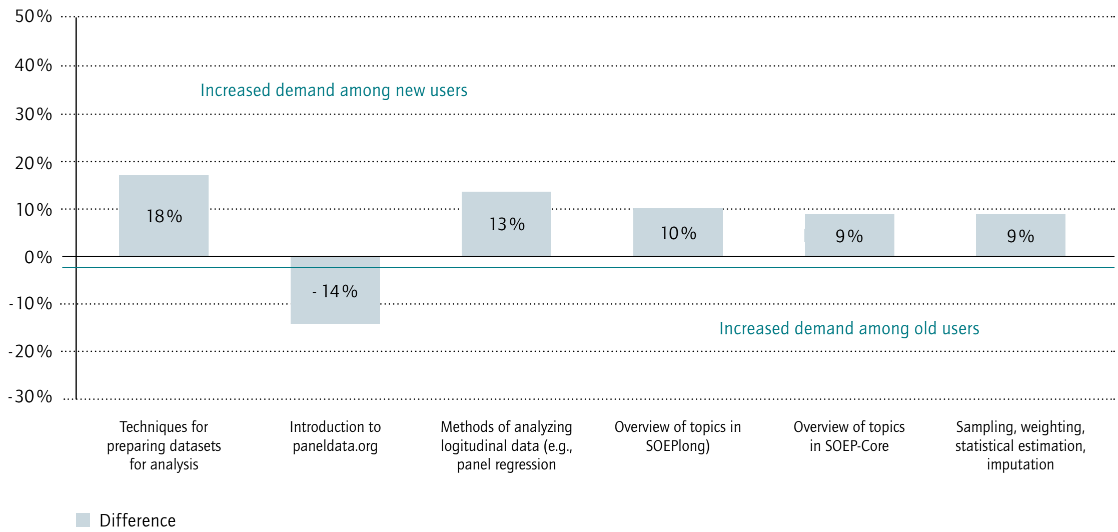



## User-Friendliness

To identify potential problems faced by first-time SOEP data users, this year's survey asked respondents what subjects they would like to have covered in the SOEP's instructional materials (**Figure 2**). Users were asked to think back to the first time they worked with the SOEP data and rate (on a seven-point Likert scale) how useful an instructional manual on specific topics would have been at that time, and whether the currently available instructional materials are sufficient. Respondents rated instructions on how to find the history of questions and variables (mean: 5.6) and understand the meaning of terms for datasets and variables (mean: 5.6) as extremely important. They reported having problems especially in "finding the history of questions and variables," and felt that the available information (mean: 4.6) should be expanded. In the area "survey instruments and their contents," the information provided by the SOEP met users' expectations. Users rated detailed written descriptions with screenshots as their preferred form of instructional materials (**Figure 3**).

Figure 4

**Which workshop topics are important to old and new SOEP users ? (n=369), in percentages**



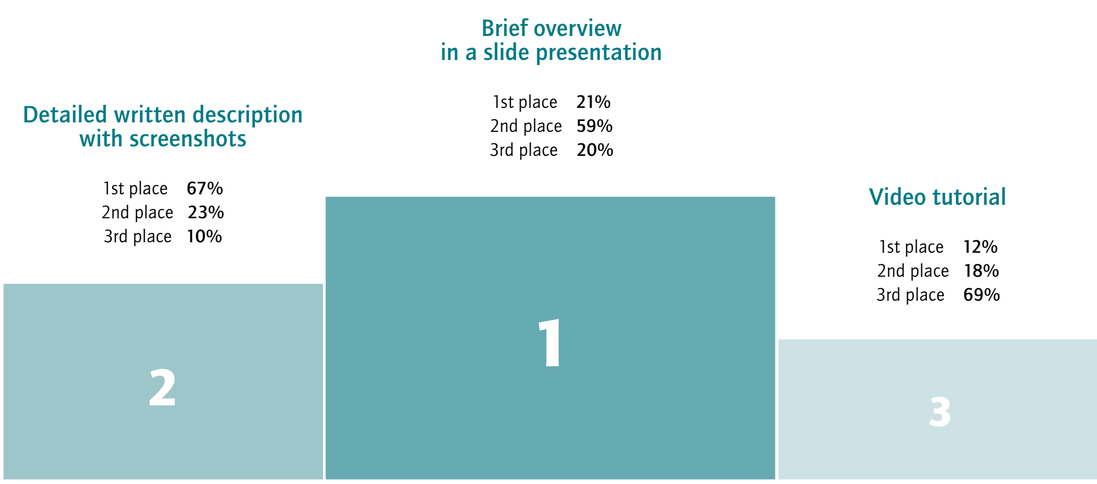

## SOEPcampus

The SOEP offers an array of SOEPcampus events to make it easier to get started working with the SOEP. To tailor our workshops to old and new users' needs, we asked User Survey respondents how important the various types of workshops are (**Figure 4**). When comparing the percentages of old and new users who rated a particular workshop as "very important," we found differences in demands: introductory workshops on "techniques for preparing datasets for analysis" (difference: 18 percent) and "methods for analyzing longitudinal data (e.g., panel regression)" were much more important to new users. Among old users, there was a higher demand for an "introduction into the use of paneldata.org" (difference: -14 percent).

The extensive feedback from our User Survey is a valuable source of information that helps us to continually improve our work and our services. We are very grateful to all of the SOEP users who participated in our survey in 2017!

Figure 5

**How should instructions be provided? (n=478), in percentages**



# SOEP Staff & Community News

- **Christoph Halbmeier** began work in February as a SOEP research assistant on the DFG project "Wealth Distribution in Switzerland and Germany: Evidence from Survey Data". He finished his degree in economics in October of last year at the Humboldt-Universität zu Berlin. His master's thesis analyzed the effects of trade on the labor productivity in German industries. He worked previously as a student assistant on the SOEP team, and plans to complete a PhD while working at the SOEP.
- **Michaela Schmälzle** joined the SOEP group in January to support in survey management of the SOEP-related study PIAAC-L. Michaela studied sociology at the University of Konstanz and the University of Mannheim. In her master's thesis, she examined the relationship between different pathways to retirement and retirement adjustment in Germany. Her research interests include changes in social inequalities over the life course, as well as survey methodology.
- **Andreas Franken** has been assisting the SOEP team since April 1 in data preparation, particularly for the SOEPlong data set. Andreas most recently worked as a research assistant at the German Centre for Higher Education Research and Science Studies (DZHW) in Hanover, and prior to this at the University of Bamberg Chair of Sociology, where he also earned his degree in sociology.
- **Sandra Gerstorf**, previously responsible for the Research Management at SOEP, left SOEP at the end of February to pursue new professional opportunities. Best wishes for the future, Sandra!
- **Daniel Schnitzlein** has been appointed to the advisory board of the Thailand Vietnam Socio-Economic Panel (www.tvsep.de). The TVSEP is a panel survey of households in Thailand and Vietnam (partly based on SOEP) and is managed from Hannover and Göttingen. The project will receive long-term financing for ten years (2015–2024) from the German Research Foundation (Deutsche Forschungsgemeinschaft). Daniel has also become a member of the Economics of Education Committee of the German Economic Association (VfS).
- **Holger Lüthen** joined the SOEP group as a post-doctoral student in May 2017. He studied economics at Freie Universität Berlin and graduated with a dissertation entitled "Essays on long-term labor market developments and retirement in Germany".
- **Lea-Marie Löbel** joined the SOEP team in May. She is a PhD candidate in the intervention study "Mentoring for Refugees (MORE)." Previously, Lea worked as an intern at the Berlin office of the International Labour Organization. She obtained her Master's Degree in Public Policy and Human Development at the United Nations University MERIT in Maastricht with a focus on social protection systems. For her thesis, she analyzed the non-take-up of social benefits among Germany's migrant population using SOEP data.
- **Christian Westermeier** successfully defended his dissertation at the Freie Universität Berlin in May 2017. His thesis, entitled "Exploring the possibilities and boundaries of survey data for the analysis of wealth and wealth transfers" was supervised by Prof. Dr. Dr. Giacomo Corneo (Freie Universität Berlin) and Prof. Dr. Carsten Schröder (Freie Universität Berlin and SOEP at DIW Berlin). We congratulate Christian on his success and wish him all the best for his career.

- **Magdalena Krieger** joined the SOEP in July and is the second PhD candidate in the MORE study. Magdalena previously earned her Master's in Migration Studies at the University of Oxford. As part of her studies, she focused on aspects of the political economics of international labor migration. Her master's thesis examined how immigration programs could address the lack of specialist doctors in Germany.
- **Peter Eibich** has been appointed Deputy Head of the Labor Demography Research Group at the Max Planck Institute for Demographic Research in Rostock, Germany. Peter worked at SOEP from 2012 to 2015 as a PhD student on the Berlin Aging Study II (BASE-II, SOEP Related Studies) before taking a position as a senior researcher at the University of Oxford in 2015.
- **Jan Goebel** has been elected Vice Chair of the German Data Forum's Standing Committee Research Data Infrastructure (FDI) at its 17th meeting. The aim of the FDI's work in the coming three years under newly elected Chair Pascal Siegers from the German General Social Survey at GESIS (RDC ALLBUS) will be to further improve the research data infrastructure in the social and behavioral sciences and economics in Germany.
- **Martin Kroh**, former Division Head of Survey Methodology and Management at the SOEP, has been appointed Professor of Methods of Empirical Social Research with a focus on quantitative methods at the University of Bielefeld starting January 1, 2018. He will continue to support the SOEP in the area of survey methodology during a transitional period and also work on joint ongoing research projects.

# The SOEP People Video Series

Since 2014, our video series SOEP People has been spotlighting some of the many interesting people who make up the SOEP community. Right now, there are over 500 researchers around the world working with SOEP data. In our short video portraits, members of the SOEP community give a personal perspective on their work, telling us what drives their research interests, what first led them to work on these subjects, and how their research affects their lives.

Up to 2017, we have featured videos on the following SOEP People: Jule Specht, John P. Haisken-DeNew, Elke Holst, Thorsten Schneider, Matthias Pollmann-Schult, Jennifer Hunt, Katharina Mahne, Rainer Winkelmann, Nicolas R. Ziebarth, and Judith Niehues.

In 2017, we produced the three video portraits in the SOEP People series: **Rainer Winkelmann**, Professor of Economics at the University of Zurich since 2001, who is a member of the DIW Berlin Scientific Advisory Board and has chaired the SOEP Survey Committee up to the end of 2016. In his SOEP People video, he talked about his groundbreaking 1998 paper "Why are the unemployed so unhappy?" (written jointly with Liliana Winkelmann), which provided the first conclusive evidence that unemployment makes people unhappy. It is the most widely cited paper in the history of the SOEP. **Nicolas Ziebarth** is an Assistant Professor in the Department of Policy Analysis and Management at Cornell University and talked to us about the differing research mentality between the United States and Germany. His dissertation, entitled "Sickness Absence and Economic Incentives", was supervised by Gert G. Wagner and was awarded the 2011 Upjohn Institute Dissertation Award. His research is in the field of applied health and labor economics, focusing on the interaction of social security systems with labor markets and population health, as well as the driving forces and implications of health-related behavior. **Judith Niehues** is a Senior Economist at the Cologne Institute for Economic Research (IW Köln), where she heads the Microdata and Method Development Research Group. In her SOEP People video, she talked about inequality and perceptions of inequality within the population of Germany.

The videos can be found in the DIW Berlin Media Center at http://www.diw.de/soeppeople, on YouTube at https://www.youtube.com/user/SOEPstudie, and are posted on the SOEP Facebook page at https://www.facebook.com/SOEPnet.de/. The interviews are also published in written form in our quarterly SOEP Newsletter under the heading "Five questions to...".

# SOEP People: **Five questions to Rainer Winkelmann**

Rainer Winkelmann's research on unemployment and happiness using SOEP data led to his groundbreaking 1998 paper "Why are the unemployed so unhappy?" (written jointly with Liliana Winkelmann), which provided the first conclusive evidence that unemployment makes people unhappy. It is the most widely cited paper in the history of the SOEP.

Rainer Winkelmann studied economics at the University of Konstanz, Paris IX-Dauphine, and Washington University in St. Louis, and he holds a PhD from the University of Munich (1993). He has taught at Dartmouth College, USA, and the University of Canterbury, New Zealand, and was a visiting professor at Harvard University, Syracuse University, and UCLA. He has been a Professor of Economics at the University of Zurich since 2001. His research is in microeconometrics with applications to social policy issues in the fields of labor, health, and well-being. He is a member of the DIW Berlin Scientific Advisory Board and chaired the SOEP Survey Committee up to the end of 2016.

The SOEP People video interview can be found at:
**https://www.youtube.com/watch?v=pdUaKCpL9_8.**

***1. Your paper "Why are the unemployed so unhappy?", published in 1998 in the journal Economica, paved the way for a growing body of research on unemployment and happiness. What did you find out?***

First, we found that unemployment matters a lot to individuals' well-being. For instance, unemployed people on average have a 10 percent lower probability of being happy than employed people. Second, we found out that income is not that important for well-being. This fits with an idea that emerged around the same time that economics is too narrow in focus. It's not just what makes workers go to work. It's not just a high per capita GDP that's needed for a good society. There is much more to it than that—there are other things that people look for and that contribute to their well-being. It's not just money. Incidentally, we published another paper three years before the Economica paper in the journal Konjunkturpolitik, where we studied how unemployment affects the household when one partner is unemployed. The SOEP data allowed us to do that because they provide the family context. What we found is not really that surprising: women are very unhappy when their partner is unemployed. This actually means that unemployment is overall even worse than what we described in our Economica paper, because it not only affects the unemployed person but also spills over in the household.

***2. Today, almost 20 years later, do you see policy impacts of that research?***

One part of the long-term impact was to put life satisfaction and well-being research on the agenda and say it's not just money that matters; there should be broader notions. It's not enough to focus on macroeconomic factors like maximizing GDP; to have high well-being in a country, other things matter as well. That has slowly started to have an impact in policy circles. Now the OECD has a "better life index" that takes account of these broader measures of well-being that came from life satisfaction and happiness research. The UN edits a world happiness report. Our research has supported the idea that one should judge progress not just by looking at income changes or GDP growth, but also by looking at other indicators.

***3. Several countries are discussing the introduction of a basic income. What does your research say about how a basic income might affect people's incentive to work?***

For economists, the idea of a basic income clearly has some appeal. As a labor economist, one is very aware of welfare traps: situations where people with low incomes who receive benefits have no monetary incentive at all to start working. Basic income would solve that. I think that our evidence is consistent with the notion that even a basic income would not stop most people from working because actually they like to work; they get social recognition from work. With a basic income, you can also work to supplement your income and have a higher income as a consequence. In this sense, there is some link between our unemployment research and the discussion on basic income.

***4. Your research has high policy relevance, but you're also known in the SOEP community as an innovator and expert in micro-econometric methodologies.***

Most of my research is really one step before policy-oriented research. I develop microeconomic methods and am happy if people use them in applied research that goes into policy reports, but I don't have to be the person that actually does that. I find it more interesting to be guided by my curiosity than by current policy issues, so I think a bit more long-term about what to work on and what fascinates me. I find research fascinating because you can make discoveries—you think about questions that no one has addressed before. Whether it gets published in the end is almost secondary. We've written papers that were never published but I still thought it was a good experience and a good idea to do that research.

***5. As a data user for over 30 years, you've seen numerous changes and innovations in the SOEP study...***

The most important thing for my purposes was that from the start in 1984, the SOEP included a life satisfaction question, which no other survey had at the time and which was quite visionary. I think that has paid off nicely for the SOEP and for many researchers. We now have 32 years of data this year, so there are also tremendous opportunities for future research to look at long time series of consistent measurements in life satisfaction.

Another point that I think is important about the SOEP is that success breeds success. Once the SOEP was there—it was early and was doing good things—others picked up on it. A research community developed around the SOEP. That also makes the SOEP more attractive to you as a young researcher because you benefit from the experience, from the acknowledgment that this is a good dataset, and it becomes easier for you to publish. There are also the SOEP user conferences. All these aspects are important points when deciding what data to use.

# SOEP People: **Five questions to Nicolas R. Ziebarth**

Nicolas Ziebarth is an Assistant Professor in the Department of Policy Analysis and Management at Cornell University. He studied economics and business studies at HU and TU Berlin and was a member of the first DIW Graduate Center cohort from 2006 to 2011. During this time, Nicolas Ziebarth worked in the SOEP department at DIW Berlin. His dissertation, entitled "Sickness Absence and Economic Incentives," was supervised by Gert G. Wagner and was awarded the 2011 Upjohn Institute Dissertation Award. His research is in the field of applied health and labor economics, focusing on the interaction of social security systems with labor markets and population health, as well as the driving forces and implications of health-related behavior.
We spoke to Nicolas Ziebarth at the last SOEP Conference in Summer 2016.
The SOEP People video interview can be found at:
**https://www.youtube.com/watch?v=WICqkDc5XmQ.**

***1. When did you discover the SOEP?***
During my master's studies at TU Berlin, I took a microeconomics course with Joachim Frick. He taught us how to analyze data. Up to that point I had never worked with a data set. That was when I realized I could use microdata to find empirical answers to the questions I'm interested in. I got excited not only about the SOEP but also about microeconomic research. After Joachim's course, I knew I wanted to do microeconomics and also pursue a PhD.

***2. Soon after completing your PhD, you took a teaching position in the United States. How has your European perspective affected your teaching and research in a US context?***
I think the fact that I am German and moved to the US after my PhD was helpful for my perspective on health care in the United States. Sometimes people ask me why they hired a German to teach students the US health care system. I think it actually helps a lot because if you have an outsider perspective, you're able to analyze things from a less emotional, more rational perspective. In the United States, people either hate Obamacare or they love Obamacare and there's nothing in between. That's something we don't have in Germany—that people are so emotionally and ideologically involved in the question of whether everybody should have health insurance or whether the state should force you to have health insurance.

***3. In addition to the different understandings of health policy in the United States and Germany, does the research mentality also differ between the two countries?***
Americans are generally more optimistic than Germans. Germans have the tendency to be a little grumpy and to complain a lot. Americans are very different, and that translates into the research culture and environment as well. We have lively debates about numerous topics, but you don't have people complaining so much about things. In the US, people are very optimistic and excited about what they do.

***4. You do applied research on health and health care systems. What motivates you to work in that line of research?***
It's really important to me to do applied research that hopefully will be used by policy makers or governmental institutions or somebody outside the research community. That's a driving force in my research. An example of how my research translated into policy recommendations was a paper where we examined the health effects of daylight savings time. Twice every year, there's a big discussion in the media whether daylight savings is bad for us. A lot of studies have claimed that you have negative health effects in spring. In our study, we found positive effects in fall, when a lot of sleep-deprived people get an extra hour of sleep. At the time of our study, there was a debate in German Parliament on whether to abolish daylight savings. They commissioned a government report, and I was in discussions with the main author, who integrated our findings nicely into the report. It's satisfying when you see somebody using your research. As a researcher, you're always asking yourself: Why am I doing this? For the 50 or 100 or 200 other people working in this field? I want to at least see my research translate into some real-world interest.

***5. You've been working with the SOEP data since your master's thesis. What's your experience with the SOEP?***
The SOEP data are fantastic—the longitudinal dimension, the panel framework, representativeness, and great measures of personality traits, cognitive skills, risk aversion, and health that you don't find in any other data.

# SOEP People: **Five questions to Judith Niehues**

"Income Inequality, Inequality of Opportunity, and Redistribution" was the subject of economist Judith Niehues' doctoral dissertation and has been a central focus of her research since then. Niehues earned her doctorate at the University of Cologne after completing undergraduate studies there and at San Diego State University in the United States. She is a Senior Economist at the Cologne Institute for Economic Research (IW Köln*), where she heads the Microdata and Method Development Research Group. In her research, she makes regular use of SOEP data to study inequality and perceptions of inequality within the population.
Our SOEP People video interview with Judith Niehues can be found at:
**https://www.youtube.com/watch?v=UeohQUgTMDQ (in German)**

***1. Much of your research deals with the middle class. What's your most important finding on the middle class to date?***
It was clear to me from the research on income distribution that Germany is a middle-class society. But in a data analysis, I found that the majority of Germans don't believe that at all. Most Germans think that our society is shaped like a pyramid, with most people at the bottom. That surprised me. I was even more surprised to find out that more Americans than Germans believe they live in a middle-class society—despite the fact that the middle class is much smaller in the United States than in Germany.

***2. Do Germans think the social situation here is worse than it actually is?***
Yes. And there is also evidence that Germans are too pessimistic about how inequality in our society is changing over time. Eighty percent of Germans think the gap between rich and poor has widened in recent years. In fact, around 70 to 80 percent of the population of every country in the developed world has this perception, independent of what the actual development of inequality has been like.

***3. How do these kinds of perceptions arise?***
I always had the idea in the back of my mind that these perceptions might be driven by the mass media. And the SOEP offered a unique opportunity to test this idea. The SOEP data include information on the specific date respondents were interviewed. There are also media data that show what was being reported on in the media on what date. Our study found that when there is extensive reporting on inequality in the media, respondents are likely to report being less satisfied, for instance, with social justice in our country. This shows that media reporting can influence people's subjective perceptions and concerns.

***4. How important is it to you that your findings get out into the public?***
It's important to me to give people facts and clear up misconceptions. So bringing my findings out into the public sphere always plays a role in my work. And when I see that my findings are being picked up by the media and that they're making it into the political discourse, I feel like I'm having at least a small influence on the public debate.

***5. Is there anything else you're as enthusiastic about as you are about research?***
Yes—I really enjoy playing soccer and also watching it. It must be great to be a professional player. Not because of the hype around it, but playing soccer every day and getting paid for it sounds like a dream.

# SOEP Glossary

## SOEP-Core

The German Socio-Economic Panel (SOEP) is a wide-ranging representative longitudinal study of private households, located at the German Institute for Economic Research, DIW Berlin. Every year, around 14,000 households and about 30,000 persons are sampled by the fieldwork organization Kantar Public Germany.

The SOEP study is available in the two formats “SOEP-Core” and “SOEPlong.”

### Contents of SOEP-Core

The SOEP started in 1984 as a longitudinal survey of private households in the Federal Republic of Germany. The central aim then and now is to collect representative micro-data to measure stability and change in living conditions. It uses a microeconomic approach enriched with variables from sociology and political science. The main survey instruments are a household questionnaire, which the head of the household completes, and an individual questionnaire, which each household member is asked to complete. Furthermore, since 1997, the SOEP has collected retrospective biographical information on every new respondent. Based on the information from these questionnaires, user-friendly BIO$$ data files are constructed (e.g., BIOBIRTH). A relatively stable set of core questions are asked every year covering the main areas of interest in the SOEP:

- population and demographics
- education, training, and qualification
- labor market and occupational dynamics
- earnings, income, and social security
- housing
- health
- household production
- preferences and values
- satisfaction with life in general and specific aspects of life.

In addition to this standard information, special modules with detailed questions on specific topics are included each year. The topics are documented in the following table. Most of these modules appear in the individual questionnaire, and a few in the household questionnaire. Starting in 2001, several different health measures and well-known psychological concepts were added to the standard individual questionnaire and to age-specific questionnaires.

### SOEPlong

SOEPlong is a highly condensed version of the SOEP data that is much easier to handle and analyze than the usual SOEP-Core data. It contains a significantly reduced number of datasets and variables. The data are no longer provided as wave-specific individual files but rather pooled across all available years (in a “long” format). In some cases, variables are harmonized to ensure that they are defined consistently over time. For example, the income information up to 2001 is provided in euros, and categories are modified over time when versions of the questionnaire are changed. All these modifications are clearly documented and described for ease of understanding. In the case of recoding or integration of data (for example, datasets specific to East German or foreign populations), documentation is generated automatically, and all modified variables are provided in their original form as well. SOEPlong thus provides a well-documented compilation of all variables and data that is consistent over time.
**https://ddionrails.soep.de/soep-long**

Table 1

## SOEP-Core Topics

| Year | Wave number | Wave letter | Topic |
|---|---|---|---|
| 1986 | 3 | C | Residential environment and neighborhood |
| 1987 | 4 | D | Social security, transition to retirement |
| 1988 | 5 | E | Household finances and wealth |
| 1989 | 6 | F | Further occupational training and professional qualifications |
| 1990 | 7 | G | Time use and time preferences; Labor market and subjective indicators |
| 1991 | 8 | H | Family and social networks |
| 1992 | 9 | I | Social security (2nd measurement) |
| 1993 | 10 | J | Further occupational training (2nd) |
| 1994 | 11 | K | Residential environment and neighborhood (2nd); Working conditions; Expectations for the future |
| 1995 | 12 | L | Time use (2nd) |
| 1996 | 13 | M | Family and social networks (2nd) |
| 1997 | 14 | N | Social security (3rd) |
| 1998 | 15 | O | Transportation and energy use; Time use (3rd) |
| 1999 | 16 | P | Residential environment and neighborhood (3rd); Expectations for the future (2nd) |
| 2000 | 17 | Q | Further occupational training (3rd) |
| 2001 | 18 | R | Family and social networks (3rd) |
| 2002 | 19 | S | Wealth and assets (2nd); Social security (4th); Health (SF12, BMI) |
| 2003 | 20 | T | Transportation and energy use (2nd); Trust; Time use (4th) |
| 2004 | 21 | U | Residential environment and neighborhood (4th); Further occupational training (4th); Risk aversion; Health (2nd) |
| 2005 | 22 | V | Expectations for the future (3rd); Big Five; Reciprocity |
| 2006 | 23 | W | Family and social networks (4th); Working conditions (ERI); Health (3rd); Grip strength |
| 2007 | 24 | X | Wealth and assets (3rd); Social security (5th) |
| 2008 | 25 | Y | Further occupational training (5th); Health (4th); Grip strength (2nd); Trust (2nd); Time use (5th) |
| 2009 | 26 | Z | Residential environment and neighborhood (5th); Risk aversion (2nd); Big Five (2nd); Globalization and transnationalization; Diseases |
| 2010 | 27 | Ba | Consumption and saving; Reciprocity (2nd); Health (5th); Grip strength (3rd) |
| 2011 | 28 | BB | Family and social networks (5th); Working conditions (ERI) (2nd); Diseases (2nd) |
| 2012 | 29 | BC | Wealth and assets (4th); Social security (6th); Health (6th); Grip strength (4th) |
| 2013 | 30 | BD | Big Five (3rd); Trust (3rd); Loneliness; Working conditions (ERI) (3rd); Diseases (3rd) |
| 2014 | 31 | BE | Health (7th); Risk aversion (3rd); Globalization and transnationalization (2nd); Residential environment and neighborhood (6th); |
| 2015 | 32 | BF | Minimum wage, Reciprocity (3rd), Transportation and energy use (3rd) |
| 2016 | 33 | BG | Minimum wage (2nd); Family and social networks (6th); Working conditions (ERI); Activities and attitudes towards migration issues |
| 2017 | 34 | BH | Minimum wage (3rd); Wealth and assets (5th); Social security (7th), Big Five (4th); Trust (4th); Loneliness (2nd) |

## SOEPregio

SOEP offers diverse possibilities for regional and spatial analysis. With the anonymized regional information on the residences of SOEP respondents (households and individuals), it is possible to link numerous regional indicators on the levels of the states (Bundesländer), spatial planning regions, districts, and postal codes with the SOEP data on these households. However, specific security provisions must be observed due to the sensitivity of the data under data protection law (see overview). Accordingly, users are not allowed to make specific statements about places of residence or administrative districts in their analyses, but the data do provide valuable background information.

## SOEP Pretests

The SOEP conducts pretests before questionnaires are fielded each year. The aim is to test new questions or modifications of existing questions. In some cases, behavioral experiments are tested and included in the main SOEP survey. A pretest usually goes to about 1,000 respondents. The samples are representative by approximation for the adult population (aged 16 years and older). Data are collected by Kantar Public and passed on to the SOEP, and released by SOEP to users. Since 2012, pretests have been part of SOEP-IS sub-samples.
https://ddionrails.soep.de/soep-pretest

## CNEF—Cross-National Equivalent File of the SOEP

The International Science Use Version of the SOEP (95% version) can be used worldwide. The Research Data Center SOEP is providing it upon request at no cost for encrypted download. CNEF data will no longer be distributed by Cornell University, but by Ohio State University. At the moment, an order form is not available, but the conditions are unchanged: $125 one-time charge at first order. More information is given here: Cross-National Equivalent File Project
http://cnef.ehe.osu.edu/

## LIS

LIS, the cross-national data center in Luxembourg formerly known as the Luxembourg Income Study was founded in 1983. Its mission and core work have not changed since its inception: to acquire and harmonize high-quality microdatasets and to make them available to researchers around the world. At the same time, LIS is constantly evolving and growing, as is its user community, which currently numbers in the thousands. LIS' data holdings are organized into two databases. The longstanding Luxembourg Income Study (LIS) Database, which is focused on income data, will soon contain over 300 datasets from more than 50 high- and middle-income countries. The smaller and newer Luxembourg Wealth Study (LWS) Database contains microdata on assets and debt; LWS now includes 20 datasets from 12 countries. (Germany was one of the earliest participating countries; the LIS and LWS Databases contain 11 and 2 datasets from Germany, respectively.)
http://www.lisdatacenter.org

# SOEP Infrastructure Projects

## IAB-SOEP Migration Sample

The IAB-SOEP Migration Sample is a joint project of the Institute for Employment Research (IAB) and the Socio-Economic Panel (SOEP) at the German Institute for Economic Research (DIW Berlin). The project attempts to overcome limitations of previous datasets through a sample that takes into account changes in the structure of migration to Germany since 1995. The dataset is an additional SOEPCore sample. It is completely harmonized with the SOEP and integrated into SOEP v30 (identical questionnaire with additional questions on the respondent's migration situation). The study opens up new perspectives for migration research and gives insights into the living situations of new immigrants to Germany. Data collector: Kantar Public Germany.
https://ddionrails.soep.de/iab-soep-mig

## GeFam

The project "Refugee Families in Germany" (GeFam) was designed as a panel study to be conducted in the years 2016, 2017, and 2018 with the aim of improving the data infrastructure for social and economic research on the living situations of refugees in Germany. The Research Centre on Migration, Integration, and Asylum of the Federal Office for Migration and Refugees (BAMF-FZ) created the sample by random selection from the Central Register of Foreigners (AZR). The target population consists of individuals who came to Germany seeking asylum between January 2013 and January 2016. The survey covers topics including the refugees' living situations; their schooling, higher education, and vocational training; and their current occupational situations and social participation. Participation in the survey is voluntary. The study is designed around the SOEP household concept, with the "anchor" respondent drawn from the AZR being surveyed along with his or her family members. The survey is conducted by Kantar Public with specially trained interviewers and with support from interpreters when needed.

The first round of the IAB-BAMF-SOEP survey covering 1,600 "anchor" respondents and their family members went into the field in June 2016. The survey is funded by the Federal Employment Agency. The project "Conception, Implementation, Preparation, Register Linkage, Analysis, and Data Provision/Distribution of a Representative Sample of Refugee Families (GeFam)" recently approved by the BMBF will double the sample by another 1,600 "anchor" respondents and their families. The GeFam boost sample was designed to increase the number of individuals in the sample who came to Germany with their children or other underage family members. Fieldwork for the boost sample began in August 2016. According to current data, around one-third of all refugees arriving in Germany are minors, and about 90% are accompanied by parents or other adult family members.
http://www.diw.de/GeFam_en

## MORE

The scientific study MORE is designed to deliver first results on the role of civic engagement to promote the short- and long-term integration of refugees in Germany. The intervention study is being carried out by the Socio-Economic Panel (SOEP) at the German Institute for Economic Research (DIW Berlin) in partnership with the Institute for Employment Research (IAB). It is funded through the Leibniz Competition (funding line: innovative projects) and is being conducted between 2017–2019.
For the purpose of this study, MORE has partnered with Start with a Friend, a social start-up that has created more than 2,500 mentoring-style relationships (known in German as "Tandems") between refugees and locals since 2014. Like many other civic initiatives for refugees, Start with a Friend aims at creating friendships between refugees and locals and providing emotional as well as practical support. Locals who are interested in participating in the program can register on the Start with a Friend website. The MORE study uses a randomized controlled trial that will be conducted with participants of the IAB-BAMF-SOEP Refugee Sample 2017 and 2018. Participants who are interested in participating in the study are randomly selected into either the group of 300 participants (the treatment group) or the group of 500 non-participants (the control group). All participants are matched with a local by Start with a Friend. Both the treatment and the control group will be interviewed annually as part of the IAB-BAMF-SOEP Survey of Refugees. One of the main questions the study seeks to answer is whether active support from a mentor plays a causal role in expanding refugees' social networks, improving

their language use, or aiding them in the search for education or employment. In addition to the Survey of Refugees, there will be a survey on how the mentoring relationship evolved. The participating mentors will be surveyed on their expectations and the relationship with the refugee developed over time from their perspective. This will focus on the intensity of the mentoring relationship, shared activities, and the dynamics of the relationship over the course of the program. The data on refugees and locals can be combined for analysis. All data and analyses will be made available. If the refugee has given consent, it will be possible to link the IAB-BAMF-SOEP Survey of Refugees with the Integrated Employment Biographies sample (IE) of the IAB.
http://www.diw.de/MORE_en (see also pp. 58)

## EVA-MIN

The Leibniz research project EVA-MIN is jointly conducted by researchers from the Socio-Economic Panel (SOEP) research infrastructure at DIW Berlin, together with colleagues from the Institute for Employment Research (IAB) in Nuremberg and the University of Potsdam. The project is commissioned by the Leibniz Association and funded from 2015 up to 2018. It aims to comprehensively evaluate the effects of the 2015 minimum wage introduction in Germany and to exchange the knowledge with all stakeholders. They will not only be analyzing the data themselves but also providing them for use by interested researchers worldwide. More information on EVA-MIN can be found here:
http://www.diw.de/eva-min_en

# SOEP-IS

The SOEP research infrastructure at DIW Berlin introduced the longitudinal SOEP Innovation Sample (SOEP-IS) in 2011 for innovative research projects. SOEP-IS is designed primarily to test survey methods and topics that involve too high a risk of nonresponse for the long-term SOEP study. Key features:

- SOEP-IS is based on an evaluation conducted by the German Council of Science and Humanities.
- It a longitudinal sample for innovative survey methods and behavioral experiments.
- It will be further developed in the period from 2012 to 2017 and should be fully developed by 2017.

The annual fieldwork runs from September to December of each year. The first wave of the first subsample of SOEP-IS started in September 2011, with a newly developed core questionnaire “SOEP Innovations” and new methods to measure gender stereotypes. The overall volume and costs of the surveys conducted in SOEP-IS are lower than if “fresh” samples were used: central household and individual characteristics, which are invariant over time, are already available and do not have to be collected again. A two-step module of governance has been established to regulate the selection of topics and modules: first, SOEP survey management runs a basic methodological test to establish whether the size, format, and survey mode outlined in a proposal seem appropriate for implementation in the SOEP-IS. The SOEP Survey Committee then checks the content of proposals received and prioritizes these for selection purposes. Information about SOEP-IS in general and about the application process is published in: SOEP Innovation Sample (SOEP-IS)—Description, Structure and Documentation by David Richter and Jürgen Schupp (SOEPpaper 463).
https://ddionrails.soep.de/soep-is and
http://www.diw.de/soep-is
(See pages 60–73 of this report)

# SOEP Service

## SOEPnewsletter

In addition to providing comprehensive documentation and user support services, the SOEP Research Data Center also publishes the quarterly SOEPnewsletter containing the latest information on data updates, conferences, and SOEP-based publications. The newsletter is distributed by email to the growing international SOEP user community.
http://www.diw.de/SOEPnewsletter_en

## SOEPlit

Many of the research findings and publications based on SOEP data are archived at DIW Berlin. Bibliographic descriptions can be found in our SOEPlit database. In addition, we collect publications based on the European Community Household Panel (ECHP) and the Luxembourg Income Study (LIS), as the data on Germany contained within these international comparable data sets are partly generated from SOEP data. To keep this database up to date, we ask all authors to send us copies of all of their publications based on SOEP data by e-mail to:
soeplit@diw.de
http://www.diw.de/SOEPlit

## SOEPpapers

In 2007, we launched the discussion paper series SOEPpapers on Multidisciplinary Panel Data Research. It publishes papers based either directly on SOEP data or using SOEP data as part of an international comparative dataset (for example CNEF, LIS, LWS). In line with SOEP's multidisciplinary design, we welcome research from all of the social sciences: Sociology, psychology and behavioral genetics, survey methodology, economics, econometrics and advanced statistics, demography, educational science, political science, public health, geography, and sport science. SOEPpapers are published on a non-exclusive basis, so there is nothing to prevent an author from publishing elsewhere as well. All SOEP users are invited to use SOEPpapers as a platform for their SOEP-based research. The series is designed to open up ongoing research work to an international audience for discussion and debate. To submit paper, please write to: soeppapers@diw.de
http://www.diw.de/soeppapers_en

## SOEPcampus

The SOEP is working to constantly improve methodological training in the use of SOEP data—especially for young scholars in sociology, economics, and psychology. In addition to holding workshops at universities, we offer introductions to the use of the SOEP data and workshops on particular issues of data use. They are listed on our website at:
http://www.diw.de/soepcampus_en.

## SOEPmonitor

The SOEPmonitor compiles time series since the mid-1990s for chosen indicators calculated on basis of the SOEP data. The most important function of the SOEPmonitor—aside from reporting detailed information on the situations of individuals and households—is to give SOEP users a benchmark for their own studies. With the figures contained in the SOEPmonitor, we offer an important reference point to evaluate the results of users' own research. Simultaneously, the numerical series of the SOEPmonitor represent social indicators. With every issue of the SOEPmonitor, we provide data series for the years 1984 to the current wave, disaggregated for East and West Germany since 1990 by households and individuals. Since the 2007 SOEPmonitor, tables are provided in English as well.
http://www.diw.de/SOEPmonitor_en

## SOEP-in-Residence

In addition to offering SOEP users the standard Scientific Use File (by encrypted download), online access (via SOEPremote), and advice from our SOEPhotline, we also provide the opportunity to conduct research during a stay in the SOEP Department at DIW Berlin. Users benefit from direct discussion with SOEP team members and our user-friendly environment, allowing them to work effectively on research projects and bring them to successful completion. For users interested in using the small-scale geodata, a research stay at the SOEP Data Research Center at DIW Berlin is mandatory. SOEP also provides research stays to address special research questions and topics. Furthermore, research visits to SOEP's fieldwork organization, Kantar Public Germany, are also possible.
http://www.diw.de/soep-in-residence

## SOEP Re-Analysis

Data protection issues are of utmost importance to SOEP and CNEF users. First, data protection comprises part of the (implicit) contract between the survey and the respondent. Second, in order to access the data, users are required to address all data protection regulations. Ultimately, all these precautions are crucial to ensure future participation by panel respondents. As such, making SOEP and CNEF data available for reanalysis while maintaining the highest levels of data protection can present a major challenge. Whenever such a microdata set is not considered completely anonymous from a legal point of view, we—as data producers—are not permitted to allow archiving without guaranteeing adherence to clear-cut access regulations.
http://www.diw.de/soep-re-analysis

## Digital Object Identifiers (DOI)

The need for replicability of findings makes it necessary to be able to identify and cite the particular SOEP data used in research. One way of doing this is through the system of Digital Object Identifiers (DOI), which is already being used for numerous publications. It is also well-suited for research data, and is therefore now being used for the SOEP data as well. Digital identifiers provide a form of permanent identification for digital objects and thus guarantee that they can be found again on the Internet. They are a basic requirement for citing and finding research data on the Internet, even when the location (URL) has changed. A series of metadata are linked with each DOI (defined in the “metadata schema”) in order to guarantee improved description and recognition of the data. The SOEP RDC, as a publication agent, will be assigned the prefix 5684 in each DOI registered via da|ra. It is important for SOEP users to know that this does not change anything about our proposed mode of citation for the SOEP data. Rather, this provides you with the additional possibility to add a unique DOI to your citations. Because precise references to data sources are becoming increasingly important in the scientific research community, the SOEP group recommends citing the SOEP data as follows.
**English:** Socio-Economic Panel (SOEP), data for years 1984–2016, version 33, SOEP, 2017, doi:10.5684/soep.v33.
**German:** Sozio-oekonomisches Panel (SOEP), Daten für die Jahre 1984–2016, Version 33, SOEP, 2017, doi:10.5684/soep.v33.
**Short Version:** SOEP v33

## PART 5

# SOEP-Based Publications in 2017

# SOEP-Based Publications over the Last Decade

Figure 1

## SOEP-based (S)SCI publications over the last decade

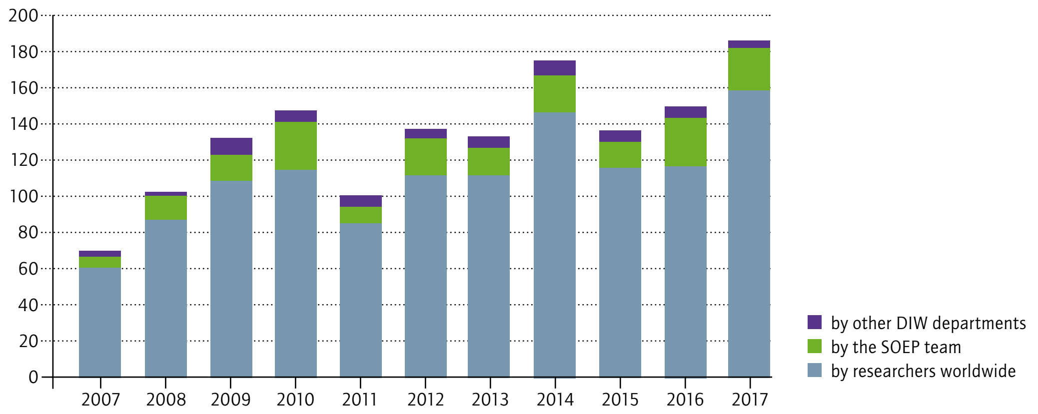
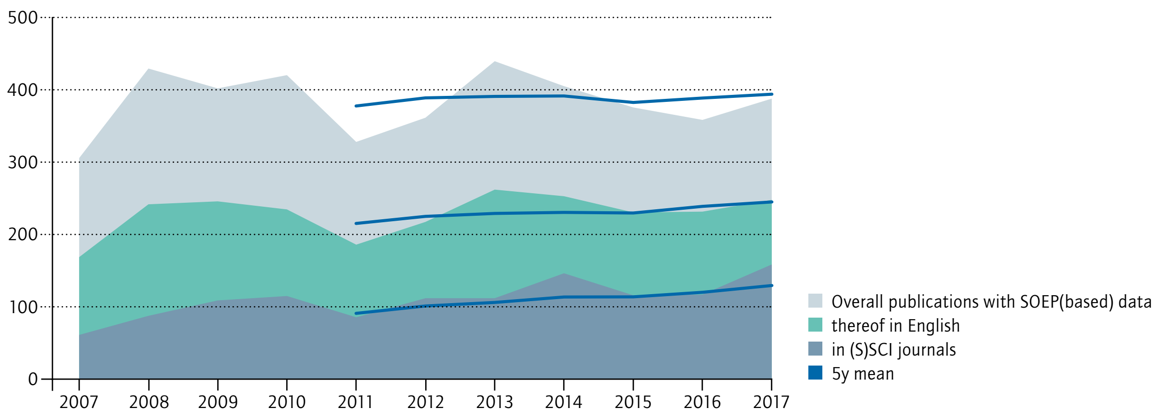



Figure 2

## Overall publications with SOEP(-based) data




**Last data update: March 2018**

# (S)SCI Publications in 2017 by SOEP Staff


## A

Anger, Silke and **Daniel D. Schnitzlein**. 2017. Cognitive Skills, Non-Cognitive Skills, and Family Background: Evidence from Sibling Correlations. *Journal of Population Economics 30, No. 2, 591–620 (http://doi.org/10.1007/s00148-016-0625-9).*

## B

**Bartels, Charlotte** and Maximilian Stockhausen. 2017. Children's Opportunities in Germany—An Application Using Multidimensional Measures. *German Economic Review 18, No. 3, 327–376 (http://doi.org/10.1111/geer.12108).*

Bönke, Timm, Beate Jochimsen, **Carsten Schröder**. 2017. Fiscal *Equalization and Tax Enforcement. German Economic Review 18, No. 3, 377–409 (http://doi.org/10.1111/geer.12110).*

Brady, David, **Marco Giesselmann**, Ulrich Kohler and Anke Radenacker. 2017. How to measure and proxy permanent income: evidence from Germany and the U.S. *Journal of Economic Inequality (online first) (http://doi.org/10.1007/s10888-017-9363-9).*

Brandmaier, Andreas M., Nilam Ram, **Gert G. Wagner** and Denis Gerstorf. 2017. Terminal decline in well-being: The role of multi-indicator constellations of physical health and psychosocial correlates. Developmental *Psychology 53, No. 5, 996–1012 (http://doi.org/10.1037/dev0000274).*

Bratberg, Espen, Jonathan Davis, Bhashkar Mazumder, Martin Nybom, **Daniel D. Schnitzlein** and Kjell Vaage. 2017. A Comparison of Intergenerational Mobility Curves in Germany, Norway, Sweden, and the US. *The Scandinavian Journal of Economics 119, No. 1, 72–101 (http://doi.org/10.1111/sjoe.12197).*

Bügelmayer, Elisabeth and **Daniel D. Schnitzlein**. 2017. Is it the family or the neighborhood? Evidence from sibling and neighbor correlations in youth education and health. *Journal of Economic Inequality (online first) (http://doi.org/10.1007/s10888-017-9364-8).*

## D

**Dahmann, Sarah**. 2017. How does education improve cognitive skills? Instructional time versus timing of instruction. *Labour Economics 47 (August 2017), 35–47 (http://doi.org/10.1016/j.labeco.2017.04.008).*

Dragano, Nico, et al. 2017. Effort-reward imbalance at work and incident coronary heart disease: a multi-cohort study of 90,164 individuals. *Epidemiology 28, No. 4, 619–626 (http://doi.org/10.1097/EDE.0000000000000666).*

## E

**Eisnecker, Philipp, Kühne, Simon and Martin Kroh**. 2017. The Informed Consent to Record Linkage in Panel Studies: Optimal Starting Wave, Consent Refusals, and Subsequent Panel Attrition. *Public Opinion Quarterly 81, No. 2, 131–143 (http://doi.org/10.1093/poq/nfw052).*

## F

Fecher, Benedikt, Mathis Fräßdorf, **Marcel Hebing, Gert G. Wagner**. 2017. Replikationen, Reputation und gute wissenschaftliche Praxis. Information, *Wissenschaft & Praxis 68, No. 2, 154–158 (http://doi.org/10.1515/iwp-2017-0025).*

Fecher, Benedikt, Sascha Friesike, **Gert G. Wagner**. 2017. A Nod to Public Open Access Infrastructures. *Science 356, No. 6344, 1242 (http://doi.org/10.1126/science.aaf6401).*

G

Gerlach, Katharina, Nilam Ram, Frank J. Infurna, Nina Vogel, **Gert G. Wagner** and Denis Gerstorf. 2017. The Role of Morbidity for Proxy-Reported Well-Being in the Last Year of Life. *Developmental Psychology 53, No. 9, 1795–1809 (http://doi.org/10.1037/dev0000368).*

H

Hommelhoff, Sabine and **David Richter**. 2017. Refuting the cliché of the distrustful manager. *European Management Journal 35, No. 2, 164-173 (http://doi.org/10.1016/j.emj.2016.06.007).*

Hülür, Gizem, Jutta Heckhausen, Christiane A. Hoppmann, Frank J. Infurna, **Gert G. Wagner**, Nilam Ram, Denis Gerstorf. 2017. Levels of and Changes in Life Satisfaction Predict Mortality Hazards: Disentangling the Role of Physical Health, Perceived Control, and Social Orientation. *Psychology and Aging 32, No. 6, 507–520 (http://doi.org/10.1037/pag0000187).*

I

Infurna, Frank J., Maja Wiest, Denis Gerstorf, Nilam Ram, **Jürgen Schupp, Gert G. Wagner** and Jutta Heckhausen. 2017. Changes in life satisfaction when losing one's spouse: individual differences in anticipation, reaction, adaptation and longevity in the German Socio-Economic Panel Study (SOEP). *Ageing and Society 37, No. 5, 899–934 (http://doi.org/10.1017/S0144686X15001543).*

K

**Krekel, Christian** and Alexander Zerrahn. 2017. Does the Presence of Wind Turbines Have Negative Externalities for People in Their Surroundings? Evidence from Well-Being Data. *Journal of Environmental Economics and Management 82 (March 2017), 221–238 (http://doi.org/10.1016/j.jeem.2016.11.009).*

**Krekel, Christian, Jan Goebel**, Henry Wüstemann, Sandra Düzel, Peter Eibich, Simone Kühn. 2017. In Search of Features that Constitute an "Enriched Environment" in Humans: Associations between Geographical Properties and Brain Structure. *Scientific Reports 7, No. 11920 (http://doi.org/10.1038/s41598-017-12046-7).*

Krell, Kristina, **Joachim R. Frick** and **Markus M. Grabka**. 2017. Measuring the Consistency of Cross-Sectional and Longitudinal Income Information in EU-SILC. *Review of Income and Wealth 63, No. 1, 30–52 (http://doi.org/10.1111/roiw.12202).*

**Kröger, Hannes, Martin Kroh,** Lars Eric Kroll and Thomas Lampert. 2017. Einkommensunterschiede in der Mortalität in Deutschland – Ein empirischer Erklärungsversuch. *Zeitschrift für Soziologie 46, No. 2, 124–146 (http://doi.org/10.1515/zfsoz-2017-1008).*

**Kröger, Hannes**. 2017. The stratifying role of job level for sickness absence and the moderating role of gender and occupational gender composition. *Social Science and Medicine 186 (August 2017), 1–9 (http://doi.org/10.1016/j.socscimed.2017.05.045).*

L

Lietzmann, Torsten, **Paul Schmelzer**, Jürgen Wiemers. 2017. Marginal Employment for Welfare Recipients: Stepping Stone or Obstacle? *Labour 31, No. 4, 394–414 (http://doi.org/10.1111/labr.12098).*

Linek, Stephanie, Benedikt Fecher, Sascha Friesike, **Marcel Hebing**. 2017. Data Sharing as a Social Dilemma: Influence of the Researcher's Personality. *PloS one 12, No. 8, e0183216 (http://doi.org/10.1371/journal.pone.0183216).*

P

Pakpahan, Eduwin, Rasmus Hoffmann, **Hannes Kröger.** 2017. The Long Arm of Childhood Circumstances on Health in Old Age: Evidence from SHARELIFE. *Advances in Life Course Research 31 (March 2017), 1–10 (http://doi.org/10.1016/j.alcr.2016.10.003).*

R

Rehdanz, Katrin, **Carsten Schröder**, Daiju Narita, Toshihiro Okubo. 2017. Public Preferences for Alternative Electricity Mixes in Post-Fukushima Japan. *Energy Economics 65 (June 2017), 262-270 (http://doi.org/10.1016/j.eneco.2017.04.026).*

**Richter, David** and Sakari Lemola. 2017. Growing up with a single mother and life satisfaction in adulthood: A test of mediating and moderating factors. *PLOS ONE 12, No. 6, e0179639 (http://doi.org/10.1371/journal.pone.0179639).*

**Rohrer, Julia M.,** Boris Egloff and Stefan C. Schmukle. 2017. Probing Birth-Order Effects on Narrow Traits Using Specification-Curve Analysis. *Psychological Science 48, No. 12, 1821–1832 (http://doi.org/10.1177/0956797617723726).*

**Rohrer, Julia M.**, Martin Brümmer, Stefan C. Schmukle, **Jan Goebel, Gert G. Wagner.** 2017. "What Else Are You Worried about?"—Integrating Textual Responses into Quantitative Social Science Research. *PloS one 12, No. 7, e0182156 (http://doi.org/10.1371/journal.pone.0182156).*

## S

**Sander, Julia**, Florian Schmiedek, Annette Brose, **Gert G. Wagner**, and Jule Specht. 2017. Long-Term Effects of an Extensive Cognitive Training on Personality Development. *Journal of Personality 85, No. 4, 454–463 (http://doi.org/10.1111/jopy.12252).*

**Sander, Julia, Jürgen Schupp and David Richter.** 2017. Getting Together: Social Contact Frequency Across the Life Span. Developmental *Psychology 53, No. 8, 1571-1588 (http://doi.org/10.1037/dev0000349).*

Scheve, Christian von, Frederike Esche and **Jürgen Schupp**. 2017. The Emotional Timeline of Unemployment: Anticipation, Reaction, and Adaptation. *Journal of Happiness Studies 18, No. 4, 1231–1254 (http://doi.org/10.1007/s10902-016-9773-6).*

Schober, Pia S. and **Christian Schmitt**. 2017. Day-care availability, maternal employment and satisfaction of parents: Evidence from cultural and policy variations in Germany. *Journal of European Social Policy 27, No. 5, 433–446 (http://doi.org/10.1177/0958928716688264).*

**Schröder, Carsten** and Shlomo Yitzhaki. 2017. Reasonable sample sizes for convergence to normality. *Communications in Statistics—Simulation and Computation 46, No. 9, 7074-7087 (http://doi.org/10.1080/03610918.2016.1224347).*

**Schröder, Carsten** and Shlomo Yitzhaki. 2017. Revisiting the evidence for a cardinal treatment of ordinal variables. *European Economic Review 92 (February 2017), 337–358 (http://doi.org/10.1016/j.euroecorev.2016.12.011).*

## V

Verbist, Gerlinde and **Markus M. Grabka**. 2017. Distributive and poverty-reducing effects of in-kind housing benefits in Europe: with a case study for Germany. *Journal of Housing and the Built Environment 32, No. 2, 289–312 (http://doi.org/10.1007/s10901-016-9514-5).*

Vogel, Nina, Denis Gerstorf, Nilam Ram, **Jan Goebel and Gert G. Wagner**. 2017. Terminal decline in well-being differs between residents in East Germany and West Germany. *International Journal of Behavioral Development (IJBD) 41, No. 1, 115–126 (http://doi.org/10.1177/0165025415602561).*

## W

Wegwarth, Odette, **Gert G. Wagner**, Gerd Gigerenzer. 2017. Can Facts Trump Unconditional Trust? Evidence-Based Information Halves the Influence of Physicians' Non-Evidence-Based Cancer Screening Recommendations. *PLOS ONE 12, No. 8, e0183024 (http://doi.org/10.1371/journal.pone.0183024).*

Weinhardt, Michael, Alexia Meyermann, **Stefan Liebig and Jürgen Schupp**. 2017. The Linked Employer–Employee Study of the Socio-Economic Panel (SOEP-LEE): Content, Design and Research Potential. *Jahrbücher für Nationalökonomie und Statistik – Journal of Economics and Statistics 237, No. 5, 457–467 (http://doi.org/10.1515/jbnst-2015-1044).*

# (S)SCI Publications in 2017 by the SOEP User Community


## A

**Akay, Alpaslan, Olivier Bargain and Klaus F. Zimmermann.** 2017. Home Sweet Home? Macroeconomic Conditions in Home Countries and the Well-Being of Migrants. *Journal of Human Resources 52, No. 2, 351–373 (http://doi.org/10.3368/jhr.52.2.0115-6900R1).*

**Akbulut-Yuksel, Mevlude.** 2017. War during childhood: The long run effects of warfare on health. *Journal of Health Economics 53, No. May 2017, 117–130 (http://doi.org/10.1016/j.jhealeco.2017.02.005).*

**Akbulut-Yuksel, Mevlude, Melanie Khamis and Mutlu Yuksel.** 2017. Women Make Houses, Women Make Homes. *Labour Economics 49, December 2017, 145–161 (http://doi.org/10.1016/j.labeco.2017.05.004).*

**Akbulut-Yuksel, Mevlude and Mutlu Yuksel.** 2017. Heterogeneity in the long term health effects of warfare. *Economics & Human Biology 27, 126–136 (http://doi.org/10.1016/j.ehb.2017.05.007).*

**Anger, Silke, Georg Camehl and Frauke Peter.** 2017. Involuntary job loss and changes in personality traits. *Journal of Economic Psychology 60, June 2017, 71–91 (http://doi.org/10.1016/j.joep.2017.01.007).*

**Anusic, Ivana, Richard E. Lucas and M. Brent Donnellan.** 2017. The Validity of the Day Reconstruction Method in the German Socio-economic Panel Study. *Social Indicators Research 130, No. 1, 213–232 (http://doi.org/10.1007/s11205-015-1172-6).*

**Auspurg, Katrin, Thomas Hinz and Carsten Sauer.** 2017. Why Should Women Get Less? Evidence on the Gender Pay Gap from Multifactorial Survey Experiments. *American Sociological Review 82, No. 1, 179–210 (http://doi.org/10.1177/0003122416683393).*

## B

**Baetschmann, Gregori and Rainer Winkelmann.** 2017. A Dynamic Hurdle Model for Zero-Inflated Count Data: With an Application to Health Care Utilization. *Communications in Statistics—Theory and Methods 46, No. 14, 7174–7187 (http://doi.org/10.1080/03610926.2016.1146766).*

**Beckmann, Michael, Thomas Cornelissen and Matthias Kräkel.** 2017. Self-Managed Working Time and Employee Effort: Theory and Evidence. *Journal of Economic Behavior & Organization 133, January 2017, 285–302 (http://doi.org/10.1016/j.jebo.2016.11.013).*

**Bellani, Daniela, Gøsta Esping Andersen and Léa Pessin.** 2017. When equity matters for marital stability: Comparing German and U.S. couples. *Journal of Social and Personal Relationships (online first) (http://doi.org/10.1177/0265407517709537).*

**Bernardi, Laura, Grégoire Bollmann, Gina Potarca and Jérôme Rossier.** 2017. Multidimensionality of Well-Being and Spillover Effects Across Life Domains: How Do Parenthood and Personality Affect Changes in Domain-Specific Satisfaction? *Research in Human Development 14, No. 1, 26–51 (http://doi.org/10.1080/15427609.2016.1268893).*

**Best, Henning and Tobias Rüttenauer.** 2017. How Selective Migration Shapes Environmental Inequality in Germany: Evidence from Micro-level Panel Data. *European Sociological Review 34, No. 1, 52–63 (http://doi.org/10.1093/esr/jcx082).*

Betthäuser, Bastian. 2017. Fostering Equality of Opportunity? Compulsory Schooling Reform and Social Mobility in Germany. *European Sociological Review 33, No. 5, 633–644 (http://doi.org/10.1093/esr/jcx066).*

Biewen, Martin and Andos Juhasz. 2017. Direct Estimation of Equivalence Scales and More Evidence on Independence of Base. *Oxford Bulletin of Economics and Statistics 79, No. 5, 875–905 (http://doi.org/10.1111/obes.12166).*

Blázquez Cuesta, Maite and Santiago Budría. 2017. Unemployment persistence: How important are non-cognitive skills? *Journal of Behavioral and Experimental Economics 69, August 2017, 29–37 (http://doi.org/10.1016/j.socec.2017.05.006).*

Böhnke, Petra and Sebastian Link. 2017. Poverty and the Dynamics of Social Networks: An Analysis of German Panel Data. *European Sociological Review 33, No. 4, 615–632 (http://doi.org/10.1093/esr/jcx063).*

Borah, Melanie and Andreas Knabe. 2017. There and back again—estimating equivalence scales with measurement error. Applied *Economics Letters (online first) (http://doi.org/10.1080/13504851.2017.1420886).*

Boyce, Christopher J., Alex M. Wood, Liam Delaney and Eamonn Ferguson. 2017. How do Personality and Social Structures Interact with Each Other to Predict Important Life Outcomes? The Importance of Accounting for Personality Change. *European Journal of Personality 31, No. 3, 279-290 (http://doi.org/10.1002/per.2099).*

Brachert, Matthias, Walter Hyll and Mirko Titze. 2017. On the simultaneity bias in the relationship between risk attitudes, entry into entrepreneurship and entrepreneurial survival. *Applied Economics Letters 24, No. 7, 477–480 (http://doi.org/10.1080/13504851.2016.1203056).*

Breunig, Christoph. 2017. Testing Missing at Random Using Instrumental Variables. *Journal of Business & Economic Statistics, 1–12 (http://doi.org/10.1080/07350015.2017.1302879).*

Brick, Timothy R., Rachel E. Koffer, Denis Gerstorf and Nilam Ram. 2017. Feature Selection Methods for Optimal Design of Studies for Developmental Inquiry. *Journals of Gerontology Series B—Psychological Sciences and Social Sciences 73, No. 1, 113–123 (http://doi.org/10.1093/geronb/gbx008).*

Brockmann, Hilke, Anne-Maren Koch, Adele Diederich and Christofer Edling. 2017. Why Managerial Women are Less Happy Than Managerial Men. *Journal of Happiness Studies (online first) (http://doi.org/10.1007/s10902-016-9832-z).*

Bruckmeier, Kerstin and Jürgen Wiemers. 2017. Benefit Take-Up and Labor Supply Incentives of Interdependent Means-Tested Benefit Programs for Low-Income Households. *Comparative Economic Studies (online first) (http://doi.org/10.1057/s41294-017-0041-5).*

Buddelmeyer, Hielke, Daniel S. Hamermesh and Mark Wooden. 2017. THE Stress Cost of Children. *European Economic Review (online first) (http://doi.org/10.1016/j.euroecorev.2016.12.012)*

Bünnings, Christian, Jan Kleibrink and Jens Weßling. 2017. Fear of Unemployment and its Effect on the Mental Health of Spouses. *Health Economics 26, No. 1, 104–117 (http://doi.org/10.1002/hec.3279).*

Bursian, Dirk. 2017. Solving RE models with discontinuous policy rules—an application to minimum wage setting in Germany. *Applied Economics Letters 24, No. 15, 1121–1126 (http://doi.org/10.1080/13504851.2016.1259736).*

Busk, Henna, Elke J. Jahn and Christine Singer. 2017. Do Changes in Regulation Affect Temporary Agency Workers' Job Satisfaction? *Industrial Relations 56, No. 3, 514–544 (http://doi.org/10.1111/irel.12184).*

## C

Cheng, Terence C., Nattavudh Powdthavee and Andrew J. Oswald. 2017. Longitudinal Evidence for a Midlife Nadir in Human Well-being: Results from Four Data Sets. *Economic Journal 127, No. 599, 126–142 (http://doi.org/10.1111/ecoj.12256).*

Czymara, Christian S. and Alexander W. Schmidt-Catran. 2017. Refugees Unwelcome? Changes in the Public Acceptance of Immigrants and Refugees in Germany in the Course of Europe's 'Immigration Crisis'. *European Sociological Review 33, No. 6, 735–751 (http://doi.org/10.1093/esr/jcx071).*

## D

**Dassonneville, Ruth and Annika Grieb.** 2017. Partisanship and Political Sophistication During and Outside of Election Times: A Longitudinal Analysis Using the German SOEP Survey 1984–2012. *German Politics (online first), (http://doi.org/10.1080/09644008.2017.1302430).*

**Daum, Marcel, Anja Höptner, Andreas Speck and Ingmar Steinhart.** 2017. Teilhabe für chronisch psychisch kranke Menschen in Deutschland oder Die Sozialpsychiatrie und die Soziale Gerechtigkeit. *Psychiatrische Praxis 44, No. 02, 108–110 (http://doi.org/10.1055/s-0043-100274).*

**Dohmen, Thomas, Armin Falk, Bart H. H. Golsteyn, David Huffman and Uwe Sunde.** 2017. Risk Attitudes Across The Life Course. *Economic Journal 127, No. 605, F95–F116 (http://doi.org/10.1111/ecoj.12322).*

**Doré, Bruce and Niall Bolger.** 2017. Population- and Individual-Level Changes in Life Satisfaction Surrounding Major Life Stressors. *Social Psychological and Personality Science (online first) (http://doi.org/10.1177/1948550617727589).*

**Dudel, Christian.** 2017. Variance estimation for sensitivity analysis of poverty and inequality measures. *Survey Research Methods 11, No. 1, 81–92 (http://doi.org/10.18148/srm/2017.v11i1.6297).*

**Dustmann, Christian, Patrick A. Puhani and Uta Schönberg.** 2017. The Long-Term Effects of Early Track Choice. *The Economic Journal 127, No. 603, 1348–1380 (http://doi.org/10.1111/ecoj.12419).*

## E

**Eckhard, Jan.** 2017. Indicators of Social Isolation: A Comparison Based on Survey Data from Germany. *Social Indicators Research (online first) (http://doi.org/10.1007/s11205-017-1741-y).*

**Eisnecker, Philipp Simon.** 2017. Non-migrants' interethnic relationships with migrants: the role of the residential area, the workplace, and attitudes toward migrants from a longitudinal perspective. *Journal of Ethnic and Migration Studies (online first) (http://doi.org/10.1080/1369183X.2017.1394180).*

**Emmenegger, Patrick, Paul Marx and Dominik Schraff.** 2017. Gescheiterte Berufseinstiege und politische Sozialisation. Eine Längsschnittstudie zur Wirkung früher Arbeitslosigkeit auf politisches Interesse. *Zeitschrift für Soziologie 46, No. 3, 201–218 (http://doi.org/10.1515/zfsoz-2017-1012).*

**Engel, Julia and Herbert Bless.** 2017. The More Negative the More Impact: Evidence From Nationally Representative Data on the Relation Between Domain Satisfactions and General Life Satisfaction. *Social Psychology 48, No. 3, 148–159 (http://doi.org/10.1027/1864-9335/a000305).*

## F

**Falk, Armin, Fabian Kosse, Ingo Menrath, Pablo Emilio Verde and Johannes Siegrist.** 2017. Unfair Pay and Health. *Management Science (online first) (http://doi.org/10.1287/mnsc.2016.2630).*

**Fauser, Margit.** 2017. Mixed Methods and Multisited Migration Research: Innovations From a Transnational Perspective. *Journal of Mixed Methods Research (online first) (http://doi.org/10.1177/1558689817702752).*

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