

Gerstorf, Sandra (Ed.); Schupp, Jürgen (Ed.)

Research Report

SOEP Wave Report 2014

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SOEP — The German Socio-Economic Panel study at DIW Berlin

Sandra Gerstorf, Jürgen Schupp (Editors)

SOEP Wave Report

2014

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German Socio-Economic Panel study | SOEP
DIW Berlin
Mohrenstr. 58
10117 Berlin
Germany

Phone +49-30-897 89-238
Fax +49-30-897 89-109

Director
Jürgen Schupp

Editors
Sandra Gerstorff, Jürgen Schupp

Technical Office
Michaela Engelmann

Photos
Cover: Georg Erber, DIW Berlin
Christine Kurka, DIW Berlin
Anja Kehmeier, DIW Berlin
Stefan Röhl

Print
Werner Jahnke, DIW Berlin

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Editorial

Jürgen Schupp

Director of the Research Infrastructure SOEP

Professor of Sociology at Freie Universität Berlin

We are pleased to be able to offer you a glimpse of our work over the last year in this, the fifth Wave Report of the SOEP longitudinal study. In 2014, the SOEP data from a total of 30 waves were distributed to over 500 scientific users in Germany and worldwide. And for the first time, users enjoyed the added convenience of downloading the data from a secure server for free, without any of the previous shipping costs.

For us, the focus of our work is still on the core SOEP study, with all its subsamples and refresher samples, which provide a representative picture of private households in Germany from both a cross-sectional and longitudinal perspective. But no less important are the other, newer members of the SOEP family of studies, especially the SOEP Innovation Sample (SOEP-IS), the first of our studies to use solely user-designed content. The SOEP-IS now surveys around 5,000 adult respondents, of whom some have been participating for many years, while others joined in 2012 when new samples were added to supplement the SOEP core sample. This Wave Report also profiles a cooperation project and “SOEP-related study” (SOEP-RS) that has taken on increased importance in recent years, K2ID-SOEP, along with an increasing number of other SOEP-related studies.

The IAB-SOEP Migration Sample was a focus of considerable media and public attention in 2014. The survey was launched in 2013 among approximately 5,000 adult respondents in around 2,700 households with the aim of providing a clearer picture of the lives of people in Germany with an immigrant background. In October 2014, a government press conference was held to release initial findings from the new study. The data show, among other things, that migration and integration pay off for immigrants to Germany: more than half of all immigrants found their first job through family members, friends, or acquaintances. And the data also show that immigrants who socialize with non-immigrants are significantly more satisfied with their lives in general.

Just a few weeks prior to that—on October 3, 2014—a press conference was held on a SOEP-based DIW Wochenbericht (weekly report) commemorating the 25-year anniversary of the fall of the Berlin Wall. It’s worth noting that the SOEP started in 1984 in the former West Germany and was expanded to more than 2,000 households in the GDR in June 1990—even before the economic, currency, and social union. In 2014, experts at DIW Berlin took stock of the last 25 years since reunification based on the SOEP data. According to their analyses, the data show that despite all the mistakes, problems, and costs of reunification, it has been a success—not just politically, but economically as well.

Translations of the two DIW Wochenberichte on the IAB-SOEP Migration Sample and on the 25-year anniversary of the Fall of the Berlin Wall have been published in English in the DIW Economic Bulletin, and selections from these publications appear—along with other SOEP publications—in this Wave Report. The list of publications in Chapter 4 also highlights some of the most important SOEP-based papers published in the last year.

Berlin, June 2015.

SOEP Personnel

In 2014 the SOEP director Jürgen Schupp in conjunction with his two division heads Martin Kroh and Jan Goebel established a new structure of leadership, adding a third division under the head of Carsten Schröder and sharpening the profile of each division. Please find on the following pages an overview on the three division and the integrating area Directorship and Management:

- Survey Methodology
- Data Operation and Research Data Center (RDC)
- Applied Panel Analysis and Knowledge Transfer

SOEP Staff (in Berlin) Research Infrastructure German Socio-Economic Panel (SOEP)

Directorship and Management

Director

Prof. Dr. Jürgen Schupp
Phone: -238, jschupp@diw.de

Deputy Directors

Dr. Jan Goebel

Prof. Dr. Martin Kroh

Prof. Dr. Carsten Schröder

SOEP Representative on the DIW Berlin Executive Board

Prof. Dr. Gert G. Wagner
Phone: -290, gwagner@diw.de

Team Assistance

Patricia Axt
Phone: -490, paxt@diw.de

Christiane Nitsche
Phone: -671, cnitsche@diw.de

Research and Project Management

Dr. Sandra Gerstorf
Phone: -228, sgerstorf@diw.de

SOEP Media and Public Relations

Monika Wimmer
Phone : -251 mwimmer@diw.de

Documentation and Reporting

Deborah Anne Bowen (Translation/Editing)
Phone: -332, dbowen@diw.de

Janina Britzke (Social Media)
Phone: -418, jbritzke@diw.de

Uta Rahmann
Phone: -287, urahmann@diw.de

Education and Training

PhD Scholarship Recipients

Sandra Bohmann (BGSS)
Phone: -428, sbohmann@diw.de

Sarah Dahmann (DIW Berlin GC)
Phone: -461, sdahmann@diw.de

Sybille Luhmann (Sociology) (BGSS)
Phone: -428, sluhmann@diw.de

Julia Sander (Psychology) (LIFE)
Phone: 370, jsander@diw.de

Nina Vogel (Psychology) (LIFE)
Phone: -319, nvogel@diw.de

Tim Winke (Sociology) (BGSS)
Phone: -428, twinke@diw.de

Trainees (Specialists in market and social research)

Marvin Petrenz
Phone: -345, mpetrenz@diw.de

Carolin Stolpe
Phone: -345, cstolpe@diw.de

Survey Methodology

Division Head

Prof. Dr. Martin Kroh
Phone: -678, mkroh@diw.de

Survey Management

Dr. Simone Bartsch (PIAAC-L)
Phone: -438, sbartsch@diw.de

Florian Grieser
Phone: -359, fgrieser@diw.de

Dr. Elisabeth Liebau (SOEP-Core) (on leave)
Phone: -259, eliebau@diw.de

Katharina Poschmann (PIAAC-L)
Phone: -336, kposchmann@diw.de

Dr. David Richter (SOEP-IS)
Phone: -413, drichter@diw.de

Survey Methodology

Philipp Eisnecker (BGSS, REC-LINK)
Phone: -671, peisnecker@diw.de

Simon Kühne (BGSS, REC-LINK)
Phone: -543, skuehne@diw.de

Dr. Denise Saßenroth (BASE II)
Phone: -285, dsassenroth@diw.de

Sampling and Weighting

Rainer Siegers
Phone: -239, rsiegers@diw.de

Data Operation and Research Data Center (RDC)

Head of the RDC-SOEP

Dr. Jan Goebel

Phone: -377, jgoebel@diw.de

Data Management

Dr. Peter Krause

Phone: -690, pkrause@diw.de

Knut Wenzig

Phone: -341, kwenzig@diw.de

Data Generation and Testing

Dr. Alexandra Fedorets

Phone: 321, afedorets@diw.de

Dr. Markus M. Grabka

Phone -339, mgrabka@diw.de

Janine Napieraj

Phone: -345, jnapieraj@diw.de

Maximilian Priem

Phone: -235, mpriem@diw.de

Dr. Paul Schmelzer

Phone: -526, pschmelzer@diw.de

Dr. Christian Schmitt

Phone: -603, cschmitt@diw.de

Jun.-Prof. Dr. Daniel Schnitzlein

Phone: -322, dschnitzlein@diw.de

Metadata and Data Documentation

Marcel Hebing

Phone: -242, mhebing@diw.de

Marius Pahl

Phone: -345, mpahl@diw.de

Ingo Sieber

Phone: -260, isieber@diw.de

Regional Data and Data Linkage

Klaudia Erhardt (REC-LINK)

Phone: -338, kerhardt@diw.de

SOEPh hotline, Contract Management

Michaela Engelmann

Phone : -292, soepmail@diw.de

Applied Panel Analysis and Knowledge Transfer

Division Head

Prof. Dr. Carsten Schröder

Phone: -284, cschroeder@diw.de

Externally Funded Projects

Elisabeth Bügelmayr (DIW Berlin GC)

Phone: -344, ebuegelmayr@diw.de

Adrian Hille (DIW Berlin GC)

Phone: -376, ahille@diw.de

Lukas Hoppe (BIGSSS)

Phone: -272, lhoppe@diw.de

Dr. Anita Kottwitz

Phone: -319, akottwitz@diw.de

Christian Krekel (DIW Berlin GC)

Phone: -688, ckrekel@diw.de

Nicolas Legewie

Phone: -587, nlegewie@diw.de

Maria Metzging

Phone: -221, mmetzging@diw.de

Jun.-Prof. Dr. Ingrid Tucci

Phone: -465, itucci@diw.de

Christian Westermeier

Phone: -223, cwestermeier@diw.de

Knowledge Transfer

Jun.-Prof. Dr. Marco Giesselmann


Phone: -503, mgiesselmann@diw.de

Guests and Event Management

Christine Kurka

Phone: -283, ckurka@diw.de

PD Dr. Elke Holst
(SOEP-based Gender Analysis)
Phone: -281, eholst@diw.de

 = Based at the SOEP but not part of its organizational structure.

Student Assistants

Sophie Bartosch
Alexander Böwing
Luise Burkhardt
Lisa Elfering
Martin Friedrich
Lucia Grajcarova
Daniel Groth

Christoph Halbmeier
Maik Hamjediers
Imke Herold
Luisa Hilgert
Dominik Jonat
Michael Krämer
Elisabeth Krone
Svenja Linnemann

Laura Lükemann
Marwa Mahran
Kyle Ott
Diego Alejandro Rodríguez Sánchez
Guido Schulz
Carsten Schwemmer
Arnim Seidlitz
Martin Spitzenpfel

Katharina Strauch
Max v. Ungern-Sternberg
Kristina Wiechert
Simon Wolff
Tobias Wolfram

* 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 Autogenetic Dynamics (LIFE)".
Inequalities: Public Economics & Inequality—Doctoral Program at Freie Universität Berlin.

Survey Methodology

Prof. Dr. Martin Kroh
Division Head
Survey Methodology
Research Focus: Political Science

Dr. Simone Bartsch
Survey Management
Research Project: PIAAC-L

Florian Gries
Survey Management

Dr. Elisabeth Liebau
(on leave)
Survey Management
Research Focus: Migration

Katharina Poschmann
Survey Management
Research Project: PIAAC-L

Dr. David Richter
SOEP-Innovation Sample
(SOEP-IS)
Research Focus: Developmental
Psychology

Philipp Eisnecker
Survey Methodology
Doctoral fellow (BGSS)
Research Project: RECLINK

Dr. Denise Saßenroth
Survey Methodology
Research Project: BASE II

Simon Kühne
Sampling and Weighting
Doctoral fellow (BGSS)
Research Project: RECLINK

Rainer Siegers
Sampling and Weighting
Imputation and Survey
Methodology



Survey Methodology team (from left): Florian Gries, Katharina Poschmann, Denise Saßenroth, David Richter, Simone Bartsch

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 TNS Infratest Sozialforschung in Munich, the survey research institute in charge of the SOEP fieldwork, which covers both interviews and all direct contacts 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.



on Kühne, Martin Kroh

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 the fieldwork on a large-scale study.

Data Operation and Research Data Center (RDC)

Dr. Jan Goebel

Division Head RDC

Research Focus: Income and
Regional Inequality

Dr. Peter Krause

Data Management

Research Focus: Quality of Life

Knut Wenzig

Data Management

Dr. Alexandra Fedorets

Data Generation and Testing

Research Focus: Labour Market

Dr. Markus M. Grabka

Data Generation and Testing

Research Focus: Income and
Wealth Inequality

Dr. Paul Schmelzer

Data Generation and Testing

Research Focus: Employment

Dr. Christian Schmitt

Data Generation and Testing

Research Focus: Demography

**Jun.-Prof. Dr. Daniel
Schnitzlein**

Data Generation and Testing

Research Focus:

Intergenerational Mobility

Marcel Hebing

Metadata and

Data Documentation

Janine Napieraj

Metadata and

Data Documentation

Ingo Sieber

Metadata and

Data Documentation

Peter Eibich

Regional Data and

Data Linkage

Research Project: BASE II

Klaudia Erhardt

Data Linkage

Research Project: RECLINK

Michaela Engelmann

SOEPhotline

Contract Management



*Data Operation and Research Data Center (RDC) team (from left, back row): Klaudia Erhardt, Marius Pahl, Marvin Pe
(from left, front row: Peter Krause, Alexandra Fedorets, Jan Goebel, Maximilian Priem, Lukas Hoppe*

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 forms the precondition for use of the SOEP's scientific use files. The means 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, such as regional data,

are made available to users by remote execution, remote access, at a guest research workstation at DIW Berlin.

The anonymized data sent by TNS Infratest Sozialforschung in Munich to DIW Berlin are processed in such a way that they can be used in scientific research, for both longitudinal and cross-sectional analyses. 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 on key research findings, most of which is available on the SOEP Research Data Center website. Members



trenz, Ingo Sieber, Knut Wenzig, Paul Schmelzer, Janine Napieraj, Michaela Engelmann, Markus Grabka,

of the team have also developed a web-based tool oriented toward the DDI standard for the documentation of scientific studies in order to present all of the SOEP and SOEP related studies to our users. A detailed description of this tool can be found [here](#).

The SOEP Research Data Center also provides user support through methodological lectures and workshops at universities. A guest program enables users to access the data on site at the SOEP Research Data Center—particularly for 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 analyses.

Prof. Dr. Carsten
Schröder
Division Head
Applied Panel Analysis
Research Focus: Public
Economics

Elisabeth
Bügelmayer
Doctoral Fellow
DIW Berlin Graduate Center

Adrian Hille
Doctoral Fellow
DIW Berlin Graduate Center

Dr. Alexandra
Fedorets
Data Generation and
Testing, Research Focus:
Labour Market

Anita Kottwitz
Doctoral Fellow
LIFE Graduate Program

Christian Krekel
Doctoral Fellow
DIW Berlin Graduate Center

Dr. Nicolas Legewie
Research Focus: Migration

Maria Metzging
Doctoral Fellow
Externally Funded Projects

Dr. Anika Rasner
Research Focus: Pension
Inequalities

Jun. Prof. Dr. Ingrid
Tucci
Research Focus: Migration

Christian
Westermeier
Doctoral Fellow
Externally Funded Projects

Jun. Prof. Dr. Marco
Giesselmann
SOEP Campus
Knowledge Transfer

Christine Kurka
Guests and
Event Management

Applied Panel Analysis and Knowledge Transfer



Applied Panel Analysis and Knowledge Transfer team (from left, back row): Anita Kottwitz, Elisabeth Bügelmayer, Christine Kurka, (from left front row): Nicolas Legewie, Sarah Dahmann, Carsten Schröder, Alexandra Fedorets, Marco Giesselmann

In the SOEP, we not only provide data infrastructure as a public good; we also carry out our own research on a wide range of topics using the SOEP data. On the one hand, the published research results increase the visibility of the SOEP in the international research landscape. On the other hand, the ongoing research conducted in the SOEP 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.

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



*tian Westermeier, Maria Metzger,
Giesselmann.*

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 work 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 foundations and federal ministries.

SOEP Directorship and Management

Prof. Dr. Jürgen Schupp
Director of SOEP

Prof. Dr. Gert G. Wagner
SOEP Representative on
the DIW Berlin Executive Board

Patricia Axt
Team Assistance

Christiane Nitsche
Team Assistance

Dr. Sandra Gerstorf
Research and Project
Management

Monika Wimmer
SOEP Media
and Public Relations

Deborah Anne Bowen
Translation/Editing
German-English Translation

Janina Britzke
Documentation
Social Media

Uta Rahmann
Documentation
and Reporting



Directorship and Management team (from left): Uta Rahmann, Janina Britzke, Christiane Nitsche, Patricia Axt, Sandra Gerstorf

The SOEP administrative and management team is responsible for around 45 staff members, as well as trainees, doctoral students, grant holders, and 30 student assistants in the year 2014. The team provides a range of research and administrative support services to the entire SOEP, including, to an increasing degree, translation and editing.

One key area of the team's work is research and project management. This includes acting as liaison for the SOEP Survey Committee and coordinating and facilitating administrative processes between the SOEP unit and the financial management units at DIW Berlin.

Another key area is the planning and coordination of press and public relations activities to promote news and findings from the SOEP through both traditional and social media outlets. This also includes maintenance and development of the SOEP website.



Andra Gerstorf, Nina Vogel, Deborah Bowen, Jürgen Schupp.

A third key area of the administrative and management team's work is coordination of the SOEP's international contacts. The SOEP has contractual partnerships with numerous institutions worldwide, and maintains close contacts with the DIW Research Fellows nominated by the SOEP.

A fourth key area is editing and archiving of the various SOEP publication series, including the SOEP Wave Report, the SOEPnewsletter, the SOEP Survey Papers, and the SOEPpapers series.

Last but not least, the administrative and management team is in charge of budget planning for the SOEP infrastructural unit, consulting with the SOEP's funding bodies, reporting on the SOEP's program budgets for approval by the DIW Board of Trustees, responding to queries from the Leibniz Association, and coordinating the SOEP's contributions to the DIW Annual Report.

Research Infrastructure of SOEP Studies

The research infrastructure SOEP contains a variety of studies feeding on each other. The center is SOEP-Core, newer additions are amongst others the Innovation Sample (SOEP-IS), SOEP Related Studies (SOEP-RS, e.g., BASE II, FiD, PIAAC-L) and cooperation studies (e.g., TwinLife). On the following pages you will find a closer description on each of the essential parts of the evolving SOEP.

SOEP-Core

SOEP-Core Samples

		Initial
1984	Oversampling of immigrants (A + B)	5,921
since 1990	East Germany (C)	2,179
1994/95	Immigration Sample (D)	521
1998	Refresher I (Capi) (E)	1,056
2000	Refresher II (F)	6,013
2002	High-Income Refresher (G)	1,224
2006	Refresher III (H)	1,506
2009	Innovation Sample (Incentives) (I)	1,531
2010 (2014)	FiD (Families in Germany) (KH, SC) Integration into SOEP-Core	4,337* (3,262)
2011	Refresher IV (J)	3,136
2012	Refresher V (K)	1,526
2013	IAB-SOEP Migration Sample (M _r)	2,700

* Number of households in 2010; complete integration into SOEP-Core in 2014

SOEP-RS

FiD (Families in Germany) (2010 - 2013)

BASE-II (Berlin Aging Study II)

PIAAC-L (2013 - 2017)

TwinLife (2014 - 2016) [cooperation study]

K²ID


Bonn Intervention Study (BIP)

BIKE (Bremer Interventionsstudie bei Neugeborenen
(Universität Bremen)

SOEP-IS

SOEP Innovation Samples

Initial



1998-2008	Integration of Sample (I_e)	339
2009	Innovation Sample (Incentives) (I_i)	1,040
2012	Refresher (I_2)	1,010
2013	Refresher (I_3)	1,166
2014	Refresher (I_4)	924

NUBBEK (Nationale Untersuchung zur Bildung, Betreuung
und Erziehung in der frühen Kindheit (Konsortium))

Pro Kind (Universität Hannover)

Ravensburger Elternsurvey
(Humboldt-Universität zu Berlin)

Part 2

The Research Data Center

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1 News from the Research Data Center of the SOEP

by Jan Goebel

In 2014, the range of datasets the SOEP provides to our user community has continued to grow. As depicted in the Research infrastructure of SOEP studies, [pp 20-21](#), the SOEP is no longer merely one longitudinal study, but is at the center of a constellation of different studies. Of course, the most important addition to our user services in 2014 was the release of Version 30 of the SOEP-Core data (1984-2013). Along with this “classic” data distribution, we also distributed the data from the SOEP Innovation Sample (see [pp 27](#) for more on the SOEP-IS). An important addition to SOEP-Core is the IAB-SOEP Migration Sample, a special immigrant boost sample that we released in 2013 in cooperation with the IAB. Also new are data from the linked employer-employee (SOEP-LEE) study carried out in cooperation with the University of Bielefeld in 2013. There was also an update for FiD study (families in Germany), Version 4.0 of which was released on February 28, 2014. The increasing diversity and growing range of data products provided by the SOEP Research Data Center underscore the importance of the new system we have been developing as a follow-up SOEPinfo. A beta version of this new system has been publicly available since January 2013, and now not only contains virtually all the functions of the old SOEPinfo but can also show relationships between the individual studies. We plan to continue expanding the possibilities for documenting various surveys and the links between them in one overarching system. Details can be found on [pp 35](#). Due to the different demands of 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, which we did for the first time in 2013 completely via the Internet (using the encryption program cryptshare and providing users with individual 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 SOEPrmote (based on the LISSY System of the Luxembourg Income Study), which has been available for years now, or in the framework of a guest research visit to the SOEP. Two additional modes of data access were added in 2013. First, we piloted our first real remote access from the Research Data Center of SFB 882 in Bielefeld with a server on the DIW Berlin Intranet. This will allow researchers at a specially protected terminal

in Bielefeld to access regional data connected with the SOEP and FiD and to access data from SOEP-LEE. The second additional mode of data access added in 2013 is designed especially for the sensitive geocoded coordinates of the survey households, which are provided on specific computers on site at DIW Berlin, where researchers are able to 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 Center¹.

Table
**Overview of Data Use
at the SOEP Data Research Center**

Mode of Access	Number of Users
Download Link by cryptshare	741
Remote Execution (SOEPrmote)	42
Remote Access (FDZ SFB 882)	8
SOEPgeo (coordinates)	10
Guest Research Station (w/o SOEPgeo)	37

Sources: SOEP v30; calculations by FDZ SOEP. © DIW Berlin

Alongside many improvements and user-friendly additions to the [SOEP data](#)² one of the most important improvements in 2013 was the addition of the new IAB-

1 Please see: Goebel, Jan, and Bernd Pauer. 2014. Datenschutzkonzept zur Nutzung von SOEPgeo im Forschungsdatenzentrum SOEP am DIW Berlin. Zeitschrift für amtliche Statistik Berlin-Brandenburg 8 (3), 42-47 (https://www.statistik-berlin-brandenburg.de/produkte/zeitschrift/2014/HZ_201403.pdf)
2 Please see the documentation of the improvements on our website (Changes in the Dataset) or in a PDF document (http://www.diw.de/documents/dokumentenarchiv/17/diw_01.c.508076.de/whatsnew-soepv30.pdf).

SOEP Migration Sample, a joint project with the Institute for Employment Research (IAB). The new sample takes into account changes in the structure of migration to Germany since 1995. It covers not only direct immigration but also the “second generation,” the children of immigrants. The dataset, which overlaps completely with the SOEP (identical questionnaire with additional questions on the particular situation of immigrants), opens up new perspectives for migration research and provides insights on the lives of new immigrants to Germany. Thus, the IAB-SOEP Migration Sample is not simply an update of previous SOEP surveys on migration.

The new sample has four key features:³

- First, the survey data are—if the participants in the survey sign an agreement and only for a subsample of the IAB-SOEP Migration Sample—linked to the register data from the “Integrated Employment Biographies” (IEB). The IEB is a dataset provided by the Institute for Employment Research (IAB), which contains the complete labor market biographies of individuals in Germany. The record linkage creates new research opportunities by enabling us to combine the advantages of both survey and register data. Because the linkage of survey and register data is both sensitive and potentially very promising for the SOEP, we have included an experimental design by randomly allocating a portion of the participants to the record linkage procedure. The methodological implications of linking survey and register data can therefore be investigated in detail here for the first time.
- Second, the questionnaire used with the IAB-SOEP Migration Sample covers the entire migration, education, and labor market biographies of respondents in both home and destination countries. Migration episodes to other countries than Germany are considered as well. This is an important extension over previous SOEP surveys of immigrants’ personal biographies: For the first time, we can now track whether important events in individual biographies occurred in the home country, in Germany, or in other destination countries. This also takes into account

that migration is no longer a one-time event but often part of increasingly “transnational” biographies, often with several migration episodes over the course of a lifetime and involving personal ties in different countries. For the comprehensively surveyed migration biography, we have created a user-friendly spell data set (MIGSPELL). Detailed documentation is available in the **biographical data documentation of the SOEP**.⁴

- Third, following recent advances in the research on migration and immigration, the IAB-SOEP migration sample considers numerous new sets of questions that have not been considered previously in the SOEP or other household surveys in Germany, at least not in the necessary depth. Examples are: earnings and the labor force and occupational status before migration; migration decisions in the family and partnership context; and the purposes and transfer channels of remittances.
- Fourth, the IAB-SOEP Migration Sample substantially increases the sample size for research on migration and the lives of immigrants in Germany: 4,964 individual residing in 2,723 households participated in the first wave of the survey. Moreover, since the survey is included in the regular SOEP as subsample “M”, including migrants from the other SOEP samples in analyses can increase the number of observations further.

3 See for a report on technical details of the sample: Herbert Brücker, Martin Kroh, Simone Bartsch, Jan Goebel, Simon Kühne, Elisabeth Liebau, Parvati Trübshwetter, Ingrid Tucci, Jürgen Schupp. 2014. The new IAB-SOEP Migration Sample: an introduction into the methodology and the contents. SOEP Survey Papers 216: Series C. Berlin: DIW/SOEP (<http://hdl.handle.net/10419/103964>). First analyses you find in the texts in Part 4 of this Wave Report: “New Patterns of Migration” (pages 120ff) and “Recognized Qualifications and Command of German Language Are Worthwhile” (page 129ff).

4 Jan Goebel (ed.). 2015. SOEP 2013 – Documentation on Biography and Life History Data for SOEP v30. SOEP Survey Papers 266: Series D. Berlin: DIW/SOEP (<http://hdl.handle.net/10419/109645>).

2 SOEP Innovation Sample

by David Richter

SOEP-IS

The SOEP offers researchers worldwide the opportunity to use the SOEP Innovation Sample (SOEP-IS) for their research projects. The SOEP-IS is suited to short-term experiments, but it is especially useful for testing long-term instruments that are not suitable to the SOEP-Core survey, whether because they have not yet been scientifically verified or because the questions deal with very specific research issues. Since 2013, the SOEP has accepted proposals for the Innovation Sample from users and assessed the submissions in an annual competitive refereed process to identify the “best” research questions and operationalizations.

In 2014, almost 5,500 people in more than 3,500 households responded to the SOEP-IS survey. Many of these women and men have been part of an extension sample to the SOEP-Core since 1998, while others joined the SOEP-Core in 2009. These individuals provide a wealth of longitudinal data to the SOEP-IS. Additional samples were recruited to the SOEP-IS in 2012, 2013, and 2014 (see Table 1).

As a new technical feature, the SOEP-IS premiered the use of 111 smartphones for data collection in 2014 using the Experience Sampling Method (ESM). The ESM is the third and final element of our framework to triangulate the well-being of respondents. The three elements of the framework are: the SOEP-Core survey questions, the Day Reconstruction Method (DRM), and the ESM (see figure 27 at page 78). The use of the ESM and DRM in the SOEP-IS is funded through an NIH project by Richard E. Lucas at Michigan State University. The DRM element of the framework consists of an adaptation of the DRM method introduced by Kahneman et al. 2004 together with a replication of the PSID’s supplement on Disability and Use of Time (DUST) from 2009. Respondents are asked to reconstruct their previous work day using a list of 22 activities, election of two activities possible per episode. Respondents then rate the “pleasantness” of each episode and provide additional ratings of their emotions during three random episodes. The data are collected in CAPI, that is, the interviewer fills in the questionnaire on a laptop. The procedure was pretested in the SOEP-IS supplementary sample in 2012

Table 1

Sample\Survey Year	1998-2008	2009	2010	2011	2012	2013	2014
Sample E (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 (642) in SOEP-IS	310 (599) in SOEP-IS	295 (580) in SOEP-IS
Sample I (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 SOEP-IS	928 (1,826) in SOEP-IS	864 (1,728) in SOEP-IS	797 (1,596) in SOEP-IS
Supplementary Sample 2012 (started in 2012 with 1,010 households and 2,005 individuals)					1,010 (2,005) in SOEP-IS	833 (1,688) in SOEP-IS	772 (1,611) in SOEP-IS
Supplementary Sample 2013 (started in 2013 with 1,166 households and 2,141 individuals)						1,166 (2,141) in SOEP-IS	928 (1,870) in SOEP-IS
Supplementary Sample 2014 (started in 2014 with 924 households and 1,665 individuals)							924 (1,665) in SOEP-IS
Households total (individuals total)	373 (963)	1,622 (3,986)	1,628 (3,386)	1,504 (3,057)	2,277 (4,473)	3,173 (6,163)	3,716 (7,322)

and became part of the SOEP-IS in 2012. The procedure was repeated to test its long-term stability in 2013 and 2014 and will be repeated again in 2015. The ESM part of the project was carried out in 2014 by the 25 to 30 most experienced interviewers from Infratest. Around 500 households were contacted and almost 300 individuals completed the data collection process. The smartphones will be available for future use in the SOEP-IS or other SOEP projects.

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, and 2013

The latest SOEP-IS data were released in late April 2015. The data release contained the core SOEP questions and additional modules included in the SOEP-IS in 2013, user-friendly generated SOEP variables for 2013, 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 and 2012, which are released after a 12-month embargo during which the data are available exclusively to the researcher who submitted the questions.

Twenty proposals were submitted for data collection in 2013. We were able to implement seven of these. Four were not feasible within the framework of SOEP-IS and the remaining nine were rejected for other reasons. Two were submitted from the field of economics, eight from sociology, eight from psychology, and two from medical and health sciences. The data from the 2013 innovative modules will be under embargo until April 2016 and not available to users until then.

Innovative Modules Surveyed in 2011

- Implicit Association Test of Gender Stereotypes and Explicit Measurement of Gender Stereotypes (Dietrich, Eagly, Garcia-Retamero, Holst, Kröger, Ortner, Schnabel)
- Justice Sensitivity (Liebig)
- Pension Claims (Grabka)

Innovative Modules Surveyed in 2012

- Adaptive Test of Environmental Behavior (Otto & Kaiser)
- Control Strivings (Gerstorf & Heckhausen)
- Day Reconstruction Method (DRM; Lucas & Donnellan)
- Expected Financial Market Earnings (Schmidt & Weizsäcker)
- Explicit Measurement of Self-Esteem (Gebauer, Asendorpf & Bruder)
- Implicit Association Test of Self-Esteem (Gebauer, Asendorpf & Bruder)
- Fear of Dementia (Kessler)
- GeNECA (Just Sustainable Development Based on the Capability Approach; Gutwald, Krause, Leßmann, Masson, Mock, Omann, Rauschmayer, Volkert)
- Loneliness & Depression (Brähler & Zenger)

Innovative Modules Surveyed in 2013

- Conspiracy Mentality (Haffke)
- Day Reconstruction Method (DRM; Lucas & Donnellan)
- Factorial Survey on Job Preferences and Job Offer Acceptance (Auspurg & Hinz)
- Job Task Survey (Görlich)
- Mobility & Identity (Neyer, Zimmermann, & Schubach)
- Narcissism (Küffner, Hutteman, & Back)

- Assessment of Sleep Characteristics (Stang & Zinkhan)
- Socio-Economic Effects of Physical Activity (Lechner & Pawlowski)

Additional Non-Annual Survey Topics from the SOEP-Core Survey in 2011

- Effort-Reward-Imbalance Scale (ERI)
- Family Network
- Household Amenities
- Justice (Wages)
- Loneliness / Number of Friends
- Membership in Organizations
- Neighborhood and Condition of Building
- Occupational Mobility
- Satisfaction with Life (in Five Years)
- Time Use (Short Form)

Additional Non-Annual Survey Topics from the SOEP-Core Survey in 2012

- Assets
- Body Mass Index & Health (SF12)
- Life Goals
- Occupational Mobility
- Overtime

Additional Non-Annual Survey Topics from the SOEP-Core Survey in 2013

- Big Five
- Effort-Reward-Imbalance Scale (ERI)
- Impatience, Impulsiveness
- Justice (Wages)

- Loneliness / Number of Friends
- Time Use (Short Form)
- Trust (Three-Item Short Form)
- Satisfaction with Life (in Five Years)

Data Collection in 2014

Forty proposals were submitted for the 2014 wave of SOEP-IS data collection. Sixteen of these were accepted. Due to the limited testing time available, the remaining 24 proposals had to be rejected. We received seven proposals from the field of economics, 15 from the field of sociology, 17 from psychology, and two from medical and health sciences.

In 2014, we received a number of proposals dealing with various aspects of well-being. We therefore decided to place a special focus on subjective well-being and included a single item on “flourishing” from the European Social Survey and the OECD scale on subjective well-being.

Furthermore—and for the first time in the SOEP-IS—we replicated innovative modules in 2014: the questions on justice sensitivity from 2011 and the experiment on Expected Financial Market Earnings from 2012.

Innovative Modules in 2014⁵

- Cross-Cultural Study of Happiness and Personality (Uchida & Trommsdorff)
- Day Reconstruction Method (DRM; Lucas & Donnellan)
- Determinants of Attitudes to Income Redistribution (Poutvaara, Kauppinen, & Fong)
- Expected Financial Market Earnings (Huck & Weizsäcker)
- Experience Sampling Method (ESM; Lucas & Donnellan)
- Finding Efficient Question Format for Long List Questions (Herzing & Schneider)
- Flourishing State (Mangelsdorf & Schwarzer)

⁵ For more information on this please see part 4, chapter 4.4 of this Wave Report.

- Inattentional Blindness (Conley, Chabris, & Simons)
- Individual & Age Differences in 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)
- Major Life Events (Luhmann & Zimmermann)
- Measurement of Self-Evaluation and Overconfidence in Different Life Domains (Ziebarth, Arni, & Goette)
- Separating Systematic Measurement Error Components Using MTMM (Cernat & Obersky)
- Short Form of the “CHAOS” Scale (Rauch)

Additional Non-Annual Survey Topics from the SOEP-Core Survey in 2014

- Assets
- Body Mass Index & Health (SF12)
- Cognitive Competencies
- Household Energy Consumption
- Modernization of Dwelling
- Risk Aversion (Long Version)

3 A SOEP-Related Study: Early Childhood Education and Care Quality in the Socio-Economic Panel (K²ID-SOEP)

Georg F. Camehl, Pia S. Schober, and C. Katharina Spieß

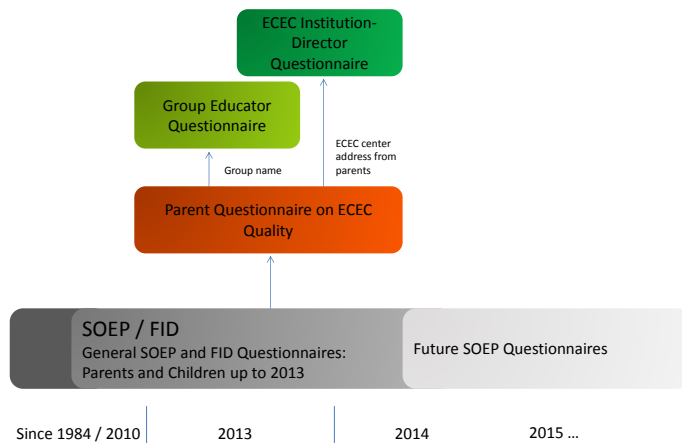
With the recent introduction of the right to a place in an early childhood education and care (ECEC) institution starting from a child's first birthday, more and more parents in Germany utilize ECEC-services for their very young children (Statistisches Bundesamt 2014). The quality of such services varies (Tietze et al. 2013), and this raises important questions: Which groups of parents are more likely to choose high-quality facilities for their children than others? How do these selection processes affect child development? And how does daycare quality affect well-being and employment of parents, in particular mothers? These questions are addressed by the research project "Early Childhood Education and Care (ECEC) Quality in the Socio-Economic Panel" that is conducted as an extension study to the SOEP. The project acronym K²ID is based on the German name of the survey through which data on ECEC quality are collected from parents and ECEC institutions across Germany, which is "Kinder und Kitas in Deutschland".

The K²ID-SOEP project started in August 2013 and is laid out for a three year period. In addition to developing a new database on ECEC quality in Germany, it aims to answer four substantive research questions. Its objectives are to (1) investigate short-term effects of ECEC quality, particularly for children from disadvantaged households. Results from international studies generally suggest positive effects of high-quality day-care attendance on children's cognitive development (e.g., Anders et al. 2011, NICHD ECCRN & Duncan 2003). Existing evidence is more mixed with regard to socio-emotional development and as to whether these effects are larger for children from disadvantaged households (e.g., Belsky et al. 2007; Bernal and Keane 2011, Burchinal et al. 2010, Loeb et al. 2007, Vandell et al. 2010). However, little research on this has been conducted so far in the German context. Differential effects of ECEC attendance between socioeconomic subgroups could be driven by selection processes into ECEC institutions with different levels of quality. Therefore the project also aims at (2) examining whether parents' choices of or access to ECEC institutions of high quality differs between socio-economic groups. This is of interest for providing advice to policy-makers as regards the reasons for such socio-economic differences. While costs do not seem to be a crucial factor given the German pricing system (Immervoll & Barber 2005), a mismatch

between parents' preferred care types and quality dimensions, discriminatory practices of ECEC providers or parents' lacking information about ECEC quality may all be important. A further aim of the project is therefore to (3) assess information asymmetries between parents and ECEC providers. Previous studies have shown that parents have limited information and tend to overestimate it (Mocan 2007). In line with economic models of adverse selection (Akerlof 1970), this may be problematic by reducing the average level of quality in the child care market and it may limit the set of available choices for some population groups more than for others. For a better understanding of these processes, it is important to collect more information on these decision processes and criteria. Apart from the impact on the children themselves, policy on ECEC is always concerned with its impact on the parents' situation. A last research goal is thus to (4) explore how ECEC quality affects employment and well-being of parents, in particular mothers. Promoting more equal opportunities for women in the labor market has been a central policy goal of the recent day-care expansion in Germany. High quality of ECEC services may play an important role in increasing the take-up and acceptance of ECEC services for young children and of maternal employment.

Most existing studies on ECEC quality have started from the institution level and collected data on children in the sampled facilities. However, for some age groups of children under school age this may lead to non-representative samples. K²ID overcomes this problem by starting from a representative household panel study, the German Socio-Economic Panel study (SOEP). It collects information on the quality of facilities attended by children who live in a SOEP household. The project will not only produce results on the above mentioned research questions but will also provide a new database on ECEC quality experienced by families in the SOEP which will allow researchers to follow children in the longer term. All future analyses can take advantage of the SOEP's infrastructure and the sampling strategy was developed taking the SOEP's characteristics into consideration.



Figure 1 - Data Structure K²ID

In a first step, the project surveyed one parent of all SOEP children (including subsamples from “Families in Germany / FiD”) below school age to gather information on the ECEC facility the children attend. This includes the address of the facility and is also meant to investigate the parental decision-making process with respect to ECEC quality. This was done using postal questionnaires (PAPI). The second step was to collect indicators of structural, orientation and process quality directly from directors and the main group educator of the facilities attended by the SOEP children. This was done through postal questionnaires and telephone follow-ups and aimed at capturing the quality of the learning environment, the interactions between children and pedagogic staff, activities and the attitudes of early childhood professionals. Drawing on existing studies which gather information on ECEC quality through surveys, the project is seeking to further refine such methods of measuring the pedagogical quality of ECEC facilities. Figure 1 illustrates the data structure of the project and its different layers.

The parent questionnaire includes measures for the parents’ opinions on child care in general and the reasons for their choice of a specific arrangement. Furthermore, it includes extensive indicators for the quality of the ECEC institution their child attends. Subjective questions such as their satisfaction with various details of the institution’s pedagogical work are included as well as questions on structural characteristics such as available space and materials for play and learning. Other important topics are the degree of cooperation between parents and the institution and the frequency of activities conducted in the daily routine of the ECEC institution, covering both recreational and educational activities. Comparable indicators for quality are also collected from the

ECEC institution’s staff in their respective questionnaires to enable comparisons between parental and staff evaluations. Structural indicators are also surveyed in more detail from the institution director. In addition, these questionnaires collect some information on the professional and educational background of the staff.

Parents and ECEC institutions of most SOEP subsamples have been surveyed between November 2013 and November 2014. Based on the data already collected, the response rate for the additional parent questionnaire was reasonably high: Of 2533 households, 1867 filled out the questionnaire (a response rate of 74%). From these questionnaires, 1256 addresses of ECEC institutions could be retrieved. As was to be expected for a survey trying to collect data from institutions, the response rate among these was lower, but still 680 completed questionnaires are ready for analysis (a response rate of 54%). Because the sampling was based on the SOEP, relatively detailed information on the non-responders is available so that weighting procedures will be used to obtain representative results.

After completion of the project, the data will be made available to all SOEP users. Comprehensive data documentation as well as information on data access will be made available on the project homepage at K2id.de. In the meantime, further information is available from Dr. Pia Schober (pschober@diw.de) of the K²ID-team at the German Institute for Economic Research (DIW Berlin).

By combining information on ECEC facilities with individual and household data collected in past and future waves of the SOEP, the new data set created by the project “Early Childhood Education and Care Quality in the Socio-Economic Panel / K²ID-SOEP” makes it possible to take a closer look at development during early childhood, then during the school years and finally into adulthood. In the context of Germany’s current expansion of ECEC facilities for children under age three and a general increase in full-day care for children below school age, the project will provide important evidence on the effects of ECEC quality on children. By comparing how mothers perceive ECEC quality with the perceptions of early childhood professionals, the project’s analyses will aid policymakers by shedding light on differences between these two groups’ views. Finally, the project will provide valuable insight into the question of whether policies that focus on ECEC quality may also promote children’s well-being by increasing maternal employment and family income, or by improving mothers’ well-being.

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4 The New SOEP Metadata Portal (SOEPinfo v.2 = DDI on Rails)

by Jan Goebel and Marcel Hebing

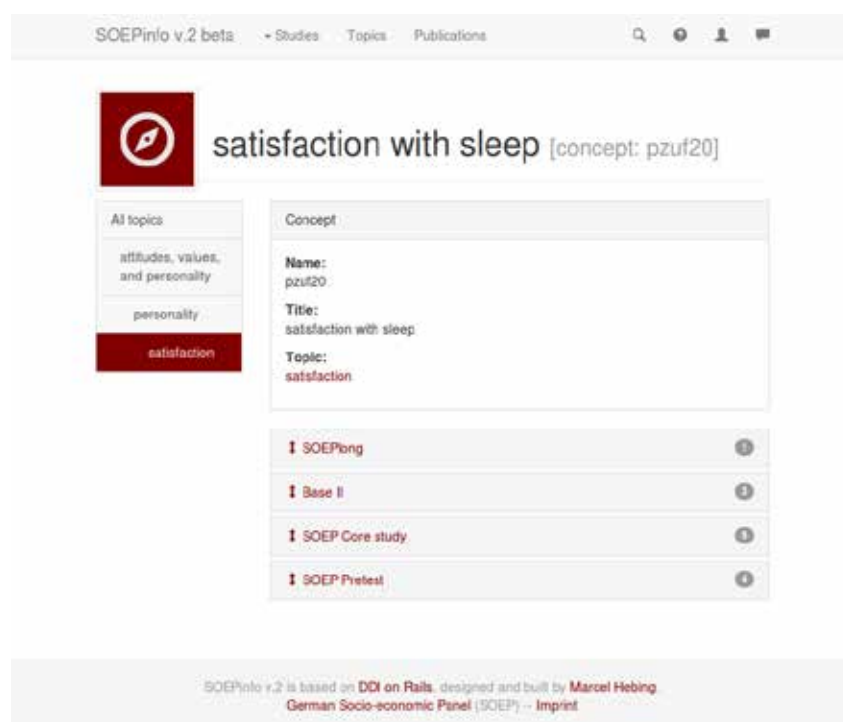
In order to provide comprehensive—as well as user-friendly—documentation of the SOEP’s growth and increased diversity over these last several years, we have been working to develop a new documentation and metadata portal. “User-friendly data” are data that can be easily understood by users and analyzed for a variety of research themes. This requires a clear description of the data and easy access to comprehensible documentation. When the SOEP released its first longitudinal dataset in the mid-1980s, the documentation on questions that had been asked previously and the underlying variables could still be provided in the form of simple tables created using a word processing program. By the late 1980s, these tables had grown so large that they had to be transferred into the then widely used database management system dBASE.

As the complexity continued to increase with each additional wave of data, it became necessary to switch from simple tables to a documentation system called SOEPinfo. By the end of the 1990s, this documentation system was ported to a web-based program by the SOEP’s IT specialist Ingo Sieber. It has been developed continuously since then and is still in use today. It allows our user community a simple and practical point of entry to a SOEP data structure that is becoming more complex with each successive wave. By means of a web-based basket and a script generator that can be used in most common statistical software packages used with the SOEP data, even first-time users are able to conduct their own independent longitudinal SOEP analyses with confidence after an introductory workshop of just a few hours. While the first version of SOEPinfo was completely tailored to the data format of the SOEP, the data reality at the SOEP Research Data Center has changed since then. We now offer SOEPlong, which uses the new computing capacities and translates the SOEP data from their usual cross-sectional format into the clearer and more comprehensive longitudinal format. There are also additional studies like the SOEP Innovation Sample and related studies like BASE II. The successor to SOEPinfo, which has been under development since 2013, therefore had to combine similarly in-depth documentation to the old SOEPinfo with the abstraction of a model that can be applied to a variety of panel studies. Marcel Hebing took on the not insignificant task of developing the program DDI on Rails

(<http://www.ddionrails.org>) as the successor to SOEPinfo in the framework of his doctoral thesis.

Figure 1:

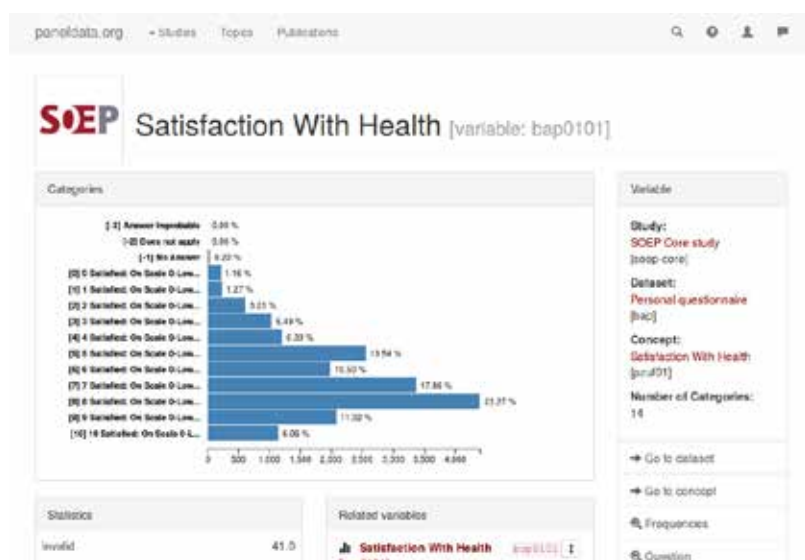
Variables Found in Different Studies



The three main goals for the design of the new metadata system were (a) to create an “open source” software that would allow our solution to be applied by other longitudinal studies, (b) to adhere to a metadata standard **DDI** to ensure the possibility of integration into other retrieval systems, and (c) to maintain the full functionality of SOEPinfo. Our new successor to SOEPinfo, SOEPinfo v.2, is now available worldwide under the new domain paneldata.org. Following the initial beta release in 2013, which had limited functionality with respect to the old SOEPinfo, the 2014 release has all of the functionalities of the old SOEPinfo plus additional ones as well. Now in the new SOEPinfo, variables can be collected in baskets, scripts can be generated, and variables can be compared over time.

Figure 2

Quick Overview About Every Variable



As an addition to the old SOEPinfo, all our studies within and related to the SOEP can now be documented at one centralized location. This makes it possible for our users to search all of the studies in the database for key terms or variables and to see which variables are used in which studies, or in what form the variables were surveyed.

The current version of DDI on Rails is able to link generated variables back to the original variables and even the underlying questions. This is used to provide a comprehensive documentation of our new SOEPlong data, which includes references to the original SOEP-Core variables. Besides the pure links for variables over time, DDI on Rails provides more sophisticated views of changes over time. These views are available on the variable level (where the value labels are compared) and on the question level (where changes in the texts are identified and highlighted).

For future releases, we plan to extend the functionality to comparing and linking variables over time, across studies, and even with external data sources. The first step will be to compare and reuse baskets across studies. This will be useful when a new version of a study is published, but it will also enable researchers to reproduce previous research with new data sources. Furthermore, we intend to improve the link between the

documentation system and statistical packages. Because the new basket stores variables online, Stata is able to execute the resulting scripts directly from the web application. But this is only the start. First tests in R, for example, suggest that it will soon be possible to access metadata-like question texts directly from the statistical package.

Our vision is that the SOEP data portal DDI on Rails will accompany researchers throughout the entire course of their research projects from conception to publication. The system offers researchers the possibility to explore the SOEP data and to compile personalized datasets, and it reflects the specific features of longitudinal studies. Even the SOEPlit database of SOEP-based publications is integrated into DDI on Rails.

In contrast to comparable products, DDI on Rails is independent of any specific study and was developed as open-source software. In the future, the documentation will also include different versions of the data (releases) and will reflect the specific features of longitudinal studies. We invite other longitudinal studies to document their data using this product. The SOEP team aims at providing this metadata portal solution to other longitudinal studies as a special service of the SOEP infrastructure.

5 Results of the 2014 SOEP User Survey

by Florian Gries

In fall 2014, 662 SOEP users took part in our annual SOEP User Survey, providing feedback on the range of services we currently provide. We are pleased to be able to rely on relatively consistent levels of participation in this survey among the members of our user community. The number of users who completed the survey has risen continuously over the last four years (see Figure 1). Of the 662 users who expressed willingness to take part in the survey, 581 actually completed it. This translates into a dropout rate of around 12%, which is slightly lower than last year (16%).

Changing Composition of the SOEP User Community

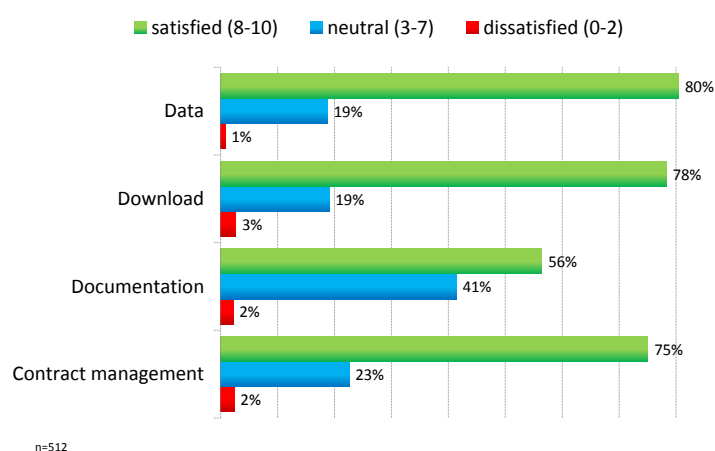
The results of the survey show a change in the composition of our user community with regard to occupational status and location of home institutions. While the percentage of students dropped from 14.5% in 2013 to 8.7% in 2014, the percentage of professors has increased substantially from 24.7% to 45.7%.

At the same time, the share of respondents who do or have never worked with the SOEP data has increased. Figure 2 illustrates the increase of professors using the data “passively”, facilitating the use of the SOEP among their students while not conducting research with the SOEP themselves. To the additional question of whether professors are supervising a thesis using SOEP data, 64% of professors responded “yes.” The finding that university professors are playing an increasing role in enlarging our user community is certainly a positive outcome of this user survey. It should be kept in mind, however, that many of the questions in the survey can only be answered based on first-hand experience working with the SOEP data.

The survey always asks respondents to evaluate each of our individual service areas. As seen in Table 1, users gave high marks to the new data downloads introduced in 2013. Users reported equally high levels of satisfaction with the quality of the data and contract management. In the area of documentation, however, respondents saw room for improvement. We are well aware of the importance of our data documentation and are working constantly to improve in this area. One exam-

Figure 1

Satisfaction with SOEP-Services



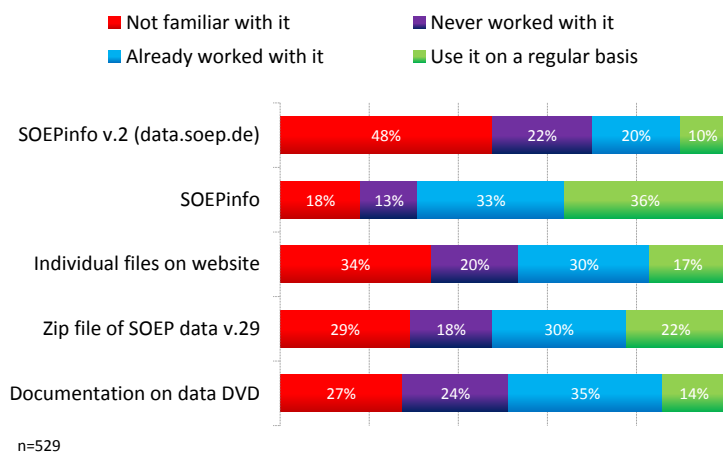
ple is the recently updated **Desktop Companion**. Since the SOEP is still expanding with its various Related Studies (SOEP-RS), increasing effort is required to produce detailed documentation. Integrating the FiD study (which ran through 2014) into SOEP-Core poses one such challenge. In 2015, we will be focusing on adapting these datasets to guarantee consistent and user-friendly documentation of all of the SOEP data.

SOEPinfo v.2 to Provide Better Access to Data Documentation

Our plans for 2015 also include promoting wider use of our new metadata portal, SOEPinfo v.2, in our user community. It was developed as part of the open-source project “DDI on Rails” and includes not only comprehensive documentation of SOEP-Core from the previous online resource, SOEPinfo, but also a complete picture of the SOEPLong data. The user survey showed that just a few months after SOEPinfo v.2 was introduced, around one-third of all respondents had already used it (see Figure 2). This group of respondents gave the version they used an average of 7 out of 10 possible points. In 4 out of 6 subcategories—visual design, information content,

Figure 2

Use of Documentation Services



quality of the generated syntax, and response speed—the average rating was 7 or above. Overall, users' evaluations of the new SOEPinfo were around equally high as those used to evaluate the previous version of SOEPinfo in the same categories in 2011.

Survey respondents who had not used the new SOEPinfo v.2 reported that they were continuing to use the old SOEPinfo mainly out of habit or because they did not see a need to switch. We are very curious to see how users will respond to the question of which data documentation system they use in the next user survey. Until then, we would like to encourage all our users to take advantage of the new SOEPinfo v.2 and especially of the opportunity to provide us with your feedback.

6 30 Years of SOEP-Core – Some Unique Selling Points

by Jürgen Schupp

In the following, we try to sketch out the diverse areas of research potential that partly already is reached and partly will arise from the long observation period in the SOEP in the years to come. These potentials justify the long-term design and duration of longitudinal household panel studies, and they are also some of the unique selling points of the SOEP internationally. The areas of research potential outlined below provide striking evidence of the degree to which the SOEP will increase in value for the research community as the observation period continues to increase.

Multi-Generational Design

To understand the determinants of social and economic opportunities available to the younger generation, it is crucial to examine how mechanisms of intra-family and particularly intergenerational transmission of financial resources, skills, values, and norms interact with social institutions. With the increasing duration of the longitudinal study, potentials for analyzing these intergenerational mechanisms in relation to the core topics of the SOEP (education, social status, income, poverty and wealth, health, and well-being) will multiply. With the growing number of parent / child dyads in the SOEP in which the children have reached the age of 16 and are now SOEP respondents themselves, the number of cases available for three-generation analysis is also increasing.

The possibilities for sibling analysis rise with increasing duration of the SOEP study, since the siblings that grow up in the family remain part of the panel population, as dictated by the panel study concept of following these offspring further after they reach adulthood and form their own households. In the SOEP, there are already sibling pairs in around 8,000 SOEP households that are available for analysis, provided with user-friendly sibling pointers differentiated by shared mother or father.

The genetically sensitive twin study TwinLife finished in 2014 their first wave. The SOEP sibling data will be the control group for twin effects in this German Research Association (DFG) funded long-term study (12 year funding period) www.twin-life.de/en.

Figure 1:

Number of Intergenerational Links in the SOEP

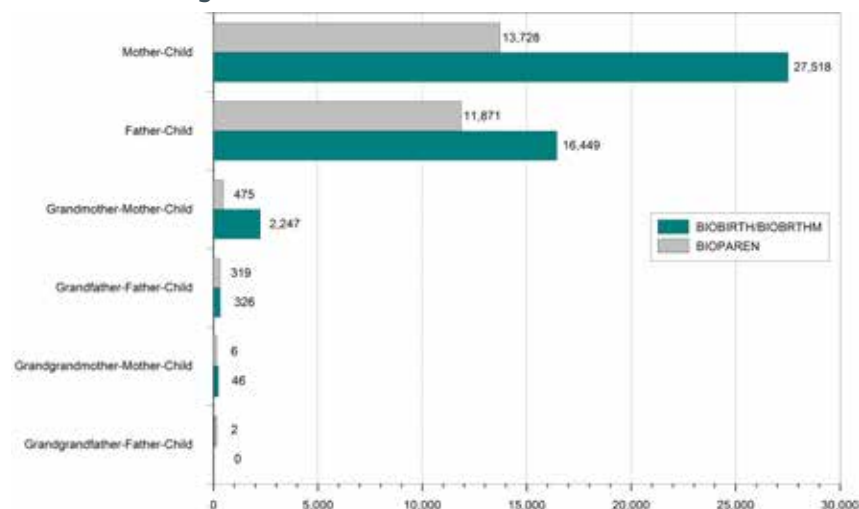
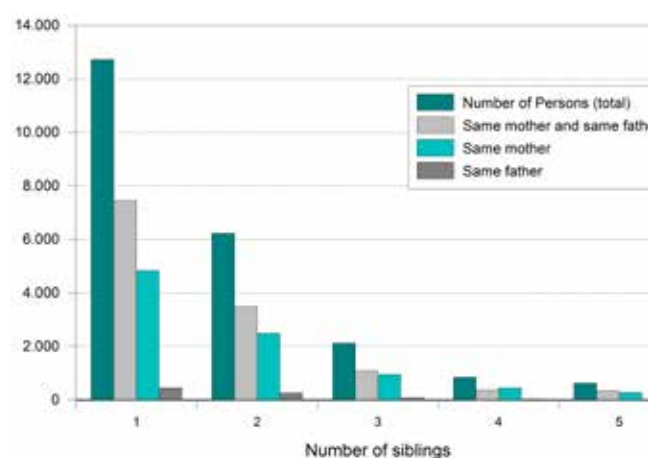


Figure 2:

Number of Respondents with Sibling Information, by Number of Siblings



The Transition to a Unified Germany

The SOEP is the only database worldwide in which political unification of a society that had been divided for 40 years took place during the course of the study. In June 1990, soon after the fall of the Wall, the first wave of the East sample was collected—one month before the

Table 1

Number of Observations in East-Germany—former GDR

	1990	2000	2013
Sample C (No. of households)	2,179	1,879	1,250
Sample C (No. of respondents)	4,453	3,687	2,111
Sample C (No. of children)	1,591	826	439
East Germany (no. of all hh)	2,179	3,103	2,928
East Germany (No. of all resp.)	4,453	5,895	4,913
East Germany (No. of all children)	1,591	1,311	937

currency, economic, and social union. The SOEP provides with Sample C and its refresher samples a unique database for East-Germany (Table 1).

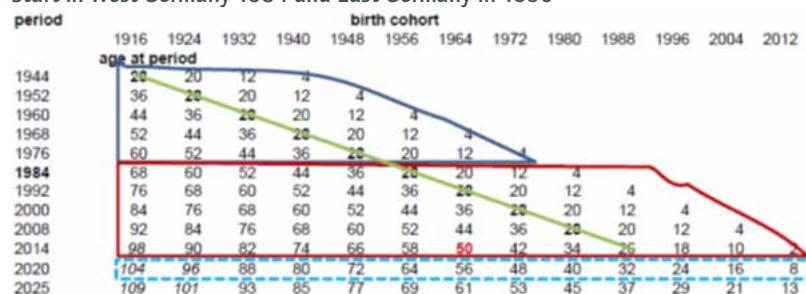
German unification brought about an increased rate of social change in both West and East Germany. The processes of transformation and adaptation initiated by the fall of the Wall still have not come to an end and it will still take generations for living conditions to reach similar levels in East and West Germany.

Since the SOEP includes not only objective indicators such as income and assets but also subjective indicators such as life satisfaction, concerns, and values all the way to psychological concepts of personality traits, diverse possibilities will open up the years to come for analyzing how these indicators are changing, how they are transmitted from parents to children, and what they mean for educational and occupational success (see Part 4).

Table 2

SOEP and Its Multi-Cohort Design from an Age, Period, and Cohort Perspective

Start in West Germany 1984 and East Germany in 1990



The Aging of the German Postwar Generation and Retirement Decisions of the Baby Boomer Generation

SOEP respondents from the postwar generation that came of age in the political ferment of 1968 are now retiring and will spend a much longer period of time in retirement than their parents. This generation was between 35 and 40 years of age at the start of the SOEP, and they will have reached the age of 70 to 75 in 2020.

When analyzing key points in the career trajectories of this generation, problems they have faced in balancing family and career, as well as their activities in retirement, researchers do not have to rely on retrospectively collected longitudinal data; they can also use longitudinal data prospectively. Furthermore, this generation's children have been observed in the SOEP throughout their entire childhood and teenage years. This opens up significant potentials for socially relevant analysis, particularly in the areas of old-age security, asset building, and inheritances.

Table 2 shows the three temporal dimensions that are of interest for individual longitudinal analysis (APC-analysis, age, period, cohort) schematically for the birth cohorts that can be observed in the SOEP so far. The area outlined in red shows what age ranges for various specific age cohorts can be analyzed in prospective studies of the life course using data collected annually since the start of the SOEP study. For the age ranges outlined in dark blue, the SOEP offers at least retrospectively collected rough data.

The baby boomer generation has been observed in the SOEP since they left school. In 2020, the cohort with the highest birthrate in Germany (those born in 1964) will reach the age of 56. The life courses of these baby boomers differ significantly from those of previous cohorts. For the baby boomer cohorts, the SOEP data show a increasing diversity of career trajectories as well as frequent phases of unemployment—especially among respondents in East Germany. At the point in time German unification, when these individuals were surveyed for the first time in the SOEP, they were between 21 and 35 years of age and thus just becoming established in the labor market. This development has impacts on their entitlements under the German Federal Pension Fund, the most important source of retirement income.

Table 3

The Discovery of the Early Life Course in the SOEP

birth cohort								
period	1984 ¹	1985	1990	1996	2002 ²	2004	Development of age-specific instruments	Topics
age at period								
1984	0,5	-	-	-	-	-		
1990	6	5	0,5	-	-	-		
2000	16	15	10	4	-	-	Youth Questionnaire	
2002	18	17	12	6	0,5	-	Mother & Child A	Child Health, Circumstances of Pregnancy, Child Care
2004	20	19	14	8	2	0,5		
2005	21	20	15	9	3	1	Mother & Child B	Child Health, Child Care, Competencies
2006	22	21	16	10	4	2	Cognitive Test DJ	Strength and Difficulties, (SDQ), Child Care, Activities
2008	24	23	18	12	6	4		
2010	26	25	20	14	8	6	Questionnaires for Parents	Educational Goals, upbringing styles and goals, child care
2012	28	27	22	16	10	8	Mother & Child E	Educational Goals and School Performance, Activities, SDQ
2014	30	29	24	18	12	10	Teenager I (self-report)	
2016	32	31	26	20	14	12	Teenager II (self-report)	
2018	34	33	28	22	16	14		
2020	36	35	30	24	18	16		
Total No. Of Age Specific instruments	1	1	2	2	9	9		

1 "golden cohort"; 2 "platin cohort".

The Discovery of Early Childhood

Because of its household design, the SOEP offers little direct information on the course of individual development for the *post*-1984 generation—that is, for those born since the start of the study. But a special feature of the SOEP longitudinal study is its unique data on family contexts for the entire period of early childhood (“gold cohort”). Divorce and remarriage during a child’s early years, a parent’s job loss, and parents’ choices in regard to working hours (from part-time to overtime) may all create significant opportunities as well as limitations affecting children’s development. The gold cohort consists primarily of individuals born in the early high birthrate years whose entry to the labor force is observed in the SOEP, at least for West Germany.

In the year 2000, the first birth cohort born into SOEP households since the start of the SOEP turned 16, the age when young people become fully fledged survey respondents themselves. In other words, this generation was observed on an annual basis throughout their en-

tire childhood in the SOEP as a prospective panel study. Although only a small amount of direct information on children’s school careers is collected in the SOEP household questionnaire, the household design of the SOEP makes it possible to describe the social contexts that shaped these young people in precise detail. For the age group of 16-year-old first-time respondents, an additional age-specific survey instrument, the “youth questionnaire”, has been used since 2000.

For all children born after 2002, the second age-specific questionnaire on newborns, “Mother & Child A”, was introduced in 2003, and it has been given to all mothers of children born in the SOEP every year since then. Further age-specific survey instruments have been launched every two years to trace the 2002 cohort. In 2006, first-time respondents (born in 1990) were given a standardized cognitive skills test, which has been used on all younger birth cohorts since then.

In 2012, parents were asked about their children turning 10 during the current survey years for the first time. The

Table 4

Number of Completed (Proxy) Interviews on the Early Life Course in the SOEP

	Mother and Child A	Mother and Child B	Mother and Child C	Parents Questionnaire	Mother and Child E	Teenager I	Teenager II	Cognitive Test (DJ)	Youth Questionnaire
Data collection in the age of ... years									
Survey-Year	0-1	2-3	5-6	7-8	9-10	12	14	16	16
2000									232
2001									618
2002									352
2003	313								365
2004	241								373
2005	244	255							368
2006	228	221						835	307
2007	201	235						295	346
2008	181	239	234					223	261
2009	194	183	209					211	243
2010	181	186	212	217				190	214
2011	143	172	206	173				155	267
2012	163	189	184	210	219			189	244
2013	178	175	197	233	225			217	257
2014	180	180	200	240	230	150	Start in 2016		250
Total No.	2,447	2,035	1,442	1,073	674	150		2,315	4,697

topics in these questionnaires vary with the age of the child. In 2014, young teenagers at age 12 answered for the first time directly on their current school activities, their friends and leisure activities.

In 2018, the 2002 birth cohort ("platinum cohort"⁶) will reach the age of 16, when they will become SOEP respondents, and the entire development process for this cohort will be documented in the SOEP by means of nine age-specific survey instruments. These data make the SOEP a unique data resource for studies in developmental psychology, providing a nationally representative reference study or control sample for diverse longitudinally oriented intervention studies.

Table 5

Total Number of Migrants in SOEP-Core Sample 2013

Adults (Children)	Samples A - K	Sample "M 1"	FiD (Families in Germany)	Total
First-Generation Migrants	2,126 (37)	3,710 (319)	1,281 (87)	7,117 (443)
Second-Generation Migrants	1,475 (814)	943 (1,799)	1,080 (2,861)	3,498 (5,474)
Subtotal	3,601 (851)	4,653 (2,118)	2,361 (2,948)	10,615 (5,917)
No Migration Background	18,974 (2,920)	308 (117)	6,225 (5,915)	25,507 (8,952)
Total	22,575 (3,771)	4,964 (2,235)	8,586 (8,863)	36,125 (14,869)

The Integration of Migrants in Germany

Since the start of the SOEP, special attention has been paid to the resident immigrant population. For this reason, the initial representative sample of all people living in the Federal Republic of Germany (Sample A)

⁶ We introduced the term "gold cohorts" to refer to the cohorts born since the start of the prospective collection of longitudinal data who entered the SOEP study at the age of 16—a group for whom we have effectively no left-censoring of data on young adults (e.g., regarding poverty in early childhood). "Platinum cohort" refers to cohorts born after the introduction of the age-specific survey instrument "Mother & Child A" (born 2002 and younger) who reached the age of entry to the SOEP survey in 2018.

in 1984 was accompanied by a second random sample drawn from register data (Sample B) of all households in Germany with a Turkish, Italian, ex-Yugoslavian, Greek, or Spanish household head. At the time, these were the largest immigrant groups in Germany—they were the so-called “guest workers” who were recruited from southeast European countries. Their data were added to the sample of other groups of foreigners who were represented by only a few cases in Sample A (from the Netherlands, Austria, Canada, etc.).

After German reunification and the fall of the Iron Curtain, there were new waves of immigration to Germany—particularly immigrants of German descent, many of them from Poland and the former USSR. To address this, an additional migration sample was added to the SOEP in 1994/95 (Sample D). Since then, small refreshers representing the entire general population have been added (Samples E, J, K) with marginal oversampling of migrants (Samples F and H).

Recent studies have shown that new immigrant groups are not adequately represented in the SOEP. For this reason, another migration sample (Sample M1) was added in 2013 in cooperation with the German Federal Employment Agency (BA) in Nuremberg. The sample was created with the aid of the Integrated Employment Biographies Sample (IEBS). This register of individual employment spells and public transfers contains a total of 17.4 million new entries for the period since 1995. A total of 2,700 new households of immigrants to Germany since 1995 were added to the SOEP from this register.

Thanks to these ongoing efforts to maintain coverage of the immigrant population, the SOEP provides a database on integration processes and migration developments in Germany that is one-of-a-kind worldwide.

Understanding the Effects of Policy Changes and Studying Future Shocks and Policy Innovations

Social institutions are subject to constant changes. In Germany, a series of reforms carried out over the last 30 years have affected people’s living conditions substantially. These include changes in the educational system (e.g., BAföG student grants and loans), in labor market institutions (“minijob” arrangements, labor market flexibilization), and in the tax and social security system (income tax reforms, Hartz IV, etc.). With its longitudinal design, the SOEP offers an ideal data source for comprehensive scientific evaluations of legal reforms using econometric techniques (differences-in-differences; treatment, etc.).

The recently adopted €8.50/hour minimum wage to be introduced across Germany by the end of 2016 is labor market reform that will likely have far-reaching impacts. It can be expected that this “natural experiment” will spark interest among labor market researchers worldwide to evaluate different effects of such a legal reform. Current estimates show that approximately one in five employees will be affected by the reform. The SOEP provides an ideal representative longitudinal micro database for studies of this reform—at least regarding the labor supply—in order to study both the labor market effects and distribution effects of this reform.

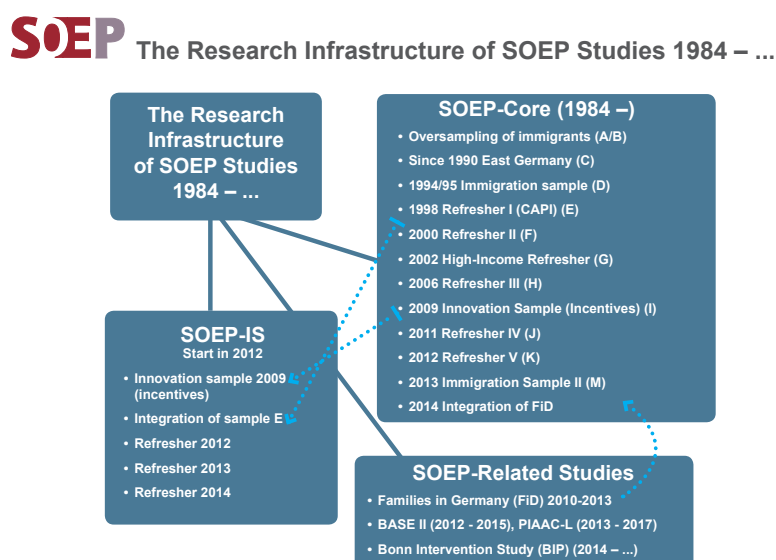
Beyond SOEP-Core—the Research Infrastructure of SOEP Longitudinal Studies

In considering the detailed discussion of the SOEP’s further development that follows, it should be taken into account that the SOEP is now a differentiated *family* of longitudinal studies. Figure 3 shows the three main “branches” of the research infrastructure of SOEP studies as introduced in section 1.

The first is the SOEP-Core longitudinal study, which was started in 1984 in West Germany and in 1990 in East Germany and has since been expanded to include various replacement and refresher samples enabling us to maintain the generalizability of the sample findings both longitudinally and cross-sectionally. The second is the SOEP Innovation Study (SOEP-IS), which was launched in 2012, incorporating some subsamples from SOEP-Core. The third branch is the SOEP Related Studies (SOEP-RS), which are externally funded longitudinal studies with a close relationship to the SOEP.

Figure 3

Research Infrastructure of SOEP Studies



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, there were nearly 11,000 households, and more than 20,000 persons sampled by the fieldwork organization TNS Infratest Sozialforschung. The SOEP study is available in the two formats „SOEPcore“ and „SOEPlong“.

Additionally, yearly topical modules enhance the basic information in (at least) one of these areas by asking detailed questions as documented in the following table. These modules for the main part appear in the personal questionnaires; only some of them are additions to the household questionnaire. Starting in the year 2001, the data have become even richer by including several different health measures and well-known psychological concepts as well as age specific questionnaires.

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 by following a micro-economic approach enriched with variables from sociology and political science. Therefore the central survey instruments are a household questionnaire, which is responded by the head of a household and an individual questionnaire, which each household member is intended to answer. Furthermore beginning with 1997, there are wave-specific \$LELA files (Lebenslauf - engl. life course) containing the biography information as collected in the respective year.

A rather stable set of core questions is asked every year covering the most essential areas of interest of the SOEP:

- population and demography
- 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 certain aspects of life.

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);

SOEPlong

SOEPlong is a highly compressed, easily analyzable version of the SOEP data that is much simpler to handle than the usual SOEP-Core version. It contains a significantly reduced number of datasets and number of variables.

The data are no longer provided as wave-specific individual files but rather pooled across all available years (in “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.

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 statements on, e.g., place of residence or administrative district in their analyses, but the data does provide valuable background information.

SOEP Pretest

Within the framework of SOEP, the questionnaires are pre-tested before being fielded each year. The aim of the pretests is to test new sets of questions or modifications to certain questions. Furthermore, behavioral experiments are prepared and tested and sometimes even included in the main SOEP survey. A pretest in the SOEP usually includes about 1,000 respondents. The samples are representative by approximation for the population aged 16 years and older in Germany. Data are collected by Infratest and passed on to the SOEP, which makes the data available to external users. <https://paneldata.org/studies/5>.

SOEP-LEE

There is increasing consensus in the economic and social sciences that the workplace plays a crucial role in individual life outcomes. This is true in the economic and sociological labor market research, network and social capital research, health research, the research on educational and competency acquisition processes, wage information, and the work-life interface, as well as in the inequality research as a whole. For this reason, there has been increasing interest in what are known as “linked employer-employee” (LEE) datasets, in which employees' individual data are linked with information on their employers.

The workplace data collected in the framework of the project SOEP-LEE will substantially expand the information on the work contexts and working conditions of respondents to the SOEP survey. The project has been implemented by asking all dependent employees in all of the SOEP samples to provide local contact information to their employer in 2011. The employer contact data then formed the basis for a standardized employer survey conducted separately from the rest of the SOEP survey. This employer information can be linked with the individual and household data from the SOEP study. The new linked employer-employee dataset opens up new opportunities for wide-ranging forms of

secondary analysis with innovative questions from wide range of disciplines in the social and economic sciences. An additional unique feature of SOEP-LEE is the analysis of employer survey data quality, carried out through the measurement of meta- and paradata over the course of data collection. As a result, this project also contributes to the ongoing development and refinement of survey methodology in the field of organizational studies. http://www.diw.de/en/diw_01.c.433198.en/soep_lee.html

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 for free via secure 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—will soon turn 32 years old. While LIS' mission and core work have not changed since its inception—that is, to acquire and harmonize high-quality microdatasets and to make them available to researchers around the world—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.) www.lisdatacenter.org

SOEP-IS (Innovation Sample)

The research infrastructure SOEP at DIW Berlin established a longitudinal Innovation Sample (SOEP-IS) in 2011 for particularly innovative research projects. The SOEP-IS is primarily available for methodical and thematic research that involves too high a risk of non-response for the long-term SOEP study.

SOEP-IS

- is based on an evaluation conducted by the German Council of Science and Humanities.
- is a longitudinal sample for particularly innovative survey methods and behavioral experiments.
- 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 the 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 the SOEP-IS are lower than if “fresh” samples were used: central household and individual characteristics, invariant over time, are already available and do not have to be collected again.

A two-step module of Governance is established to regulate topics and question modules: first, the 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 (SOEP-paper 463).

www.diw.de/soep-is

paneldata.org/studies/4

SOEP-RS (Related Studies)

FiD data (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 on behalf of the two involved ministries. In 2014 FiD has been fully integrated into SOEP-Core.

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 new 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 is funded by the Federal Ministry of Education and Research. Participants are involved in the annual survey of the German Socio-Economic Panel (SOEP) and provide information about their life situation and living conditions.

paneldata.org/studies/3

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.

formance, career and labor market attainment, integration and participation in social, cultural and political life.

<http://www.twin-life.de/en>

SOEP-ECEC Quality (K²ID-SOEP)

Are some groups of parents in Germany more likely to choose high-quality education and care institutions for their children than others, e.g. whether due to a lack of information or varying preferences? Are mothers whose children attend high-quality settings more satisfied and more likely to be employed?

These are some of the questions studied as part of the project “Early childhood education and care quality in the Socio-Economic Panel (K²ID-SOEP)—direct and indirect effects on child development, socio-economic selection and information asymmetries.” The three-year project launched in September 2013 is funded by the Jacobs Foundation (see pages 31 ff.) and <http://k2id.de>.

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 sample for the SOEP-Core study and therefore 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 on the living situations of new immigrants to Germany. Data collector: TNS Infratest Sozialforschung GmbH. paneldata.org/studies/6

TwinLife (cooperation study)

TwinLife is a 12-year representative behavioral genetic study investigating the development of social inequality. The long-term project has begun in 2014 and will survey more than 4,000 pairs of twins and their families regarding their different stages of life on a yearly basis. All of the subjects reside in Germany. Not only social, but also genetic mechanisms as well as covariations and interactions between these two parameters can be examined with the help of identical and fraternal twins. In order to document the individual development of different parameters it is important to examine a family extensively over the course of several years. The focus is on five important contextual points: Education and academic per-

SOEP Service

SOEPnewsletter

Above and beyond the comprehensive documentation and the various user support programs, the SOEP Research Data Center publishes the quarterly SOEPnewsletter, containing the latest updates on data, conferences, and related information, and distributes it by email to the constantly growing international SOEP user community. www.diw.de/SOEPnewsletter

SOEPlit

Many of the research findings and publications based on SOEP data are archived at DIW Berlin. You will find the bibliographic descriptions 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 service 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
www.diw.de/SOEPlit

SOEPcampus

The SOEP is working to strengthen methodological training in the use of SOEP data—especially for young scholars in the disciplines of sociology, economics, and psychology. In addition to holding workshops at universities, we list workshops and lectures providing introductions to the use of the SOEP data or dealing with particular issues of data use on our website at: <http://www.diw.de/soepcampus>.

SOEPmonitor

The SOEPmonitor compiles time series since the mid 1990's 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 your 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 households and persons. Since the 2007 SOEPmonitor tables are in English as well.

www.diw.de/SOEPmonitor

SOEP-in-Residence

In addition to offering SOEP users the standard Scientific Use File (via secured SOEP download), a special mode of online access (via SOEPremote), and advice over the SOEP hotline, we also provide the opportunity to conduct research during a stay in the SOEP Department at DIW Berlin. Direct discussion with SOEP team members and our user-friendly environment provide fruitful input and support, enabling visiting scholars to work effectively on research projects and bring them to successful completion. For the use of small-scale coded geodata, a research stay at the SOEP Data Research Center located at DIW Berlin is mandatory. SOEP also provides research stays to address special research questions and topics. Furthermore, research visits to SOEP's field organization, TNS Infratest Sozialforschung, are also possible. <https://www.diw.de/en/diw-02.c.222617.en/soep-in-residence/html>

SOEP Re-Analysis

Data protection issues are of utmost importance to SOEP and CNEF users as well. 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 data protection issues thoroughly. Ultimately, all these precautions are crucial to ensure future participation by panel respondents. As such, making SOEP and CNEF data available for re-analyses 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 setting and guaranteeing adherence to clear-cut access regulations. http://www.diw.de/en/diw_01.c.340858.en/soep_re_analyses.html

SOEPdataFAQ

The FAQ is updated with the answers to the most frequent questions that were submitted to the SOEP-Hotline and to the researchers. http://www.diw.de/en/diw_02.c.222860.en/faq_questions_about_data_analyses.html



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 1984-2013, version 30, SOEP, 2015, doi:10.5684/soep.v30.

German:

Sozio-oekonomisches Panel (SOEP), Daten für die Jahre 1984-2013, Version 30, SOEP, 2015, doi:10.5684/soep.v30.

Short Version:

SOEP v30

by Axel Glemser, Simon Huber, and Anne Bohlender (TNS Infratest, Munich)

We summarize the most important aspects and results of the 2014 fieldwork. TNS Infratest Sozialforschung has been responsible for fieldwork, data collection, and data editing since the first wave of the German Socio-Economic Panel (SOEP) in 1984. The staff of the SOEP research unit at TNS Infratest Sozialforschung in Munich consists of 20 survey researchers, project managers, data editing officers, and support staff. In addition, more than 500 interviewers are involved in the fieldwork for each wave. TNS Infratest's large pool of interviewers ensures that sufficient face-to-face resources are available for the extensive and complex data collection processes of a regionally dispersed panel sample like the SOEP.

Generally speaking, the complexity and quantity of SOEP interviews has increased significantly over the last decade, which has affected both sampling and measurement-related SOEP survey tasks. This was true for the fieldwork on the various SOEP samples in 2014 as well: the development of qualitative innovations and quantitative top-up samples played a key role in the SOEP's efforts in both the main SOEP study, SOEP-Core, and in the Innovation Sample, SOEP-IS.

For SOEP-Core, presented in Section 1, the year 2014 witnessed two major challenges: the transition of the Migration Survey M1 (established in 2013) into the longitudinal section and the integration of the former study FiD (Families in Germany) into the general SOEP sampling system. The latter has to be treated as two separate subsamples: whereas the so-called cohort samples were fully integrated into SOEP-Core (e.g., same face-to-face survey mode and questionnaires), the so-called screening samples were inquired by a sequential multi-mode-design (interviewer-assisted CAWI followed by CAPI). In total 28,042 individuals living in 16,037 households were interviewed in the 2014 wave of SOEP-Core.

In the 2014/2015 wave of the SOEP Innovation Sample (SOEP-IS), a further general population refresher sample (I4) boosted the net total sample size to more than 3,700 households and 5,800 interviewed persons. Moreover a series of new and innovative survey measures were incorporated into the questionnaire, and for one

group of respondents, subjective well-being measures were supplemented by experience sampling measures (ESM) that were collected during a seven-day mobile survey.

The Scope of This Fieldwork Report

This part focuses exclusively on the various segments of fieldwork of the 2014 wave of "Living in Germany," the name TNS Infratest Sozialforschung uses for the study with interviewers and respondents. Hence it is restricted to the various longitudinal subsamples of SOEP-Core including the second wave of the migration boost sample as well as the former FiD samples. Further, it includes a concise summary of the SOEP-IS. This section does not discuss the aims and contents of other SOEP-related or associated studies that are conducted under the label of the SOEP but are not part of the SOEP's core or IS sample.

Figure 1

Overview of SOEP

Living in Germany					Special ad hoc surveys for Living in Germany + "SOEP related studies"+ "partly SOEP associated" projects
Core-SAMPLES			SOEP-IS		
Samples A – KH	Sample M	Screening Samples	Longitudinal Sample I1/E I2, I3	Refreshment Sample I4	Not covered in this report
Section 1	Section 2	Section 3	Section 4		

Overview of SOEP-Core

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, TNS Infratest delivers the various data files (gross and net sample files, question-item-variable correspondence lists, all documentation) to the SOEP team at DIW Berlin in December of each year, always in the same cross-sectional format. It should be noted that the SOEP has 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 sub-samples were based on different target populations and were therefore drawn using different random sampling principles. In **table 1** we provide an overview of the trends in absolute sample size at the individual level (persons participating in a respective SOEP wave), covering thirteen (major) subsamples launched between 1984 and 2013. **Figure 2** provides an overview of the sample sizes of the various main subsamples at the household level for 2014.

Households and individuals with the longest history of (continuous) panel participation took part for the thirty-first time in 2014 (samples A and B). The following boost samples have been added to the main sample since the beginning of the new millennium:

- Sample F, designed as a general population refresher sample initially comprising more than 6,000 households in the year 2000.
- Sample G, aiming at an oversampling of high-income households and integrated into the SOEP sample system in 2002 with about 1,200 households.
- Sample H, a general population refresher sample adding 1,500 new households to the main sample in 2006.
- Sample J, a general population refresher added in 2011 with more than 3,000 households.

Table 1

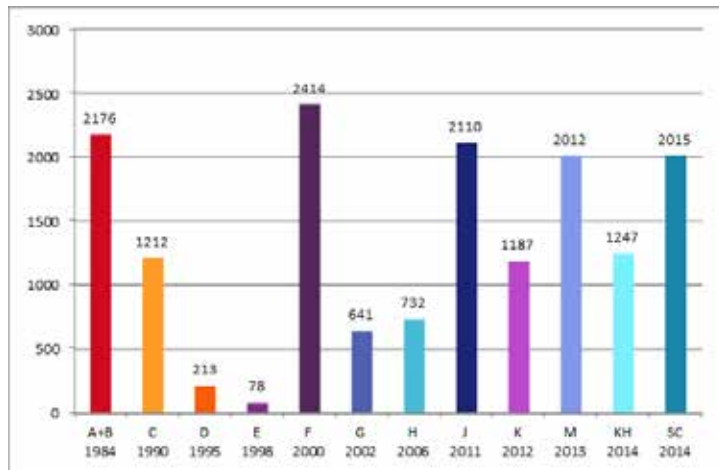
SOEP Subsamples 1984-2014

Sample	Year	1984	1990	1995	1998	2000	2002	2006	2009	2010	2011	2012	2013	2014
A+B	"SOEP West" and main groups of foreign nationalities 1984	1	7	12	15	17	19	23	26	27	28	29	30	31
C	»SOEP East« general population sample GDR 1990	-	1	6	9	11	13	17	20	21	22	23	24	25
D	Immigration sample 1995	-	-	1	4	6	8	12	15	16	17	18	19	20
E	Boost sample 1998 (general population)	-	-	-	1	3	5	9	12	13	14	15	16	17
F	Boost sample 2000 (general population)	-	-	-	-	1	3	7	10	11	12	13	14	15
G	High income sample 2002	-	-	-	-	-	1	5	8	9	10	11	12	13
H	Boost sample 2006 (general population)	-	-	-	-	-	-	1	4	5	6	7	8	9
J	Boost sample 2011 (general population)	-	-	-	-	-	-	-	-	-	1	2	3	4
K	Refresher sample 2012 (general population)	-	-	-	-	-	-	-	-	-	-	1	2	3
M1	Migration sample 2013												1	2
KH	Cohort samples: est. in 2010 (FID) and integrated in 2014	-	-	-	-	-	-	-	-	-	-	-	-	1/5 ³
SC	Screening samples: est. in 2010 (FID) and integrated in 2014													1/5 ³
Individual interviews per sample ¹														
A+B		12,239	9,518	8,798	8,145	7,623	7,175	6,203	5,196	4,790	4,541	4,204	3,926	3,761
C		-	4,453	3,892	3,730	3,687	3,466	3,165	2,769	2,559	2,392	2,262	2,111	2,006
D		-	-	1,078	885	837	780	684	565	488	461	435	398	365
E ²		-	-	-	1,923	1,549	1,373	1,199	1,024	978	961	160	134	128
F		-	-	-	-	10,886	8,427	6,997	5,824	5,316	4,984	4,610	4,329	4,049
G		-	-	-	-	-	2,222	1,801	1,487	1,438	1,358	1,285	1,259	1,168
H		-	-	-	-	-	-	2,616	1,737	1,587	1,478	1,392	1,333	1,259
J		-	-	-	-	-	-	-	-	-	5,161	4,229	3,801	3,498
K		-	-	-	-	-	-	-	-	-	-	2,473	2,115	1,962
M													4,964	3,835
KH			-	-	-	-	-	-	-	-	-	-	-	2,311
SC														3,700
Total		12,239	13,971	13,768	14,683	24,582	23,443	22,665	18,602	17,156	21,336	21,050	24,370	28,042

1 Including the interviews given by juvenils who participated the first time by completing the youth questionnaire
2 The low number of participants in sample E from 2012 on results from transferring the face-to-face-households into the SOEPHS in 2012.
3 The households of the former FID samples are actually being interviewed for the 5th time but for the first time under the name of SOEP.

Figure 2

Number of Participating Households in 2014 from Various Subsamples



TNS Infratest Sozialforschung, Munich 2015

- Sample K, a general population refresher added in 2012 with a total of 1,500 households.
- Sample M1 was designed to improve the representation of migrants living in Germany. Established in 2013, 2,723 households with at least one person with a migration background were interviewed to enhance the potential use of the data in integration research and in the analysis of migration dynamics.
- Samples SC (Screening Samples) and KH (Cohort Samples) established in 2010, originate from the former study “Families in Germany” (FiD), a longitudinal SOEP-equivalent sample system for the evaluation of German family policies on behalf of two German governmental departments (BMF/BMFSFJ). The evaluation and project-based funding ended in 2013. The FiD samples were methodically transferred into the main sample of the Socio-Economic Panel in 2014 and have been funded out the institutional infrastructure budget of the SOEP.

In this section of the report, the specifics and field results of the aforementioned samples are reported in three sections. Section 1 deals with the longitudinal SOEP core samples, including the former FiD cohort samples, which were fully integrated into SOEP-Core during fieldwork 2014. Section 2 reports on the second wave of the Migration Sample M. Section 3 describes the sequential multi-mode design of the former FiD screening samples and assesses the first CAWI approach used in a SOEP sample.

1 SOEP-Core Samples A-KH

1.1 Questionnaires

The SOEP is presented to respondents and interviewers under the catchy name “Living in Germany.” The primary interviewing method in SOEP samples is face-to-face. Depending on the respective subsample, CAPI and/or PAPI are the interviewing modes. In older samples, self-administered mail questionnaires are used only in exceptional cases. A thorough description of all interviewing modes and types of fieldwork processing can be found in the following section. In the year 2014, a total of 13 different questionnaires were fielded, most of them processed with PAPI as well as CAPI:

1. **Household questionnaire**, answered by the household member who is best acquainted with the matters of the household as a whole.
2. **Individual questionnaire** for all persons born in 1996 or earlier.
3. Supplementary **life history questionnaire** for all new panel household members born in 1996 or earlier (with samples J, K and KH, which are CAPI only, the life history questions are integrated into the individual questionnaire).
4. **Youth questionnaire** for all persons born in 1997.
5. Additional **cognitive competency tests** for all persons with a completed youth questionnaire (PAPI and f2f only).
6. **Student questionnaire** for all persons born in 2002.
7. Supplementary questionnaire “**Mother and Child**” for mothers of children who were born in 2014 (or born in 2013 when the child was born after previous year’s fieldwork was completed).
8. Supplementary questionnaire “**Your child at the age of 2 or 3**” for mothers of children born in 2011. In households where the father is the main caregiver, fathers are asked to provide the interview.
9. Supplementary questionnaire “**Your child at the age of 5 or 6**” for mothers (or fathers) of children born in 2008.
10. Supplementary questionnaire “**Your child at the age of 7 or 8**”, for mothers and fathers

of children born in 2006. In contrast to the mother-and-child questionnaires, both parents are asked to provide an interview if they live in the same SOEP household as the child.

11. Supplementary questionnaire **“Your child at the age of 9 or 10”** for mothers (or fathers) of children born in 2004. In households where the father is the main caregiver, fathers are asked to provide the interview.
12. Supplementary **questionnaire for temporary drop-outs** 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.
13. Supplementary questionnaire for panel members who experienced a death in their household or family in 2013 or 2014: **“The deceased person.”**

The mean interview length of the main questionnaires is 17 minutes for the household questionnaire and 29 minutes for the individual questionnaire. The average amount of time required by a typical household consisting of two adults is therefore 75 minutes plus the time needed for any supplementary questionnaires.

Table 2 provides an overview of the number of interviews provided for the various questionnaires types and the respective response rates (or coverage rates.)

1.2 Fieldwork Specifics and Key Fieldwork Indicators

Within-Wave Fieldwork Progress

The fieldwork period for data collection in the main SOEP samples covers a period of almost nine months, starting with the samples A-H at the end of January and being completed when the “refusal conversion” processes are completed in mid-October. Fieldwork in the recent refresher samples J and K started two weeks later due to differing fieldwork procedure rules (e.g., cash incentives and CAPI-only approach). In order to make the change from one study to the other as convenient as possible for the respondents, the fieldwork period for the former FiD cohorts samples (KH) started in June, as respondents were accustomed.

As indicated by the figures in **table 3**, which shows fieldwork progress by month, 50% or more of all household interviews are conducted within the first two months of fieldwork and about 80% within the first three months

Table 2

Questionnaires: Volumes and Response Rates, Samples A - KH

	Gross sample/ reference value ¹	Number of interviews	Response Rate/ Coverage Rate
Household questionnaire	13,990	12,010	85.8
Individual questionnaire	23,979	20,259	84.5
Youth questionnaire	280	242	86.4
Cognitive competence tests ²	244	200	93.5
Mother and child questionnaire A	279	256	91.8
Mother and child questionnaire B	302	286	94.7
Mother and child questionnaire C	580	568	97.9
Questionnaire for parents D ³	321/642	307/521	95.6/81.2
Mother and child questionnaire E	336	324	96.4
Student questionnaire	336	269	80.1

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

2 The test can only be implemented if the fieldwork is administered by an interviewer and the youth questionnaire is completed. Therefore the denominator for the respective gross sample of the target population (n=244) is different to the one of the youth questionnaire (n=280).

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 307 (95.6%) of 321 children born 2006 and living in households which participated in 2014 at least one questionnaire has been completed. In total, 521 questionnaires were completed. Therefore, in 81.2% of the cases both parents completed the questionnaire for the respective child.

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(two months for sample KH due to the shorter fieldwork period). This shows that the vast majority of interviews—and therefore data—are produced within a comparatively short fieldwork period. The remaining months are dedicated almost exclusively to households that are either extremely difficult to reach or that have to be dealt with using refusal conversion strategies (see next section).

Interview Modes and Types of Fieldwork Processing

Since the beginning of the SOEP in 1984, the primary interview method has been face-to-face interviewing. Up to 2000, all face-to face interviews were conducted by paper-and-pencil interviewing (PAPI). Since then, SOEP interviewers have gradually been provided with special interviewer notebook computers to conduct their interviews via CAPI (Computer-Assisted Personal Interviewing). Since Sample J in 2011, all of the respondents in refresher samples are interviewed exclusively by CAPI. However, respondents in the core samples A-H are still allowed to choose PAPI if they prefer.

Table 3

Fieldwork Progress by Month: Distribution of Net Sample¹

	Sample A-H	Sample J/K	Sample KH
January	8.4	—	—
February	48.6	28.3	—
March	73.1	66.3	—
April	85.2	81.7	—
May	92.4	89.2	—
June	95.6	93.5	42.8
July	98.0	96.7	80.8
August	99.2	98.8	92.7
September	99.9	100.0	99.7
October	100.0	100.0	100.0

¹ Denoted are cumulative percentages based on the month of the last household contact.

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A second type of fieldwork processing that is used exclusively in the core samples A-H is the so-called “central processing of fieldwork.” This refusal conversion process started in 1985 in the second SOEP wave and applies to households that did not agree to any further visits from an interviewer or that could not be persuaded by interviewers to continue participating for other reasons. As part of this process, the households are called on the telephone and invited to continue participating in the study. If this “conversion” is successful, the questionnaires are sent by mail and the respondents complete the questionnaires entirely on their own. This mode-

shift often leads to a conversion of “soft” refusals back into survey respondents and thus enhances the stability of the long-term samples A-H.

Two further modes of data collection are used in multi-person households in samples A-H. First, individuals who were unable to provide an interview while the interviewer was there are given the option of self-completing a PAPI questionnaire. Second, simultaneous interviewing of more than one person is useful, particularly for younger household members and those who are seldom at home during the day. This latter method is a mixture between face-to-face interviewing and self-administered interviewing. Although this option is designed to be used only as an exception, as a sample grows and ages, this often becomes the only means of ensuring low partial unit non-response in larger households.

Table 4 shows the distribution of interviewing modes by subsamples in 2014. In general, a distinct pattern can be detected across the various SOEP samples when a multi-mode design is used: the “older” the sample, the higher the share of mail or self interviews.

In the recent samples (J, K, and KH), the options of mail questionnaire and PAPI are no longer provided. This serves one of our main objectives in the area of quality enhancement in the SOEP: We aim to increase the CAPI rate in order to enhance data quality and to provide a larger pool of respondents for questionnaire modules such as cognitive tests or behavioral experiment that are not viable with paper-based interviewing. Furthermore, these samples serve as a means of testing the performance of a longitudinal panel implemented solely in CAPI in terms of response rates and panel stability.

Table 4

Interviewing Modes by Sub-Samples
(in percent of all individual interviews)

	Interviewer-Based			Centrally Administered
	Administered	PAPI	SELF	MAIL
A – D	24	15	36	26
E ¹	—	v	—	100
F	34	17	32	17
G	34	10	42	15
H	62	6	24	9
A – H	31	14	34	21
J/K	100	—	—	—
KH	100	—	—	—

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

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Composition of Gross Sample

Tables 5 and 6 present the composition of the 2014 gross sample by type of fieldwork procedures and type of households and the respective response rates for samples A-H or J-KH. The SOEP households interviewed in each wave are differentiated into three household types: previous wave respondents (A-H: 92.8% of gross sample in 2014; J-KH: 89.7%), previous wave drop-outs who rejoined the panel (A-H: 4.4%; J-KH: 7.5%), and “new” households that split off established panel households (A-H: 2.8%; J-KH: 2.8%). Interviewers make every effort to contact all households. For the reasons stated above, there are various methods used for processing samples A-H. In 2014, 73.9% of gross sample in A-H was contacted and interviewed personally by interview-

ers (Table 4), while 25.4% of the sample was contacted and administered by our main office in Munich. The remaining 0.8% consists of households that must be considered drop-outs based on information from the period between waves (e.g., final drop-outs; entire household moved abroad; or death of all household members).

Response Rates and Panel Stability

The field results of a longitudinal sample can be measured in a variety of ways. Two sets of indicators appear to be most appropriate: response rates and panel stability rates. **Response rates** reflect the simple relation between input (gross sample) and output (net sample) and are therefore an indicator of cross-sectional fieldwork success. The response rate among respondents from the previous wave who were contacted and interviewed again by interviewers—the most important of the response rates—was 94.2 %. It was similarly high to the two previous years' response rates (2012: 94.0 %; 2013: 94.7 %). The response rate for centrally administered households is naturally lower than that for interviewer-administered households. However, at 88.7% for the group of previous wave respondents, it is still remarkably high.

The response rates of the much younger samples J (88.5%) and K (88.4%) in the group of previous wave respondents are still lower than those in samples A-H. Nevertheless, compared to 2013, these rates increased considerably (J: +2.3%; K: +6.4%). The rate for sample KH (86.3%) is slightly lower. Considering the switch from one study to the other, which prompted many households to refuse to continue participating, it is a notably positive outcome.

From a long-term perspective, **panel stability** can be regarded as a decisive indicator for 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 (t) compared to the corresponding number from the previous year (t-1). Thus it reflects the net total effects of panel mortality on the one hand and panel growth (due to split-off households and temporary drop-outs from previous samples) on the other. This approach is particularly helpful in household surveys where split-off households are tracked. That is, if an individual from a participating household moves into a new household, the survey institute will try to track the address change and conduct interviews with the new household. Within the context of a panel survey, a second group of households can contribute to the stabilization of the sample.

Table 5

Composition of Gross Sample and Response Rates by Type of Fieldwork: SOEP Samples A-H

	Sample A-H abs. figures	Sample A/H in %
(1) Gross sample composition by types of households	8,475	100.0
Previous wave's respondents	7,865	92.8
Previous wave's drop-outs (re-joining the panel)	372	4.4
New households (split-off HH.s)	238	2.8
(2) Gross sample composition by type of fieldwork		
No fieldwork (between waves reported final drop-outs, deceased, moved abroad)	64	0.8
Interviewer-based	6,262	73.9
Previous wave's respondents	5,995	70.7
Previous wave's drop-outs	98	1.2
New households	169	2.0
Centrally administered (mail)	2,149	25.4
Previous wave's respondents	1,736	20.5
Previous wave's drop-outs	274	3.2
Drop-out during F2F fieldwork, further processed by mail	69	0.8
New households	70	0.8
(3) Response rates by type of fieldwork		
Interviewer-based		92.6
Previous wave's respondents		94.2
Previous wave's drop-outs		46.9
New households		61.5
Centrally administered		77.7
Previous wave's respondents		88.7
Previous wave's drop-outs		30.3
Drop-out during F2F fieldwork, further processed by mail		39.1
New households		28.6

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So-called “temporary drop-outs” are households in which no interview could be conducted in the previous wave(s) (for various reasons) but which “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 value for panel stability across the established SOEP samples A-H was 95.0% in 2014. Therefore, the results confirm the existence of a trend of increasing or at least stable values over the three last years, after several years of decreasing

Table 6

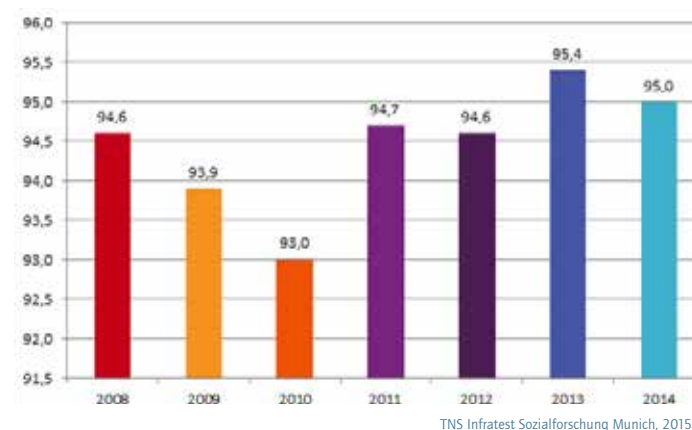
Composition of Gross Sample and Response Rates by Type of Fieldwork: SOEP Samples J, K, KH

	Sample J		Sample K		Sample KH		Total	
	Abs.	In %	Abs.	In %	Abs.	In %	Abs.	In %
(1) Gross sample composition by types of households	2,542	100.0	1,455	100.0	1,518	100.0	5,515	100.0
Previous wave's respondents	2,305	90.7	1,280	88.0	1,362	89.7	4,947	89.7
Previous wave's drop-outs (re-joining former panel)	158	6.2	130	8.9	124	8.2	412	7.5
New households (split-off HH.s)	79	3.1	46	2.1	32	2.1	155	2.8
(2) Type of fieldwork								
No fieldwork (between waves reported final drop-outs, deceased, moved abroad)	84	3.3	60	4.1	127	8.4	271	4.9
Interviewer-based (CAPI)	2,458	96.7	1,395	95.9	1,391	91.6	5,244	95.1
(3) Response Rate total		83.0		81.6		82.1		82.4
RR Previous wave's respondents		88.5		88.4		86.3		87.9
RR Previous wave's drop-out		18.4		23.8		46.0		27.6
RR New household		53.2		52.3		46.9		51.2

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Figure 3

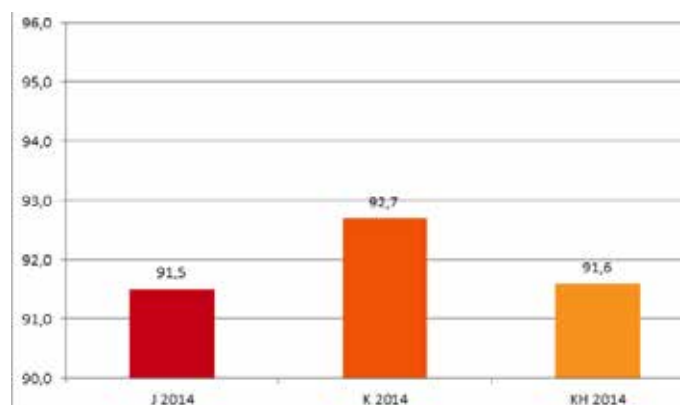
Panel Stability in SOEP Samples A-H from 2008 to 2014



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Figure 4

Panel Stability in SOEP Samples J, K, and KH 2014



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panel stability (see **Figure 3**). However, panel stability varies substantially across subsamples: it ranges from a low of 91.4% (-1.4% compared to the previous year) in sample B up to 97.0% in sample C (+1.7% against 2013).

Figure 4 shows the panel stability rates of the last two refresher samples J (fourth wave in 2014) and K (third

wave in 2014) together with sample KH.⁷ It must be assumed that these three subsamples will be consolidated further in the following wave and will approach the benchmark of 95% panel stability in 2015.

⁷ The households in Sample KH (cohort samples, formerly FiD) were interviewed for the fifth time in 2014. But since the sample went through the first four waves of the study under a different name with differing questionnaires and was then transferred into the SOEP in 2014, this sample does not yet have comparable panel stability to samples A-H.

2 The Migration Survey (Sample M1)

In 2013, a special refresher sample was added to the SOEP sampling system: Sample M1, which in contrast to previous refresher samples J (2011) and K (2012) provides not only a quantitative extension but also a qualitative enhancement of the SOEP sample system as it considerably improves the representation of immigrants in Germany in the SOEP. It thereby also enhances the analytical potential of the SOEP for research on integration and migration dynamics in Germany.

Sample M1 is the third subsample in the history of the SOEP that is composed exclusively of immigrant households. The first wave of the SOEP in 1984 included sample B, consisting of the five main nations of foreign workers who came to West Germany in the 1960s and 1970s (Turkey, former Yugoslavia, Greece, Italy, Spain). Sample D, established in 1994/1995, was designed to map the migration dynamics in Germany between 1984 and 1994. Therefore, the adequate representation of immigrant households has been a core element of the SOEP's sample design from the very beginning of the panel. Nevertheless, recent waves of immigration from the last decade were underrepresented. To fill this gap, migration Sample M1 was created, focusing on immigrants to Germany since 1995 and second-generation immigrants. In 2015, a fourth subsample of immigrant households will be added, focusing on immigrants to Germany since 2011 (M2). In this report, we focus on the Sample M1.

Migration Sample M1 differs considerably in both size and sampling design from previous immigrant refresher samples. With more than 2,700 households in wave 1, it is two times larger than Sample B (1984: 1,393 households) and six times larger than Sample D (1994/1995: 522 households). In contrast to the local registration office sample from 1984 and the screening samples from 1994/1995, sampling design and sampling procedure for Sample M1 did not take place at TNS Infratest Sozialforschung. In order to implement an innovative sampling procedure to map recent migration and integration dynamics, research cooperation was established between the SOEP unit at DIW Berlin and the Institute for Employment Research (IAB Nuremberg). On this contractual basis, the Integrated Employment Biographies Sample (IEBS) of the Federal Employment Agency (BA) was used as a sampling frame.

In 2014, with the fielding of the second wave, Sample M1 was integrated into the longitudinal survey frame-

work. Fieldwork took place from April to October. 2,012 of the 2,723 households interviewed in 2013 participated again.

2.1 Specifics of Sample M1

Corresponding to the procedures used in recent SOEP refresher samples, fieldwork in Sample M1 was conducted exclusively using CAPI. PAPI or mail questionnaires were not used. A significant change from wave 1 was that the “anchor person” concept was not used here. As the sampling of the migration survey was register-based (IEBS), the usual SOEP concept of the household as the primary sampling unit was not appropriate for wave 1. Instead, the anchor persons, sampled from the Integrated Employment Biographies database, were the primary sampling unit. Consequently, in a first step, a short screening interview was conducted to validate the anchor person's migration background. When the screening led to a negative result, not only the anchor person but also the entire household was excluded from the survey, even if other household members had a migration background. When the screening of the anchor person led to a positive result, every person living in the household born prior to 1996 was asked to participate, whether these household members had a migration background or not. As a logical consequence of this procedure, the effort required from interviewers in wave 1 to contact and interview a household and its members was considerably higher than with usual SOEP surveys, in which any adult in the sampled household could be interviewed, without any additional conditions.

In wave 1, the anchor person approach was required for conceptual reasons to adequately represent the target population. This is no longer necessary in wave 2, and therefore the original SOEP household concept, with households as the primary target group, was used. As a consequence, some individual drop-outs were accepted, even if they were former anchor persons.

Field Instruments

Regarding data collection, all questionnaires from the actual main sample were used (see Chapter 1.1). There were only minor adjustments to the individual questionnaire, as the migration history and other additional questions about migration and integration were included.

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. These languages—with the exception of English—represent 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

Table 7

Language Problems and Usage of Translated Paper-Questionnaires in Wave 2

	Number	In % net sample
No language problems occurred/no need for assistance in the event of language problems	3,212	85.6
Assistance with language problems needed	540	14.4
Thereof: ¹		
German speaking person in the same household	356	9.5
German speaking person outside the household	64	1.7
Professional interpreter	2	0.1
Paper questionnaire	142	3.8
Thereof:		
Russian	64	1.7
Turkish	31	0.8
Romanian	18	0.5
Polish	16	0.4
English	13	0.3

¹ In 24 cases more than one kind of assistance was needed.

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Table 8

Consent to Record Linkage: Response Rates

	2013	2014		
		Designated for record linkage in wave 2	Refusal in wave 1	Total
Approved	48.9%	49.4%	41.5%	44.2%
Declined	51.1%	50.6%	58.5%	55.8%

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problems. **Table 7** shows different kinds of support the interviewers used when language problems occurred during the interview situation.

Declaration of Consent to Record Linkage

A special feature of the migration sample's survey design is the linkage of respondents' survey data with register data of the Integrated Employment Biographies Sample (IEBS). This kind of big data analysis further enhances the potential for analysis and evaluation of the respondents' educational and occupational biographies.

As in wave 1, in 2014, a certain part of the sample was asked to give their written informed consent to the record linkage at the end of the individual interview. In

wave 1, not every respondent was asked for consent to record linkage: 70% of the gross sample (on a household level) was designated for data linkage in wave 1; 15% in wave 2, and the remaining 15% were not designated for linkage at all. Respondents were assigned to the three groups at random. The idea behind this approach is that the rate of cooperation with such requests varies between waves and is likely to be higher in wave 2. In addition, this approach makes it possible to analyze effects of the linkage request with reference to a control group.

Therefore, in 2014, the target group designated for record linkage in wave 2 was asked to give their consent. In addition, persons who refused to give their consent in wave 1 were asked a second time. Altogether 1,379 persons were asked to approve the data linkage. Of those, 610 signed the consent form. As presented in **Table 8** the overall response rate in 2014 was 44.2%, which is 4.7 percentage points lower than the year before. The more significant figure is the rate for the target group designated for record linkage in wave 2. At 49.4%, it is slightly higher than the previous year's rate. Therefore, it could not be verified on a statistically significant level that the rate of cooperation to such a request is likely to be higher in wave 2.

2.2 Fieldwork Results and Response Rates

Tables 9 and 10 display the fieldwork results for wave 2. Altogether, 2,841 addresses were fielded. Regarding

the gross sample composition, 95.8% of all households were previous wave respondents and 4.2% were split-off households. In total, 2,012 households were interviewed, which amounts to an overall response rate of 70.8%. In the crucial subgroup of previous wave respondents, the response rate was 71.9%. Regarding the distribution of drop-outs, the largest group by far was that of soft and permanent refusals, at 21.5% of gross sample, which is 73.7% of all drop-outs. The share of households in Sample M1 that could not be reached during the fieldwork period (6.4% of gross sample and 21.8% of drop-outs) is substantial. Compared to the shares for Samples J and K in wave 2, it is 8.5 and 6.7 percentage points higher, respectively. This confirms our experiences with wave 1 of Sample M1, where the respective target population of migrant households proved more difficult to contact than households sampled for a general population refresher sample.

Table 11 compares wave 2 response rates and panel stability rates of the recent refresher samples J, K, and M. Both fieldwork indicators in Sample M1 are about ten percentage points lower than in samples J and K. Together with the comparably low response rate for the individual questionnaire of 65.3% (see **Table 12**), this reflects well known difficulties with processing immigrant households. In a migration sample, the effort required by interviewers to contact households successfully on the one hand and to motivate every individual to be interviewed on the other, is higher than in surveys with the general population. The contact process and the interviewing situation are more complicated and sensitive as well (e.g., language problems, cultural factors, lower level of education, etc.). Furthermore, the mean number of persons living in these households is considerably higher than the population average.

3 The SOEP Screening Samples (Sample SC)

3.1 Background and Survey Design

As an integral part of the overall evaluation of German family policies, DIW Berlin and TNS Infratest Sozialforschung established a sampling system consisting of a total of seven subsamples in two main samples in the year 2010. The survey, named *Familien in Deutschland* (Families in Germany, or FiD for short), was converted into a longitudinal survey in the following year. In 2013, the last wave conducted on behalf of the initially responsible federal ministries (BMF/BMFSFJ) was carried out. When the project began, the long-term objective was to integrate the FiD samples into the main

Table 9

Sample M: Composition of Gross Sample and Response Rates

	Sample M	
	Abs.	In %
(1) Gross sample composition by types of households	2,841	100.0
Previous wave's respondents	2,723	95.8
New households (split-off HH's)	118	4.2
(2) Type of fieldwork		
No fieldwork (between waves reported final drop-outs, deceased, moved abroad)	34	1.2
Interviewer-based (CAPI)	2,807	98.8
(3) Net sample/Response Rate total	2,012	70.8
RR previous wave's respondents	1,957	71.9
Net sample/RR new household	55	46.6

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Table 10

Sample M: Fieldwork Results

	Number	In % gross sample
Gross sample	2,841	100.0
Non-interview	829	29.2
• Unable to reach during fieldwork period	181	6.4
• Anchor persons with permanent stay abroad	13	0.5
• Permanently physically or mentally unable/incompetent	18	0.6
• Language problems	6	0.2
• "Soft" refusal (currently not willing/capable)	180	6.3
• Permanent refusals	431	15.2
Interview (net sample)	2,012	70.8
• Household fully realised	1,677	59.0
• Household partially realised	335	11.8

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Table 11

Wave 2 Panel Stability in Recent SOEP-samples

	Gross sample/ reference value ¹	Number of interviews	Response rate/ coverage rate
Response rate of previous wave's respondents in wave 2	80.0%	82.0%	71.9%
Panel stability in wave 2	81.5%	83.9%	73.9%

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Table 12

Questionnaires: Volume and Response Rates Sample M

	Gross sample/ reference value ¹	Number of interviews	Response Rate/ Coverage Rate in %
Individual questionnaire	5,750	3,752	65.3
Youth questionnaire	127	83	65.4
Cognitive competence tests ²	83	73	88.0
Mother and child questionnaire A	193	152	78.8
Mother and child questionnaire B	169	128	75.7
Mother and child questionnaire C	150	118	78.7
Questionnaire for parents D ³	145/290	136/222	93.8/75.9
Mother and child questionnaire E	114	107	93.9
Student questionnaire	81	72	88.9

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

2 The test can only be implemented if fieldwork is administered by an interviewer and the youth questionnaire is completed. Therefore the denominator of the respective gross sample of the target population (n=83) is different to the one of the youth questionnaire (n=127).

3 In contrast to the other child related questionnaires this questionnaire is supposed to be completed by not just one but by both parents. For 136 (93.7%) of 145 children born in 2006 and living in households which participated in 2014 at least one questionnaire has been completed. In total, 222 questionnaires were completed. Therefore, in 75.9% of the cases both parents completed the questionnaire for the respective child.

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sampling system of the Socio-Economic Panel, both methodologically and financially, when the overall project was completed.

This process of integration took place in 2014. However, the two main samples of the FiD sampling system, the

cohorts and the screening samples, were not integrated to the same degree. For budgetary reasons, it was not possible to continue surveying the whole FiD sample in a CAPI-F2F mode. As mentioned in Section 1, the cohort samples of the general population were further processed in CAPI. The screening samples, consisting of the three different subgroups—first, single parents, second, households with three or more children, and finally, low-income households—were handled with an innovative multi-mode design: an interviewer-assisted CAWI approach followed by CAPI. The aim was to convince as many households as possible to participate, using a web questionnaire to save costs over the F2F method. Another goal was to reduce the qualitative disadvantages as well as the negative effects on the response rate caused by CAWI compared to CAPI. According to this approach, interviewers using CATI (computer-assisted telephone interviewing) contacted each household to motivate and convince them to participate online and to compile a list of all household members so that the right set of CAWI questionnaires could be provided. The CATI interviewers also acted as liaisons for respondents when they had requests or problems. When households did not have access to the Internet or could not be motivated to participate by Internet, the telephone staff was encouraged to offer CAPI.

The interviewer-assisted CAWI process was fielded at the end of May 2014 and lasted until the end of July 2014. During this period, a few offline reminders were also sent to the households to motivate them to participate in the CAWI or to ask for missing individual CAWI questionnaires. Upon completion of the telephone process, the CAWI questionnaires remained open for online access for another two months to enable further CAWI participation. In September, the CAPI post-processing of households that could either not be contacted and that did not participate in CAWI or that preferred CAPI was fielded. Households that had stated willingness to participate online but did not participate up to the end of October were also processed with CAPI. **Table 13** shows the fieldwork progress for both interviewing modes by month. The final net sample consists of 2,015 households in total, 1,122 of which completed the interviews online (55.7 %) and 893 face-to-face (44.3 %).

3.2 Questionnaires

For data collection, the CAPI questionnaires from the main sample were used (see Section 1.1). Minor mode-specific changes in CAWI programming had to be made only in the design and layout of the questionnaire. The various links to the different CAWI questionnaires

Table 13

Sample SC: Fieldwork Progress by Month and Interviewing Mode

	CAWI interviews		CAPI Interviews		Total	
	N	In % ¹	N	In % ¹	N	In % ¹
May	343	30,6	-	-	343	17,0
June	276	55,2	-	-	276	30,7
July	385	89,5	-	-	385	49,8
August	87	97,2	-	-	87	54,1
September	31	100,0	292	32,7	323	70,2
October	-	-	576	97,2	576	98,8
November	-	-	25	100,0	25	100,0
Total	1,122	55.7	893	44.3	2,015	100.0

1 Denoted are cumulative percentages of household interviews based on month.

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were presented for each individual respondent on a website with personalized access. The access data were sent by mail. The CATI process itself thus did not include the various questionnaires. In fact it gathered information about willingness to participate and recorded the household composition for those households that were willing to participate online in order to provide the right set of CAWI questionnaires. **Table 14** provides the volumes and response rates of all implemented questionnaires.

3.3 Fieldwork Results and Outcome Rates

The implemented design consisted of three different modes, implying a certain amount of complexity regarding the process management. The first two modes, CATI and CAWI, were conducted at the same time, whereas CAPI interviews were conducted afterwards. In **Table 15** the various gross samples are listed. The three gross samples are not entirely separate; one household could belong to two or even to three of the gross samples. The overall gross sample consisted of 2,868 households. 2,822 of these were given the online access data (gross sample CAWI). The remaining households were either ones that had informed TNS Infratest Sozialforschung between the waves that they did not want to continue participating or they were split-off households that emerged from the later CAPI process. For 2,692 households, phone numbers were available. These households comprised the CATI gross sample. The CAPI gross sample consisted of 1,426 households.

As already shown in **Table 13** in total 2,015 households were interviewed, of them 1,122 with CAWI and 893 with CAPI. The overall response rate for the screening samples was 70.3% (**Table 16**). Regarding modes, the CAWI response rate was 39.8% and the rate achieved with CAPI was 62.2%. Compared with the other former FiD cohort sample, which was interviewed exclusively with CAPI, the overall response rate of the screening samples was 11.8 percentage points lower. Another fieldwork indicator is the number of partially realized households divided by the total net sample (partial unit non-response or PUNR). As was expected because of the use of CAWI, the PUNR was comparatively high at 15.2% (cohort sample: 5.3%).

Figure 5 presents response rates and PUNR for the three individual sub-samples of sample SC and in addition by interviewing mode. The figure illustrates mode-specific differences on the one hand and intra-mode differences between sub-samples on the other hand. The response rates and PUNR achieved with the CAPI post-processing are still far lower than the rates shown in **Table 16** for

Table 14

Questionnaires: Volume and Response Rates of Sample SC

	Gross sample/ reference value ¹	Number of interviews	Response Rate/ Coverage Rate in %
Household questionnaire	2,868	2,015	70.3
Individual questionnaire	5,160	3,454	66.9
Youth questionnaire	314	245	78.0
Student Questionnaire	304	265	87.2
Mother and child questionnaire A	68	46	67.6
Mother and child questionnaire B	49	47	95.9
Mother and child questionnaire C	163	146	89.6
Questionnaire for parents D ²	205/410	186/285	90.7/69.5
Mother and child questionnaire E	256	225	87.9

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

2 In contrast to the other child related questionnaires this questionnaire is supposed to be completed by not just one but by both parents. For 186 (90.7%) of 205 children born in 2006 and living in households which participated in 2014 at least one questionnaire has been completed. In total, 285 questionnaires were completed. Therefore, in 69.5% of the cases both parents completed the questionnaire for the respective child.

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the cohort sample, but even so, significantly higher than with CAWI. Both results are to be expected: CAPI, with its strong motivation impact from the face-to-face-interviewer, usually achieves higher response rates than the largely self-administered web interviews. Besides, CAPI stand-alone achieves higher response rates than CAPI post-processing because willing participants are generally overrepresented in face-to-face interview modes and in the sequential design of the first CAWI stage as

Table 15

Sample SC: Overview on the Various Gross Samples

	N	in % gross sample
Total gross sample ¹	2,868	100.0
Gross sample CAWI	2,822	98.4
Gross sample CATI ²	2,692	94.0
Gross sample CAPI ³	1,426	49.7

1 Includes split-off households that originated during the CAPI fieldwork process and therefore are neither included in the CAWI nor in the CATI gross sample.

2 For 130 households of the CAWI gross sample no phone number was available.

3 Households that at first could not be reached during CATI fieldwork and did not participate online, at second could be reached during CATI fieldwork and insisted on CAPI, at third admittedly stated willingness to participate online, but did not so until end of October and finally split-off households originated during the CAPI fieldwork process.

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Table 16

Former FiD Samples: Response Rates and Partial Unit Non-response

	Response Rate			Partial Unit Nonresponse		
	CAWI	CAPI	Total	CAWI	CAPI	Total
Screening Samples	39.8%	62.2%	70.3%	17.8%	12.0%	15.2%
In comparison with Cohort Samples	-	82.1%		-	5.3%	

1 Partial unit nonresponse: number of partially realised households divided by the total net sample.

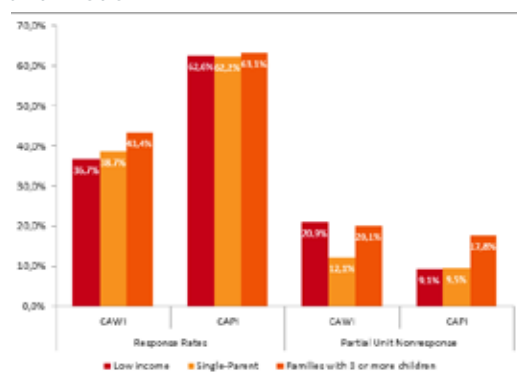
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compared to the second CAPI stage. In any case, the CAPI post-processing of a CAWI sample is an effective procedure to increase the overall net sample size.

The intra-mode differences paint a somewhat patchy picture, especially for PUNR but also for the measurement of the response rates. Whereas no significant differences in response rates between subgroups can be detected in the CAPI population, the response rates vary considerably between subgroups in the CAWI population. With PUNR, one has to keep in mind that the number of household members varies substantially between subgroups: the mean household size of partially interviewed households is 3.8 among low-income households, 3.0 among single-parent households, and 5.2 among households with three or more children.

Figure 5

Sample SC: Outcome Rates by Sub-samples and Mode



1 Partial unit non-response: number of partially realised households divided by the total net sample.

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The aforementioned findings on response rates and their mode-specific characteristics raise the following question: Does the supplementary CATI in the CAWI stage have any effect on the outcomes of the fieldwork? The main purpose of the CATI implementation was to enhance the low CAWI response. **Tables 17a** and **17b** show the results of the CATI fieldwork process. 77.7% (2,093 households) of the CATI gross sample were successfully contacted by phone. 6.3% of these households were unwilling to continue participating in the study, regardless of whether online or face-to-face. 6.6% would only participate if interviewed face-to-face. A rather high share (77.8%) of all contacted households agreed to participate online (**table 17a**). Despite the mailing of several reminders, only 56.9% of the households that agreed to do so actually completed an online questionnaire (**table 17b**). At first this seems to suggest that the CATI process did not achieve its objectives. At a second glance, one may come to a different conclusion: A sound indicator for assessing the implemented survey design, especially the significance of the telephone process, is the CAWI participation rate in the group of households that had no contact with the CATI interviewers. Compared to the group contacted by the CATI interviewers, the group of households that never had personal contact (and therefore are comparable to a regular CAWI population) functions as a sort of control group. The CAWI participation rate in this subgroup amounts to 20.9%, whereas the rate in the group with personal contact is 47.3%. From this perspective, the informative and motivational character of the personal contact via telephone resulted in a 26.4 percentage point higher participation rate in CAWI. This result suggests that the CATI approach can be cautiously interpreted as an appropriate measure to increase the CAWI response rate. In any case, the CATI approach alone is not sufficient for transforming an established face-to-face-random sample into the CAWI mode. The findings show that post-processing in CAPI is a crucial aspect of enlarging the net sample size and therefore of ensuring panel stability from a long-term perspective.

4 SOEP-IS

4.1 Overview

The SOEP-IS (SOEP Innovation Sample) is an additional longitudinal household survey that complements the SOEP's main sample system by offering a survey framework for fielding innovative questionnaire modules and testing fieldwork procedures (see chapter 2.2 by David Richter). Important features of sampling de-

sign and core fieldwork procedures are similar to those in the main sample, but the SOEP-IS also offers special design features that facilitate the piloting and testing of innovative survey modules. And most importantly, the heterogeneity of topics within SOEP-IS is much broader because the content—aside from the core elements, longitudinal survey questions—is determined by users themselves through an annual competitive selection procedure.

Sample I₁, which was established as the main SOEP sample I in 2009, served as the first SOEP-IS sample when the study was officially launched in 2011. Since then, the innovation sample has been expanded in sample size with refresher samples in 2012 (sample I₂), 2013 (sample I₃) and 2014 (sample I₄). Additionally a subset of households from the main SOEP sample (E) was transferred to the SOEP-IS in 2012 (sample I_E).

In total, 3,721 households took part in the 2014/2015 wave of the SOEP-IS. 2,797 belonged to the samples with longitudinal data that started either in 1998 (I1/E), in 2009 (I2) or 2013 (I3). In another 924 households, SOEP-IS interviews were conducted for the first time (I4). Combining all subsamples, 5,859 individuals participated in the most recent wave of the SOEP-IS. **Figure 6** provides a more detailed look at the growth in sample size since 2009.

The panel stability⁸ of samples I₁ and I_E has again slightly increased to 93.4%. In its third wave, sample I₂ was able to take another step towards greater panel stability, with a value of 92.7% in the 2014/2015 wave. In the case of sample I₃, which went through the challenging transition from a cross-sectional to a longitudinal survey in this wave, panel stability reached a rate of 79.7%. The response rate in refresher sample I₄ did not turn out at a satisfactory level (26.5% in the adjusted gross sample).

In the 2014/2015 wave, it was possible to implement an even higher number of innovative questionnaire modules than in the previous wave. In total, 13 different proposals from researchers at universities and research institutes were accepted for the SOEP-IS questionnaire. With the modules “Risk Taking” and “Financial Investment,” two behavioral experiments with real-life, small-scale pay-offs for respondents aimed to take laboratory-proven research designs to a survey environ-

⁸ Panel stability is calculated as the number of participating households in the current wave compared to the corresponding number from the previous wave. So panel mortality and panel growth (split-off households) or “re-growth” (dropouts from the previous wave who “re-joined” the sample) are taken into account.

Table 17a

Questionnaires: Volume and Response Rates of Sample SC

	N	in % gross sample	In % contacted households
CATI gross sample	2,692	100.0	
Households that could not be contacted	599	22.3	
Contacted households	2,093	77.7	100.0
Permanent refusal (both CAWI and CAPI)	131	4.9	6.3
Target person/household undecided whether to participate	195	7.2	9.3
Target person/household insists on CAPI participation (no internet or other reasons)	139	5.2	6.6
Target person/household states intention to participate online	1,628	60.4	77.8

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ment with a face-to-face population. A film shown to respondents was used to measure the prevalence of “Inattentional Blindness.” The module “Computer Assisted Measurement and Coding of Education in Surveys (CAMCES)” tested dynamic question designs such as dynamic text fields and dynamic lists to measure educational qualifications. A set of highly varied versions

Table 17b

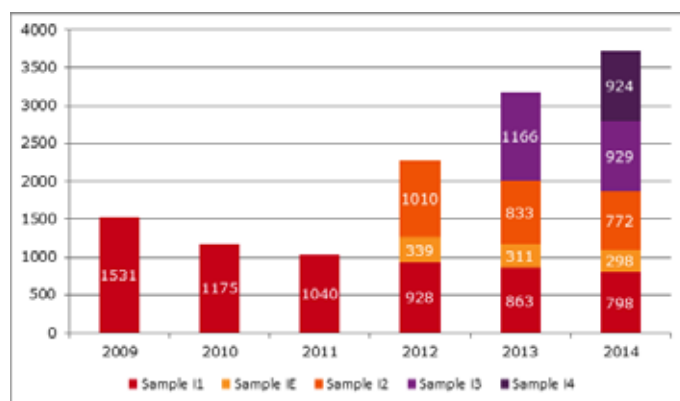
Sample SC: Selected Disposition Groups of the CATI Process and the Resulting Net Interviews

	N	In % contacted households
All contacted households	2,093	100.0
Thereof:		
- participated in CAWI	989	47.3
- participated in CAPI	630	30.1
- did not participate at all	474	22.6
Target person/household that stated intention to participate online	1,628	100.0
Thereof:		
- participated in CAWI	942	56.9
- participated in CAPI	424	26.0
- did not participate at all	262	16.1
Household that could not be contacted	599	100.0
Thereof:		
- participated in CAWI	125	20.9
- participated in CAPI	246	41.1
- did not participate at all	228	38.1

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Figure 6

SOEP-IS – Household Sample Sizes 2009-2014



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of one question regarding attitudes to immigration was used to disentangle different components of measurement error in another questionnaire module. Another set of modules dealt with a variety of topics using standard survey questions. Examples of these are modules about the prevalence of lottery play, attitudes towards income redistribution, or overconfidence in different life domains.

Moreover, the “Day Reconstruction Method (DRM)” was employed in 2014 for the third time since its in-

troduction in 2012 to provide fine-grained time use and well-being data and to quantify its short- and long-term stability. For one group of respondents, subjective well-being measures from DRM and the generalized life satisfaction question that has been part of the SOEP since 1984 were supplemented by measures based on the experience sampling method (ESM), which were collected during a seven-day mobile survey. This enhancement will make it possible to compare ESM- and DRM-measurements in a population-representative sample.

4.2 The SOEP-IS Questionnaire

An integrated core questionnaire, which is based on questionnaires from the SOEP’s main sample, provides the framework of recurring variables for the SOEP-IS. It consolidates the basic elements of the SOEP household and individual questionnaires, also including core questions from the life history questionnaire for first-time panel members and three mother-child modules. The questionnaire has an integrated CAPI script to provide a fluent and smooth interview situation. The SOEP-IS core questionnaire that was used in 2014/2015 included the following modules:

- Core elements of the **SOEP household questionnaire** to be completed by only one member of the household (preferably the one who is best informed about the interests of the household and its members)
- Core elements of the **SOEP individual questionnaire** to be completed by each person aged 16 and above living in the household
- Core elements of the **life history questionnaire** for first-time panel members (new respondents as well as the initially interviewed adolescents born in 1997)
- Only in the longitudinal samples: three mother-child modules to be completed by:
 - Mothers of children born after 2011
 - Mothers (or main caregivers) of children born in 2010 or 2011
 - Mothers (or main caregivers) of children born before 2010

In the most recent wave, the individual questionnaire included two ultra-short tests of cognitive ability that were used in the main SOEP in the year 2012: namely, a symbol correspondence test and a test of respondents’ passive vocabulary.

Table 18

Distribution of the Innovation Modules

	I _E /I ₁	I ₂	I ₃	I ₄
Justice Sensitivity	✓			
Lottery Play	✓	✓	✓	✓
Attitudes to Income Redistribution	✓	✓	✓	✓
Components of Measurement Error				✓
Home Chaos		✓	✓	✓
Computer Assisted Measurement and Coding of Education in Surveys (CAMCES)		✓		
Inattentive Blindness (IB)–Test				✓
Risk Taking–Behavioral Experiment			✓	
Financial Investment–Behavioral Experiment		✓		
Day Reconstruction Method (DRM)	✓			
Major Life Events	✓	✓	✓	✓
Happiness from a Cross-Cultural Perspective	✓	✓	✓	
Self-Evaluation and Overconfidence in Different Life Domains			✓	

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The rationale behind the integration of household and individual questionnaires into one shorter core interview is to allow for more time for innovative questionnaire modules and tests. Thus, on top of the core elements, different innovation modules were included in the SOEP-IS questionnaire for 2014/2015. To be able to consider as many different ideas as possible, given the limited interview time, the different subsamples received different sets of innovation modules. In order not to overburden the new SOEP-IS panel members in refresher sample I_4 who have to answer life history questions, the number of innovation modules in their version of the questionnaire was limited. **Table 18** illustrates the distribution of innovation modules in the subsamples.

Components of Measurement Error

Survey questions that produce systematic error may threaten the validity of the findings and thereby also the primary goals of scientific work. Questioning has different effects on every individual so measurement errors occur. So this module of the SOEP-IS is supposed to examine different kinds of systematic measurement errors with the aim of disentangling the relative importance of each type of error. Due to its CAPI format and the large sample size, the SOEP-IS allows for a comparison of the relative strength of the effects in the form of a randomized Multitrait-Multimethod Design (MTMM). Because of the longitudinal design of the study, it will also be possible to examine the systematic error over time.

One of the most common sources of measurement error is the phenomenon of social desirability in survey responses. When confronted with sensitive topics, some individuals tend to give answers that they expect to correspond with social norms. Another common source of measurement error is acquiescence, the general tendency to agree with certain statements that are formulated as agree/disagree questions. Another source of error is the “satisficing” strategy, which leads respondents to consider only the extremes or only the middle options in matrix questions in order to get through the survey interview more quickly.

Each interviewee in sample I_4 was asked to answer the same matrix-type question consisting of six items, which appeared twice in two slightly different versions during the interview. Approximately 20 minutes passed between the first version and the second version. The second time the question was asked, the interviewer read an introductory statement explaining that the respondent had already answered a similar question but that it would be important for him/her to answer the

next question as well so that best version of the question could be identified. In terms of content, the questions were identical: interviewees were asked about their attitudes towards immigration. The questions differed only in design.

To analyze different sources of measurement error, eight versions of the matrix question (W1 – W8) were included in the questionnaire. The item wordings varied systematically along the three following dimensions:

- The items were formulated in a positive or a negative way (e.g., “It is generally *good* for Germany’s economy that people come to live here from other countries” vs. “It is generally *bad* for Germany’s economy that people come to live here”)
- The scale for agreement/disagreement alternated (agree-disagree or disagree-agree)
- The number of scale points varied (two-point or 11-point scale)

Each respondent received two out of the eight possible versions during the interview in a randomized order, which led to 56 different conditions to be randomized in total.

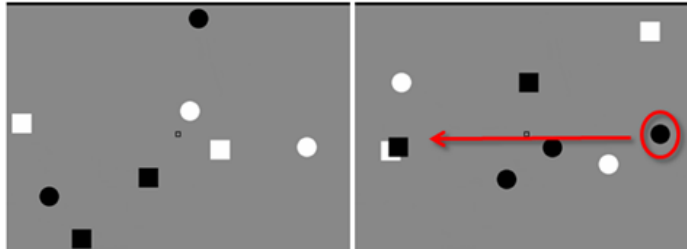
Computer-Assisted Measurement and Coding of Education in Surveys (CAMCES)

The next module examined two different methods of computer-assisted measurement of education. Open questions concerning educational qualifications are generally more expensive because the various degrees have to be coded afterwards. Surveys therefore often use lists to record qualifications instead. Lists have several drawbacks, however. First, they have been shown to produce order effects. Second, a simple list with uniform educational qualifications might not be able to adequately cover the number and complexity of degrees in a certain country. Also, migrants might not be able to convert their foreign qualifications into the list of degrees available in their current state of residence. This can lead to non-response or incorrect data, which should be prevented as effectively as possible. This is particularly crucial in the case of education, which is one of the key variables for social science research.

To evaluate two computer-assisted measurement methods developed by the group of researchers who were responsible for this module, three different types of

Figure 6

Start Screen and Appearance of Stimulus in “Inattentional Blindness” Short Film



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questions about educational qualifications were tested. Each interviewee in sample I_2 was allocated to one of the three methods randomly. An introduction text for this module explained why another means of recording educational qualifications was necessary (T1921). Then the computer was handed to the respondent, as the module was designed as a computer-assisted self-interview (CASI). This was followed by questions concerning the number of years spent in the education system (Q1922), the country where the particular qualification was attained (Q1923; Q1924), and the formal education, although only respondents who had gone to school in the former East or West Germany were asked further questions (Q1925, Q1926). The question about further educational qualifications was subject to the actual test.

The first group received a “classic” 28-item list including a wide array of post-secondary educational qualifications. The members of this group were able to choose the appropriate item by clicking a radio button (Q1929). Group two was asked to enter their qualification in a dynamic text field that appeared on the screen (Q1930). With a functionality similar to a search engine, the program suggested qualifications from a linked qualification database that matched the beginning of the word that the respondent typed in. These suggestions appeared in a drop-down box, from which the respondent could choose the qualification that fit best (Q1930). The third method consisted of a dynamic list, which showed summary categories of qualifications. Each category contained various concrete qualifications as sub-points that became visible as soon as the interviewee clicked on the particular category (Q1931).

Inattentional Blindness (IB)

“Inattentional Blindness” describes a phenomenon in psychology in which individuals fail to notice otherwise

salient events while paying attention to something else.⁹ Simons and Chabris reported on this concept in a well-known study published in 1999¹⁰: Fifty percent of their subjects failed to notice a man in a gorilla costume who appeared on the screen while they were counting how often players of a team dressed in white shirts passed a basketball to each other. According to the researchers proposing the module for SOEP-IS, this effect has been replicated in numerous studies using a variety of stimuli and participant groups, but has never been measured in a representative population sample. Including a test of “Inattentional Blindness” in SOEP-IS would also give the opportunity to analyze possible associations with ADHD (attention deficit hyperactivity disorder), autism and socio-demographic characteristics.

To assess the prevalence of “Inattentional Blindness” in SOEP-IS, a short film was embedded in the questionnaire for sample I_4 showing black and white, round and rectangular objects moving around on the screen. The respondent was asked to concentrate on the two objects and to count how often one specific type of object touched the edge of the frame. A random selection process decided whether the interviewee was to focus on circles, rectangles, white or black objects (Q260). A few seconds into the 20-second film, a new black circle moved from the right edge of the frame to the left edge and then disappeared again (see **figure 6**).

After the film, the respondent was asked how often the objects they were asked to watch had touched the edge of the frame (Q2612). Then he/she was asked whether he/she noticed an additional object that was not present in the beginning of the film. If the respondent had noticed the object, he/she was asked further questions about its shape and color, and the direction it moved across the screen (Q2613). If the interviewee did not see the object, he/she was asked to guess the aforementioned characteristics (Q2615; Q2617; Q2619).

Risk-Taking

Measures of risk-taking behavior are required to address research questions in different disciplines such as psychology, economics, and sociology. However, there are findings suggesting that differences in risk taking may

9 Chabris, C.F., & Simons, D.J. (2010). *The invisible gorilla, and other ways our intuitions deceive us*. New York: Crown.

10 Simons, D.J., & Chabris, C.F. (1999). Gorillas in our midst: Sustained inattentional blindness for dynamic events. *Perception*, 28(9), 1059–1074.

be task-dependent and that it might therefore be necessary to distinguish between two kinds of risk. There are risk assessments that are made on the basis of a simple consideration of *already known probabilities*, and there are other risk assessments in which a person has to estimate the probabilities based on his/her own experience.

The risk-taking module in SOEP-IS sample I₃ aimed to capture both kinds of risks: risk based on probabilities presented to the respondent, and risk based on an estimation of the probabilities made by the respondent him/herself. To collect this information, a behavioral experiment was designed in which each interviewee was led through two blocks of lotteries. The order of the two blocks was randomized. In each lottery block, four individual lotteries took place. Two of these lotteries consisted of the choice between two possibilities, while the other two consisted of a choice among four alternatives.

The block of lotteries with known probabilities was designed as follows: Two (four) blue lottery boxes were displayed. Permanently displayed on each box were two possible euro amounts that could be drawn from the box, as well as their probability of being drawn (e.g., box 1: 50% €2 / 50% €3; box 2: 90% €1 / 10% €10). The respondent had to click on one of the two (four) boxes to decide which one he/she would like to draw from.

The lotteries in which respondents had to estimate the probabilities also consisted of the interviewee's decision between two (four) options displayed in the form of blue boxes. But in this version of the lottery, the boxes were not labeled. The respondent could click on each box, and for a short time, one of two possible amounts of money to be drawn from the box was displayed on it. The box could be clicked on several times, and the value displayed changed according to the probabilities that were attached to the boxes. So respondents had to estimate the probability themselves depending on how often a certain amount of money was displayed when they clicked on the blue boxes. They could click as often as they wanted to develop a sense of the prevailing probability. By pressing an additional button, they could finally select their favorite option.

Before starting the actual experiment, the interviewees took a trial run to make sure they understood the task correctly. To create a more realistic situation, the participants received their wins from two randomly selected lotteries in cash.

Financial Investment

The module “financial investment” which had already been part of the SOEP-IS questionnaire in 2012 aims at investigating the relative reluctance of Germans to invest in stocks. This fact is sometimes described as problematic as the high preference to invest conservatively can lead to limited returns on, for instance, retirement investment. By conducting the behavioral experiment in a slightly altered version again in 2014, longitudinal data were generated and the robustness of the former results was tested.

At the beginning of the experiment, respondents from sample I₂ were informed that they could win but not lose money (T2630; T2631). Then, an introductory text explained the course of the experiment, which was designed as a CASI (computer-assisted self-interview) module. The respondents were asked to invest a hypothetical sum of €50,000, either in a riskless German government bond with a return of 4% per annum or an asset whose risky return would be determined by the development of the DAX in the year after the interview (T2633). Afterwards, the respondents were informed of the real-life consequences of their decision: one year after the interview, they would earn €1 for each €2,000 of the hypothetical €50,000, including possible gains or losses from their investment decision. The final sum would depend on the real performance of the DAX in the following year, and the sum would be provided one year later by check (T2634).

Question T2636 asked respondents to decide how they wanted to invest the €50,000. They could invest the money at will in any ratio in either of the above-mentioned options. Respondents' expectations about the development of the DAX during the next year were assessed using a so-called novel histogram elicitation tool, in which expectations about the DAX's development were provided by clicking on different numbers of boxes (T2638). Afterwards, they were asked to predict the trend (profit or loss?) (Q2639) and estimate the profit/loss as a percentage (Q23610).

Day Reconstruction Method (DRM)

The DRM module was already used as a pretest in the 2012 SOEP-IS refresher sample and in the 2012 and 2013 SOEP-IS waves. The intention behind this module is to measure the long-term stability of the DRM ratings over four consecutive waves, from 2012 to 2015. The module is an adaptation of the DRM as introduced by

Kahneman and colleagues in 2004.¹¹ By asking for the respondent's sensations throughout the day, researchers have an opportunity to create new measures of subjective well-being and examine the impacts of different activities on the quality of life. In 2014, the DRM was supplemented by a mobile phone study using the experience sampling method (ESM) that is described in further detail in Section 4.5.

The set of questions in the DRM module is designed to deliver an accurate reconstruction of the respondent's previous day. The module collected information about all activities as episodes, including start and end time, with the help of a list containing 26 activities, such as "shopping", "watching children," and "doing sports". Afterwards, additional questions were asked about a random subset of these episodes, including affective feelings during the activity, where the activity took place, and the presence of other persons.

Shorter modules

A range of shorter modules made use of standard survey questions to generate insight into a variety of different topics:

Playing the **lottery** is popular among many people, although it is a paradox from a scientific point of view because the value of the expected win from the lottery is substantially lower than the price of a lottery ticket. So, on a long-term basis people make a loss but still play every week. Four questions that deal with respondents' lottery playing behavior were included in SOEP-IS questionnaire (Q72-Q76).

Another topic of one of the shorter modules was the respondent's **attitude towards income redistribution**. Up to now, there is no measure of people's attitudes towards redistribution policies available for use in the SOEP, and this module was designed to fill this gap. It consisted of a matrix question that measured agreement with redistribution (Q8201) as well as two questions asking whether high/low income is more the result of personal effort or more the result of circumstances that are outside of a person's control (Q8202, Q8203).

Scientific findings on children's cognitive development are important in our society. This year, an instrument measuring the **home chaos** of a child was introduced to

verify whether factors such as noise, traffic, or disorder could influence a child's development. The longitudinal design of the SOEP makes it possible to observe processes of child development. The operationalization of the question took the form of a matrix question about household routines, noise, and order in the home, the so-called "Chaos, Hubbub, and Order Scale" (CHAOS, Q172).

In an attempt to gain further insight into **happiness from a cross-cultural perspective** by comparing Germany to Japan, three questions about life satisfaction were included in the SOEP-IS questionnaire, in addition to the standard instruments used in the SOEP-IS to measure subjective well-being (SWB). The first question tried to identify what "satisfaction" means to the individual, a term that seems to have different definitions from one culture to the next. For example, respondents were asked to rate their agreement or disagreement with statements that are typically associated with a satisfying life (Q3253).

The question about key life events is always part of the SOEP-IS. In 2014, an additional question was added asking respondents to estimate how likely the occurrence of a certain **life event** would be (Q323). The capability to anticipate certain events may make it easier to come to terms with these events if they actually occur. This hypothesis can then be tested if the events are indeed reported in one of the following waves of the SOEP-IS.

At the end of the questionnaire, the respondents had to complete a short set of questions to obtain a measure of their **self-evaluation and overconfidence in different life domains**. They were asked to imagine 100 randomly selected individuals and estimate how many of these people would be better off than they themselves were in terms of income (Q329), life satisfaction (Q331), health (Q333), etcetera.

Pretest for SOEP-Core

In addition to allowing for the fielding of different innovation modules through a competitive submission process, the SOEP-IS also provides a survey environment for pretesting new questions that are intended for the main SOEP questionnaire. In 2014/2015, several question blocks on energy use and recycling attitudes and behavior were pretested as part of the household questionnaire. Moreover, the individual questionnaire contained individual pretest questions on various topics such as educational qualifications, vegetarianism, and whether the respondent's wages are set by collective agreement.

11 Kahneman, D., Krueger, A. B., Schkade, D., Schwarz, N. & Stone, A. (2004). The Day Reconstruction Method (DRM): Instrument Documentation.

4.3 Longitudinal Samples I_{1/E}, I₂, and I₃

Fieldwork Progress

Fieldwork for the SOEP-IS usually starts in September, and the majority is concluded by the end of December or early January. This is followed by an additional fieldwork period because the four months between September and December do not provide sufficient time to process all households as thoroughly as required for a high longitudinal response rate. Households are assigned to the second fieldwork period if they could not be contacted successfully in the first period, if they were unable or unwilling to participate due, for example, to time constraints, or if interviews were missing for individual household members.

In the 2014 SOEP-IS, the main fieldwork period in the longitudinal samples lasted from September 2014 to early January 2015. As seen in **Table 19**, fieldwork for 93% of the households that participated in the study was completed by the end of December 2014. In the remaining households, some or all of the interviews were conducted in 2015.

Table 19

Fieldwork Progress for Samples I_{1/E}, I₂ and I₃: Processing of Household Interviews¹

	2013/2014		2014/2015	
	Gross Sample	Net Sample	Gross Sample	Net Sample
September ²	30	32	20	20
October	66	71	63	69
November	80	86	82	88
December	89	94	87	93
January	91	95	93	96
February	99	100	99	100
March	100	100	100	100

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

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Fieldwork Indicators (Household Level)

Table 20 presents final fieldwork results for samples I1/E, I2, and I3 at the household level. The total gross sample consisted of 3,414 households. This includes previous wave respondents as well as temporary drop-outs and new households from the previous wave (see also **Table 21**). At the end of the fieldwork period, 2,797

Table 20

Fieldwork Results (Households)

	Sample I _{1/E}			Sample I ₂			Sample I ₃		
	Num	In % Gross	In % Net	Num	In % Gross	In % Net	Num	In % Gross	In % Net
Total	1,265	100.0		935	100.0		1,214	100.0	
QNDs									
Deceased ¹	3	0.2		3	0.3		6	0.5	
Expatriates ²	2	0.2		3	0.3		5	0.4	
Interview	1,096	86.6	100.0	772	82.6	100.0	929	76.5	100.0
Completely	924	73.0	84.3	638	68.2	82.6	795	65.5	85.6
Partly	172	13.6	15.7	134	14.3	17.4	134	11.0	14.4
Not realized	169	13.4		163	17.4		285	23.5	
No contact	20	1.6		17	1.8		40	3.3	
Interview not possible³	7	0.6		14	1.5		21	1.7	
Refusals	136	10.8		126	13.5		213	17.5	
Temporary	38	3.0		33	3.5		60	4.9	
Final	98	7.7		93	9.9		153	12.6	
Other	1	0.1		0	0.0		0	0.0	

¹ I.e. last person in the household deceased

² Whole household moved abroad

³ Due to sickness, mental disease, permanent absence during fieldwork period or other reasons.

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Table 21

Key Fieldwork Indicators

	Sample I _{1/E}		Sample I ₂		Sample I ₃	
	Num.	In %	Num.	In %	Num.	In %
(1) Gross sample composition by types of households						
Previous wave's respondents	1.174	92.8	833	89.1	1.166	96.0
Temporary drop-outs prev. wave(s)	56	4.4	69	7.4	11	0.9
New households (split-off hh)	35	2.8	33	3.5	37	3.0
(2) Net sample composition by types of households						
Previous wave's respondents	1.056	96.4	732	94.8	903	97.2
Temporary drop-outs prev. wave(s)	18	1.6	22	2.8	10	1.1
New households (split-off hh)	22	2.0	18	2.3	16	1.7
Total	1.096	100.0	772	100.0	929	100.0
(3) Panel stability ¹		93.4		92.7		79.7
(4) Response rates by type of household (adj. gross sample) ²						
Previous wave's respondents		90.3		88.4		78.2
Temporary drop-outs prev. wave(s)		32.1		32.4		90.9
New households (split-off hh)		62.9		54.5		43.2
Total response rate		87.0		83.1		77.2
(5) Interviewer						
Number of interviewers	194		148		138	
Average num. of households per int.	6.5		6.3		8.8	

¹ Number of participating households divided by previous wave's net sample

² Adjusted by deceased persons and expatriates

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households took part in the SOEP-IS, that is, at least one person in the household answered the individual and the household-related questions.

The composition of gross and net sample is specified among other key field indicators in Table 22. Combin-

ing all subsamples, 3,173 (92.9%) of the 3,414 gross sample households were previous wave respondents, and 136 households (4.0%) were temporary drop-outs from the previous wave that were contacted again because there was some indication that participation in the next wave was still possible. The last subsample, "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 2014/2015, 105 new households were integrated into the gross sample.

Table 22

Individual Questionnaires: Number of Interviews and Response Rates

	Interviews	Response/Coverage Rate
Individual questionnaire ¹	4,491	89.7
Mother and child questionnaire A ²	134	97.1
Mother and child questionnaire B ³	113	98.3
Mother and child questionnaire C ⁴	707	98.5

¹ Individual questionnaire from respondent in participating household (i.e. household questions provided for the household as well)

² Coverage rate for children with birth year >=2012

³ Coverage rate for children with birth year 2010 or 2011

⁴ Coverage rate for children with birth year <=2009

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The fieldwork results for 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 compared to 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

Table 23

Distribution of Sample Points by Federal State

	Number Sample Points	Share Sample Points	Share HH in Net Sample ¹	Share Households in Germany ²
Schleswig-Holstein	5	4.0%	3.5%	3.4%
Hamburg	3	2.4%	2.4%	2.5%
Lower Saxony	12	9.6%	10.6%	9.6%
Bremen	1	0.8%	0.3%	0.9%
North Rhine-Westphalia	27	21.6%	20.9%	21.5%
Hesse	9	7.2%	6.5%	7.3%
Rhineland-Palatinate	6	4.8%	5.9%	4.7%
Baden-Wuerttemberg	16	12.8%	12.8%	12.5%
Bavaria	18	14.4%	13.1%	14.9%
Saarland	2	1.6%	2.3%	1.2%
Berlin	6	4.8%	4.3%	5.0%
Brandenburg	4	3.2%	2.9%	3.1%
Mecklenburg-West Pomerania	3	2.4%	4.1%	2.1%
Saxony	7	5.6%	5.7%	5.5%
Saxony-Anhalt	3	2.4%	2.1%	2.9%
Thuringia	3	2.4%	2.6%	2.8%
Total	125	100.0%	100.0%	100.0%

1 Preliminary results

2 Gemeindedatei 2013

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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 21**, the overall panel stability and response rates for all relevant subgroups are listed.

The panel stability of sample $I_{1/E}$ has again slightly increased compared to the last wave (93.4% vs. 92.7%), while the value for I_E alone even reaches 95.8%. In its third wave, sample I_2 was able to improve in terms of panel stability, with a value of 92.7% (2013/2014: 82.5%). In the case of sample I_3 , which went through the challenging transition from a cross-sectional to a longitudinal survey in this wave, panel stability reached a rate of 79.7%.

Individual Response Rates

In a household survey, a commonly used indicator to measure the success of the fieldwork process on an individual level is the number of households in which at least one questionnaire is missing. Just as in the core

SOEP survey, the innovation sample tries to target every member of the household who has reached the age of 16. The share of households for which at least one person did not complete the individual interview is 15.7%. In 440 of the 2,797 households, at least one interview is missing.

Another indicator for response on an individual level is the number of people who were interviewed with the individual questionnaire. From the 5,009 adults in participating households 4,491 took part in the survey. This equals a response rate of 89.7%.

4.4 Refresher Sample I_4

Sampling

Refresher sample I_4 was introduced to further enhance the sample size of SOEP-IS with the aim of adding approximately 1,000 newly recruited households to the net sample. Similar to all previous general population sam-

Table 24

Distribution of Sample Points by Community Type (BIK)

	Number Sample Points	Share Sample Points	Share HH in Net Sample ¹	Share Households in Germany ²
More than 500,000 inhabitants (center)	35	28.0%	26.4%	28.6%
More than 500,000 inhabitants (periphery)	12	9.6%	9.1%	9.0%
100,000 to 499,999 inhabitants (center)	19	15.2%	14.9%	15.9%
100,000 to 499,999 inhabitants (periphery)	18	14.4%	14.2%	14.0%
50,000 to 99,999 inhabitants (center)		2.4%	2.7%	2.3%
50,000 to 99,999 inhabitants (periphery)	10	8.0%	8.5%	7.4%
20,000 to 49,999 inhabitants	12	9.6%	9.9%	10.7%
5,000 to 19,999 inhabitants	11	8.8%	8.9%	8.0%
2,000 to 4,999 inhabitants	3	2.4%	2.9%	2.4%
less than 2,000 inhabitants	3	2.4%	2.4%	1.7%
Total	125	100.0%	100.0%	100.0%

1 Preliminary results

2 Gemeindedatei 2013

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ples in the SOEP or SOEP-IS (including refresher samples J (2011), K (2012), I₂ (2012) and I₃ (2013)), sample I₄ was realized using a multi-stage stratified sampling design. In the following, we will summarize the two main stages of sampling separately, covering the most important methodological aspects but not providing a detailed description of methods and processes.

The sampling procedure of a new SOEP household sample makes use of the so-called ADM face-to-face sampling system and modifies it in a way that maximizes the methodological advantages so that a best-practice design for a non-registry-based household sample frame can be derived. Thus, before starting to describe the specific sampling design of refresher sample I₄, we provide some context for why the ADM sampling system for face-to-face interviews is used for the SOEP.

The most important background information to bear in mind is that there is no centralized population (let alone household) directory available in Germany that contains the addresses of all private households or individuals. The data collected by the local authorities (*Städte, Gemeinden*) for the municipal registers of residents are available for surveys that are demonstrably in the “public interest”: but this information is mainly useful for sampling individuals. Due to the lack of a central household registry, the “Arbeitsgemeinschaft

ADM-Stichproben Face-to-Face” has developed the basic methodology and elements of a sampling frame suitable for market and social research samples based on random sampling. The ADM Sampling System (face-to-face) is designed as an area sample that covers all populated areas of the Federal Republic. It is “based on Germany’s topology, organized by states, counties and communities, the statistical areas within communities described by public data, and the geographical data created for traffic navigation systems.”¹² Based on the combination of data, the sample is made up of about 53,000 areas that constitute the primary sampling units. Each sampling unit contains on average 700 private households, the minimum number being 350.

In the second step of the ADM sampling procedure, the private households are selected using a street database from which the so-called start address for a random walk is randomly drawn. From this starting point, the interviewer proceeds by selecting/listing every third household, with a clear rule for how to proceed when he/she is facing dead ends, split roads, or other special problems on his or her walk through the sampled area.

12 ADM Arbeitskreis Deutscher Markt- und Sozialforschungsinstitute e.V. (2014): “Stichproben-Verfahren in der Umfrageforschung – Eine Darstellung für die Praxis,” Springer Fachmedien Wiesbaden

Stage 1: Random Selection of Sample Points

Consisting of a total of approximately 53,000 spatial areas, the sample points are the units of measurement in the first selection stage. In each unit, the number of sample points is drawn with a probability that is proportional to the number of households in each sample point. The criteria that define the stratification layers are federal state, administrative district, and municipal type. A total of 125 sample points were drawn with a selection probability proportional to the share of households in the sampling point—with states, administrative districts (*Regierungsbezirke*), and the BIK classification system (a settlement structure typology) used as the layers.

The distribution of sample points of the gross sample, both in absolute and relative figures, is shown in **tables 23 and 24**. The relative share of sample points is contrasted with the share of private households in the respective layers. As we will discuss fieldwork results in the next sub-section, in the last column of **Tables 23 and 24** we present the actual share of households in the net sample. By comparing the information on the net sample composition in two major regional layers, it is possible to observe the deviations from the “target shares” for the inference populations in the respective regional segments.

Stage 2: Random Route Walk and Address Listing

In the second stage of the selection process, the households are selected to participate in the study at each sample point. Here, a special version of the random route technique is employed. Instead of choosing the addresses and conducting the interview in a single step, the addresses are selected in a separate step (“advance listing of addresses”). This approach is more complex than the standard random walk method, which is usually implemented without the advance listing of addresses. The more complex approach used for the SOEP delivers essential methodological advantages over the standard random walk procedure:

- Since the addresses are available before the start of fieldwork, they can be checked for plausibility and correctness. In other words: there is a precisely defined list of addresses that can be prepared for fieldwork.
- The interviewer that collects the addresses does not need to be the one who is chosen to conduct the interviews. This approach minimizes interviewer effects and can be used to check whether the random route was implemented correctly by the interviewer who listed the addresses.

Table 25

Fieldwork Progress 2013/2014 in Sample I₄ as a Percentage of the Gross and Net Sample¹

	Gross Sample	Net Sample
September ²	20	36
October	32	56
November	43	65
December	55	71
January	71	85
February	80	89
March	95	100
April	100	100

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

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- The address listing is a prerequisite for measures by the fieldwork institute to increase response rates and decrease unit non-response, such as a letter of introduction and informational brochure sent to respondents before fieldwork commences. Given the declining general willingness to participate in population surveys and selection effects in the standard random walk routine, these measures constitute important aspects of a best practice design.
- For fieldwork, the interviewer receives precisely specified addresses, whose handling can be recorded in detail in a contact protocol. This facilitates the generation of paradata on the “gross sample,” regardless of whether a household does or does not participate in the survey. For this purpose, special household context questions (*Wohnumfeldfragen*) have to be answered by the interviewer. On the basis of this (subjective, interviewer-based) information and (objective) micro-contextual social context data from the commercial provider MICROM, important indicators are generated, particularly for non-response analyses.

For each of the 125 sample points, the goal was to list 72 addresses on a random walk with a step interval of three, i.e., every third household unit on the random walk route was to be listed by an interviewer.

In total, between 28 and 39 addresses per sample point were randomly selected for fieldwork. The addresses were issued to the interviewer in two sample releases. In the first release in September 2014, 28 addresses were

Table 26

Fieldwork Results (Households)

	Num.	In % Gross	In % Net	In % Adjusted Gross ³
Total	3,708	100.0		
Not eligible	223	6.0		
Interview	924	24.9	100.0	26.5
Completely	769	20.7	83.2	22.1
Partly	155	4.2	16.8	4.4
Not realized	2,784	75.1		79.9
No contact	349	9.4		10.0
Interview not possible ²	186	5.0		5.3
Refusals	2,026	54.6		58.1
Temporary	75	2.0		2.2
Final	1,951	52.6		56.0
Other	-	-		-

1 Preliminary results

2 Due to sickness, mental disease, permanent absence during fieldwork period or other reasons

3 Adjusted gross sample = Total gross sample – not eligible

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issued to the interviewers per sample point. In a second release in February 2015, 208 additional addresses were issued to compensate for addresses that were identified as ineligible (e.g., vacant housing units or businesses).

Fieldwork Progress

Fieldwork in the SOEP-IS refresher sample lasted from September 2014 to early April 2015. Around 50% of households were processed within the first four months. Fieldwork progress over the whole eight-month period is displayed in **table 25**.

Fieldwork Indicators (Household Level)

Survey-based studies are currently facing the problem of declining rates of participation. Since 2000, the public's general motivation to take part in surveys has decreased substantially. There have been several initiatives to reverse this trend, and these measures initially seemed to have helped stabilize response rates in first-wave SOEP surveys. However, refresher samples I_3 and I_4 again reflected the broader trend of declining participation.

It was possible to motivate 924 households to take part in SOEP-IS refresher sample I_4 . The response rate in the adjusted gross sample equals 26.5%. This is significantly lower than other, more recently established samples in the SOEP (e.g., J 2011: 33.1%; K 2012: 34.7%; I_2 2012: 34.7%) and more similar to the response rate of 27.1%

in refresher sample I_3 in 2013/2014. **Table 26** shows the fieldwork results in detail.

Individual Response Rates

The share of partially completed households was 16.8%. This means that in 155 of the participating households, at least one target person did not complete an individual interview. This means that the level of unit non-response in sample I_4 is similar to previous refresher samples (J 2011: 16.0%; K 2012: 14.6%; I_3 2013: 15.2%).

A total of 1,851 persons were living in the 924 households that participated in sample I_4 . 1,554 of them were at least 16 years old and were therefore asked to complete an individual questionnaire. The 1,368 personal interviews that could be conducted result in a response rate of 88.0%.

4.5 Experience Sampling Method (ESM) in Sample $I1/E$

Background and Objectives

In comparison to the data on generalized life satisfaction, which has been collected annually in the SOEP since 1984 and the SOEP-IS sample I_1 since 2009, Ex-

perience Sampling Methods (ESM) and the Day Reconstruction Method (DRM) are more recent innovations for measuring subjective well-being (SWB). However, having been employed primarily in convenience samples which are typically used in psychology, DRM and ESM posed new challenges for use in a random sample.

In the year 2012, the SOEP-IS SWB inventory was expanded in a first step by introducing the Day Reconstruction Method (DRM). This module, which is integrated into the SOEP-IS questionnaire, consists of retrospective questions concerning activities the target person engaged in the day before the interview, combined with SWB indicators related to these activities. After the first survey on the basis of the DRM module in sample I₁ in 2012, the module was repeated in 2013 and 2014. In 2014, the additional survey described in this section was set up to generate ESM-design-based interviews via mobile phone in a subgroup of sample I_{1/E}.

By implementing three collection methods for the measurement of SWB, the SOEP-IS provides comprehensive data that can be used for the qualitative validation of the different measurement methods. **Figure 7** shows the different SWB measurement concepts and the respective burdens they place on the respondent. **Figure 8** gives an overview of which questioning method has been used in which wave of the SOEP-IS. The introduction of DRM and ESM allows not only for a comparison of the three different SWB measuring methods but also offers an opportunity to test the long-term stability (over one year) and the short-term stability (over one week) of DRM measurements.

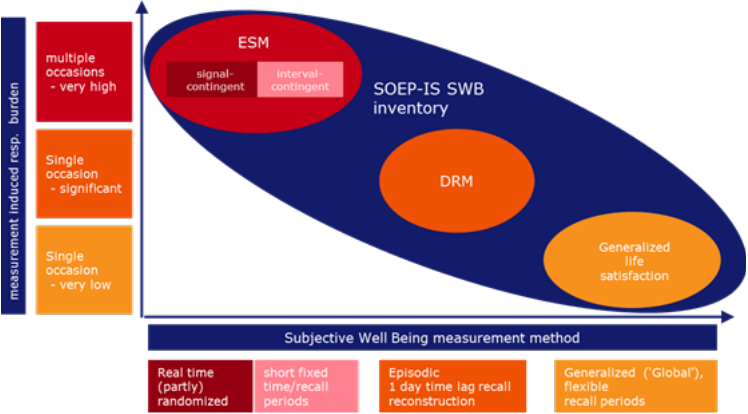
Study Design

The main emphasis of the additional ESM study in sample I_{1/E} is on the seven-day experience sampling phase. Respondents were asked to participate in 49 very short surveys on smart phones given to them by the interviewer. They received random alerts seven times a day in the seven-day ESM period and had to complete the 2.5-minute survey questionnaire within 15 minutes of receiving the alert. If the interviewee failed to answer all of the questions within the allotted time over the entire course of the survey, they were disqualified because the immediate measurement of affects is a crucial requirement for ESM.

Since people sometimes find themselves in situations in which it is not possible to complete the short survey within 15 minutes (e.g., when driving by car) or where they simply cannot hear the acoustic alert (e.g., while showering), it was assumed that even extremely moti-

Figure 7

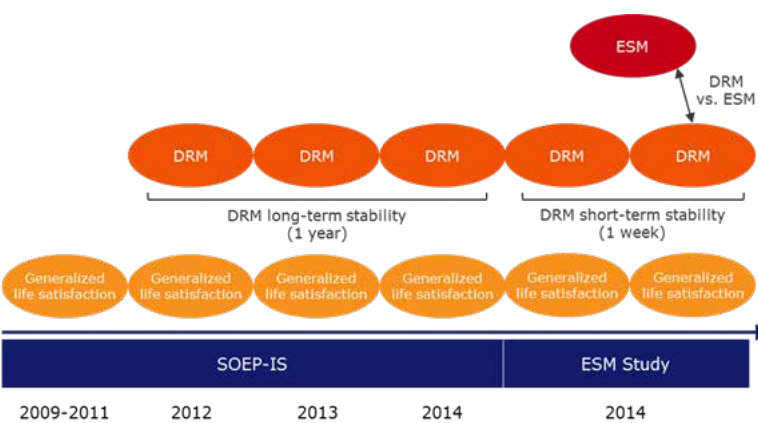
The Subjective Well-Being Framework in SOEP-IS



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Figure 8

Subjective Well-Being Measures in SOEP-IS Sample I1 since 2009



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vated respondents might not be able to complete all 49 ESM short survey questionnaires during the seven-day period. Furthermore it was expected that respondents might not be able to complete the survey questionnaires on certain days due to unforeseen circumstances (e.g., appointments, illnesses). Therefore up to two substitute days were added to the ESM phase if a respondent completed fewer than five of the seven short surveys on one of the seven days.

A complete study sequence consisted not only of the seven-day ESM period but also included two DRM interviews before the start and after the end of the ESM

Table 27

ESM-DRM Study Sequence

	Day 1	Day 2 to 8 (+ Day 9/10 ¹)	C
Data Collection Method	CAPI	Mobile	CAPI
SWB Measuring Method	DRM	ESM	DRM
Interview Duration	15 min	7*2,5 min per Day	15 min

¹ Substitute Days

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phase (see **Table 27**). The respondent had to complete at least five ESM short survey questionnaires on each of the seven days during the observation period to count as having completed the ESM part of the survey.

Sampling and selection of interviewers

One of the aims of the survey was to compare the DRM measurements collected in several waves of the SOEP-IS with the measurements based on the Experience Sampling Method (ESM) that were collected in this special survey. To achieve this, only members of the SOEP-IS sample $I_{I/E}$, who had answered DRM questions in the last few SOEP-IS waves were considered for the planned ESM study. As the survey was administrated with the help of the SOEP-IS interviewers, the composition of the final gross sample depended mainly on the selection of interviewers that were seen as meeting the requirements for this study. The interviewers were responsible for the recruitment of respondents and the DRM interviews at the beginning and at the end of the ESM phase. Moreover, they showed respondents how to use the smart phone, a task that was thought to be crucial in encouraging less tech-savvy respondents to take part as well.

For the ESM survey, only SOEP-IS interviewers were chosen that were already assigned to interview the households for the SOEP-IS main survey. Thus, each household was only contacted by one interviewer—an approach that was deemed more considerate towards households, since having to get used to a second interviewer was seen as an additional burden. Furthermore, focusing on interviewers with a relatively high gross sample of addresses seemed practical for various reasons. For instance, the lower number of interviewers assigned to this study was seen as advantageous in allowing better control over the fieldwork and reducing the number of interviewers that would have to be trained. The ESM survey was therefore only conducted

in households whose interviewers were responsible for a relatively large number of households overall.

The gross sample for the ESM study consisted of a total of 517 households with 840 persons who had taken part in the previous wave of SOEP-IS (2013). Altogether, 37 SOEP-IS interviewers were chosen to carry out the interviews and act as a contact for respondents in the context of the special study. Each interviewer contacted an average of 14 households for the ESM study and carried out ESM surveys with around 7 respondents. On average, each interviewer was provided with 3.5 smart phones that he/she could distribute to the participants.

During a half-day staff training, which took place in the middle of October just before the start of the ESM fieldwork, the interviewers were informed about the scientific background and course of the survey. But above all else, the aim of the training was to familiarize the interviewers with the handling of the smart phones and to brief them about the most important questions and problems that might occur during the project. This training was designed to enable the interviewers to be confident in explaining—especially to less tech-savvy respondents—how to handle the smart phone and to provide them with support during the ESM phase if necessary.

Data Collection

Preparation

In late August, just before the beginning of fieldwork for the main SOEP-IS study, the selected households received a slightly modified version of the usual letter of invitation sent to respondents, informing them about the planned mobile phone survey and encouraging them to participate. The letter also contained a flyer explaining the ESM survey and describing the course of the survey and its scientific background.

After the letters were sent, the interviewers had to contact the households and pre-recruit those who were interested so that a fieldwork sample for the mobile phone study could be set up. As not all results of the pre-recruitment could be finalized until the middle of October, individuals from whom no answer about participation had been received were included in the fieldwork sample.

After all preparatory steps were carried out and the training course had taken place, the interviewers began to make appointments for the first DRM interview. Here the same rules as for the DRM in the SOEP-IS main

study applied: If possible, the DRM interview should not take place on a Sunday or Monday.

Day 1

On day one, the interviewer visited the household, handed over the smart phone, and carried out the initial 15-minute DRM interview. Then an explanation of the course and the rules of the ESM survey followed. The interviewer also took time to answer questions the respondent might have. After the respondent signed a consent form to participate in the survey, the interviewer explained to them how to operate the smart phone. As participants should already be awake when the phone alert came in the morning, the respondent was asked to set an individual start time that marked the beginning of the 12-hour time period in which all seven daily mobile phone surveys would be completed. After this, the respondent had the opportunity to complete one ESM survey as a trial run.

For later reference, the participants also received a small (21 x 14.8 cm) 12-page brochure with information about the survey and instructions for how to use the mobile phone. The interviewer and the participants also completed a schedule containing the date of the final DRM interview as well as the dates of all ESM survey days, including possible substitute days.

Day 2 to Day 8

On days 2 to 8, participants had to fill in the ESM short questionnaires at seven random and previously unannounced times of the day. They were instructed to contact the interviewer if they had any questions or problems during the ESM phase, so interviewers had to be reachable by mobile phone. If the interviewer could not find a solution to a problem or did not know the answer to a question, he/she could contact a project manager at TNS Infratest Sozialforschung.

The response behavior of respondents was recorded and supervised by the SOEP team at TNS Infratest Sozialforschung with the help of a monitoring program designed for this purpose. If a participant missed the ESM surveys too often, his/her interviewer was asked to contact the participant to explain again that he/she had to complete at least five surveys per day or solve possible problems with the smart phone.

If the respondent participated in the ESM survey on fewer than seven days, the special ESM software installed on the smart phones automatically added to two substitute days on to the end of the seven-day ESM phase. In this case, the interviewers and interviewees had to postpone their appointment for the final interview on short notice.

Day 9

At the end of the ESM phase, the interviewer visited the household again to carry out the final 15-minute DRM interview with reference to the previous day's activities and SWB measures. Since ESM measures were taken on the previous day, concurring periods of time were recorded with the two different methods.

On day 9, the respondents also received their monetary incentive paid in cash. The amount depended on the number of completed ESM surveys. The "updated" incentive amount was displayed after each ESM short survey: For every complete ESM survey, they earned 1 euro (as long as the respondent participated in at least five interviews a day). If all seven surveys had been completed on a given day, the participants received a bonus of 4 euros for that day. So the maximum monetary incentive a respondent could earn amounted to 77 euros.

Questionnaire

The DRM survey at the beginning and at the end of the sequence corresponded to the DRM module that was included in the main SOEP-IS questionnaire for sample I_{1/E} in wave 2014/15. For further information, please refer to **Section 4.2** of this report. Additionally, two further questions from the SOEP concerning generalized life satisfaction were included at the beginning of both of the CAPI interviews¹³.

The ESM questionnaire consisted of 17 questions that were modelled after the DRM questions. Each short mobile survey included exactly the same set of questions. The first block focused on the respondent's current situation. The second part consisted of questions about the intensity of current emotions. Respondents received an acoustic alert announcing the start of each short survey. From that time on, the survey was available for 15 minutes. If the respondent did not react within those 15 minutes, he or she received further alerts five and ten minutes after the first.

The survey started with a few questions about the respondent's momentary situation and activities: "Where are you at the moment?", "What are you doing at the moment?", "Is this activity more pleasant or more unpleasant?", "Who is with you?". The participants had to

13 "How satisfied are you today with the following areas of your life? How satisfied are you with..." Items: "...your health?", "...your sleep?", "If employed: ...your job?", "...your household income?", "If employed: ...your personal income?", "...your dwelling?", "...your leisure time?", "...your family life?"

"Please indicate for each of the following feelings how often or rarely you experienced them in the last four weeks. How often have you felt..." Items: "...angry?", "...worried?", "...happy?", "...sad?". Scale: "Very rarely", "Rarely", "Occasionally", "Often", "Very often"

Table 28

Results SOEP-IS ESM Study 2014¹

	N	In % Gross Sample	N Wants to participate	In % Wants to participate
Gross sample	840	100.0		
Results of pre-recruitment				
Wants to participate	274	32.6		100.0
Doesn't want to participate	429	51.1		
Unable to reach	31	3.7		
No result	106	12.6		
Results of ESM fieldwork				
ESM complete ²	257	30.6	237	86.5
49 ESM questionnaires in first 7 days	112	13.3	106	38.7
Without substitute day	125	14.9	113	41.2
with substitute day	20	2.4	18	6.6
ESM incomplete	8	1.0	6	2.2
No ESM - participated in SOEP-IS	471	56.1	27	9.9
No ESM - no participation in SOEP-IS	104	12.4	4	1.5

¹ Preliminary results² At least 5 ESM-interviews on 7 days have been completed; DRM1 and DRM2 have been provided

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select answers to the questions “What are you doing at the moment” and “Who is with you?” from a list. The list of possible activities corresponded to the list used in the context of the DRM interview in the main study. However, the order had been adjusted according to the frequency of certain activities as reported in previous waves of the DRM. This aimed at shortening the search process for frequent activities that appeared at the top of the list.

Table 29

ESM Net Sample by Age Groups¹

	SOEP-IS Net Sample I _{1/E}		ESM Gross Sample		ESM Net Sample	
	N	%	N	%	N	%
24 and younger (> y 1989)	162	9.2	91	10.8	29	11.3
25 - 34 (y 1980 - 1989)	185	10.5	97	11.5	45	17.5
35 - 44 (y 1970 - 1979)	205	11.6	103	12.3	39	15.2
45 - 54 (y 1960 - 1969)	343	19.5	159	18.9	40	15.6
55 - 64 (y 1950 - 1959)	323	18.3	137	16.3	41	16.0
65 - 74 (y 1940 - 1949)	316	17.9	147	17.5	49	19.1
75 and older (< y 1940)	228	12.9	102	12.1	14	5.4
NA	-	-	4	0.5	-	-

¹ Preliminary results

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The second part of the questionnaire focused on the intensity of 13 emotions. On a scale from 1 (“not at all”) to 7 (“very strongly”), the interviewees were asked to rate the degree to which they currently felt happiness, anger, frustration, tiredness, sorrow, worry, pain, enthusiasm, satisfaction, boredom, loneliness, stress, or a sense of deeper meaning. After the interview was finished, the phone displayed the number of remaining interviews for that day and the amount of the monetary incentive that they had earned so far.

Fieldwork Results

In the pre-recruitment phase, 274 of the 840 SOEP-IS participants who were chosen to take part in the ESM study stated interest in participating in the additional survey. This amounts to 37.3% of all respondents who had provided an answer in the pre-recruitment phase, prior to the start of the main ESM fieldwork phase.

Overall, 257 respondents provided complete ESM surveys consisting of five to seven ESM-interviews on seven days and two DRM interviews. This means that we have complete ESM surveys available for 30.6% of the 840 chosen SOEP-IS participants, a slightly higher response than anticipated at the start of the study. The completeness of the ESM interviews was satisfactory as well: 43.6% of the persons with complete ESM surveys managed to answer all 49 ESM interviews in the first seven days, not missing a single survey, and only 7.8% needed an extra day. Please refer to **Table 28** for more detailed results.

One of the reasons why a more elaborate study design, providing smart phones and interviewer assistance, was chosen for the ESM study in SOEP-IS was that it was deemed to be better suited for convincing less tech-savvy, possibly older respondents to take part in the additional mobile phone survey. **Table 29** provides a first indication as to whether this strategy was successful with a comparison of the age distribution in the ESM net sample with the age distribution in the net sample of the SOEP-IS main study in 2014. A look at the oldest group of respondents “75 and older” shows that their share in the ESM net sample does differ from their share in the SOEP-IS net sample. However, the share of respondents from 55 to 74 in the ESM net sample is lower than their share in the SOEP-IS net sample.

Part 4

A Selection of 2014 Publications

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Persistently High Wealth Inequality in Germany

by Markus M. Grabka and Christian Westermeier

According to current analyses based on the Socio-Economic Panel Study (SOEP), the total net assets of German households in 2012 amounted to 6.3 trillion euros. Almost 28 percent of the adult population had no or even negative net wealth. On average, individual net assets in 2012 totaled over 83,000 euros, slightly more than ten years previously. The degree of wealth inequality also remained virtually unchanged. With a Gini coefficient of 0.78, Germany has a high degree of wealth inequality compared to other countries, and there is still a wide gap between western and eastern Germany almost 25 years after unification. In 2012, the average net wealth of eastern Germans was less than half that of western Germans.

In addition to their regular incomes, people's individual net wealth, the sum of all their assets, contributes separately to their individual economic welfare and their opportunities for self-realization.¹ When considered in microeconomic terms, individual wealth has numerous functions:² for example, investment income means additional income (income function); use of tangible assets (for instance, owner-occupied property) brings direct benefits and can create latitude for personal freedom (utilization

function); and drawing on assets can serve to stabilize consumption in the event of a lack of income (security function). Greater wealth can confer economic and political power (power function), serve to attain or retain high status (social mobility or status preservation function), and often also play a crucial role in raising and educating children (socialization function). Finally, wealth is important for providing security in old age and as an instrument for intergenerational transfer (bequeathing function). The particular economic and societal interest in wealth and its distribution can be derived from these many individual functions which far transcend those of regular income. The basis for the following calculations on the distribution of wealth is the longitudinal Socio-Economic Panel Study (SOEP).³ The wealth situation was examined in detail in special thematic surveys in 2002, 2007, and 2012. Traditional surveys⁴ gather data about wealth at the household level and usually distribute it evenly among the members of the household when analyzing its distribution. In contrast, the SOEP ascertains the components of wealth for all adults (from age 17 on). This also makes it possible to analyze private redistribution within households.⁵ The SOEP surveys eight different components of wealth: (1) owner-occupied property, (2) other real estate (including undeveloped land, vacation and weekend homes, and rented real estate), (3) monetary assets (savings accounts, savings bonds and Pfandbriefe, stocks, and investment certificates), (4) assets from private insurance policies (life insurance and private pension insurance, including Riester retirement plans), (5) building loan contracts, (6) business assets (ownership of individual

1 J. Volkert, G. Klee, R. Kleimann, U. Scheurle, and F. Schneider, *Operationalisierung der Armuts- und Reichtumsmessung* (Bonn: Federal Ministry of Health and Social Security, 2004).

2 R. Hauser, „Integrierte Analyse von Einkommen und Vermögen – Forschungsstand und Ausblick,“ in *Weiterentwicklung der Reichtumsberichterstattung der Bundesregierung* (Cologne: Institut für Sozialforschung und Gesellschaftspolitik (ISG), 2007), 12–29. Expert workshop, November 29, 2006 in Berlin. Event hosted by the Federal Ministry for Labor and Social Affairs.

3 SOEP is a representative, annually repeated survey of private households which has been conducted in western Germany since 1984 and in eastern Germany as well since 1990, see G. G. Wagner, J. Göbel, P. Krause, R. Pischner, and I. Sieber, „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): 301–328.

4 See the Federal Statistical Office's sample survey on income and expenditure or the study „Private Haushalte und ihre Finanzen (PHF)“ by the Deutsche Bundesbank.

5 M. M. Grabka, J. Marcus, and E. M. Siermiska, „Wealth distribution within couples and financial decision making,“ *Review of Economics of the household* (DOI: 10.1007/s11150-013-9229-2), (2014) (forthcoming).

Box 1

Definition of Wealth

An open economy's wealth is held by four "last-owner sectors."¹ These are the government, private non-profit organizations,² private households, and foreign countries. In Germany, the vast majority of the nation's wealth belongs to domestic households.

According to the national concept, the household assets consist of the following components: tangible assets in the form of real estate in Germany and abroad and consumable assets; the latter also includes gold, jewelry, or valuable collections. According to the definition in the national accounts, consumable assets also

include household effects and motor vehicles.³ In addition to tangible assets, household assets also include positive monetary assets in the form of receivables from the government, companies, financial institutions, and abroad. A further component is participation capital in the form of exchange traded shares or ownership rights in companies (business assets) and financial institutions in Germany and abroad. These gross assets are calculated against liabilities, such as mortgages and consumer loans. The net assets of the household sector comprise the balance of these four components.⁴ Other types of assets, such as pension claims, human assets, environmental assets, or cultural assets are not taken into account here.

1 The sectors that cannot own any property themselves. When a nation's wealth is calculated, the domestic concept is differentiated from the national concept. The domestic concept only includes the assets within a country, while the national concept only includes assets owned by the residents of a country. This distinction is important insofar as residents can also own property rights in foreign countries. Net foreign assets are the sum of property rights, assets, and liabilities abroad. According to the national concept, a country's wealth consists of property owned by the three domestic last-owner sectors and net foreign assets.

2 These include, for example, churches and religious communities, clubs, associations, private foundations, political parties, or trades union.

3 The value of consumable assets in this broad definition came to 928.5 billion euros in 2012, see Federal Statistical Office, *Sektorale und Gesamtwirtschaftliche Vermögensbilanzen 1991-2012* (2013). The value of household effects and vehicles is not recorded in the SOEP. Consequently, the financial situation of households is underestimated here (see also Box 2).

4 When national wealth is calculated, there are problems in allocating the various components of the last-owner sectors. This applies to shares in associated companies in particular. It is also difficult to fully record foreign assets held by domestic residents.

companies and shares in joint partnerships or corporations; after deducting business liabilities), (7) non-monetary assets in the form of valuable collections, such as gold, jewelry, coins, or objets d'art, and (8) debts (consumer and mortgage loans). Other durable consumer goods, including the value of vehicles, and cash and entitlements to pension systems are not included in the survey.⁶ Deducting liabilities from gross assets gives total net assets, which is relevant in terms of welfare economics and is usually referred to for analyses of the distribution of personal wealth (see also Box 1 for calculation of national wealth). The present report is based on a research project funded by the Hans Böckler Foundation analyzing the distribution of wealth in Germany.⁷

It expands previous analyses conducted by DIW Berlin describing the level, composition, and distribution of individual private wealth.⁸

Households in Germany Had Assets of Roughly 6.3 Trillion Euros in 2012, ...

The extrapolated SOEP data result in gross wealth (excluding vehicles and household effects) of roughly 7.4 trillion euros, most of which, namely 5.1 trillion euros, was accounted for by real estate. Compared to 2002, the value of nominal gross assets has risen by approxi-

6 On the relevance of assets for securing retirement-age income, see J. R. Frick and M. M. Grabka, „Alterssicherungsvermögen dämpft Ungleichheit – aber große Vermögenskonzentration bleibt bestehen,” *Wochenbericht des DIW Berlin*, no. 3 (2010).

7 *Vermögen in Deutschland – Status-quo-Analysen und Perspektiven* (Project number: S-2012-610-4. The project is being conducted by DIW Berlin and the

Hertie School of Governance; project management: Markus M. Grabka).

8 J. R. Frick and M. M. Grabka, „Gestiegene Vermögensungleichheit in Deutschland,” *Wochenbericht des DIW Berlin*, no. 4 (2009). The data for 2002 and 2007 were revised for the present study. This concerns methodological improvements particularly concerning the quality of imputing missing values on the basis of longitudinal information as well as a revision of weighting (see Box 2).

Table 1

Distribution of Wealth¹ in Germany

	2002			2007			2012		
	Lower threshold ²	Estimate	Upper threshold ²	Lower threshold ²	Estimate	Upper threshold ²	Lower threshold ²	Estimate	Upper threshold ²
Gini coefficient	0.764	0.776	0.787	0.786	0.799	0.812	0.765	0.780	0.794
Percentile ratios									
p90/p50	13.2	14.0	14.8	12.5	14.0	15.5	11.2	13.0	14.8
p75/p50	6.2	6.5	6.9	5.5	6.2	6.8	5.2	6.0	6.8
Mean in euros	76,315	79,941	83,567	76,564	81,089	85,613	79,218	83,308	87,399
Percentiles in euros									
p99	706,052	759,969	813,885	697,366	787,500	877,634	747,813	817,279	886,744
p95	310,726	323,722	336,718	303,898	319,731	335,564	304,770	323,180	341,589
p90	202,074	210,134	218,194	198,476	207,695	216,913	208,303	216,971	225,639
p75	93,683	98,130	102,577	86,952	91,374	95,795	96,519	100,000	103,481
Median	14,083	15,000	15,917	13,353	14,818	16,284	14,200	16,663	19,126
p25	0	0	0	0	0	0	0	0	0
p10	0	0	0	0	0	0	0	0	0
p5	-2,691	-1,610	-529	-4,842	-4,000	-3,158	-4,081	-3,150	-2,219
p1	-23,264	-20,360	-17,456	-35,200	-30,260	-25,320	-29,556	-24,100	-18,644
Proportion of individuals with net assets of less than 0 euros, in percent	4.8	5.2	5.6	6.9	7.4	7.9	6.7	7.4	8.0
Proportion of individuals with net assets equaling 0 euros, in percent	20.0	20.6	21.3	18.9	19.7	20.5	19.3	20.2	21.1

1 Individual net assets of individuals aged 17 or over in private households

2 95-percent confidence interval.

Statistically significant changes relative to the previous survey year are shaded gray.

Source: SOEPv29, with 0.1 percent top coding.

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Wealth inequality remains high.

mately 500 billion euros. The increase is due mainly to wealth increases in owner-occupied property, and also in monetary assets.

According to the SOEP, household debts totaled around 1.1 trillion euros in 2012, consisting mostly of mortgage loans of just below one trillion euros. Therefore, the net wealth of German adults in households amounted to about 6.3 trillion euros in 2012.⁹

... Corresponding to 83,000 Euros per Adult

In 2012, net assets per adult (persons aged 17 or over) were roughly 83,000 euros (see Table 1 and Figure 1). The median of wealth distribution, that is, the value separating the wealthier 50 percent of the population from the poorer half, was 17,000 euros, distinctly lower

than the average—a consequence of the unequal distribution of wealth. Roughly one-fifth of all adults had no net assets—seven percent even had debts greater than their gross assets. The wealthiest tenth of the population aged 17 or over had net assets of at least 217,000 euros, and the wealthiest one percent at least 817,000 euros.¹⁰ Compared with 2002, there were very few significant changes in wealth distribution. The proportion of individuals with negative net assets increased significantly between 2002 and 2007 and remained at this level through 2012.

In 2012, net assets in western Germany averaged just under 94,000 euros and was therefore more than twice as high as in eastern Germany (see Table 2). The difference is even greater for the median—21,000 euros in the western and just 8,000 euros in the eastern part of the country.

In eastern Germany, individuals with net assets of 110,000 euros are among the richest ten percent of

9 Compared to the calculation of assets performed by the Federal Statistical Office, this shows considerably lower gross and net assets held by private households (see Box 2).

10 It must be taken into account that, like other similar studies, the SOEP does not entirely cover the upper margin of the distribution of wealth, thus underestimating it, as billionaires or multi-millionaires are not or only insufficiently included in the sample, see also Box 2.

Box 2

Recording Assets with Surveys

Analyses of wealth distribution based on microdata representative of the population are confronted with a number of methodological and statistical problems. They cannot allow for entitlements to statutory pension insurance to be taken into account. Accumulated pension-related claims are converted into personal earning points that do not reveal a direct reference to social security assets and are therefore rarely included in population surveys (the same applies to occupational pension entitlements). Since the majority of the working population is subject to compulsory pension insurance or has pension-related claims, for example, in the form of training or child-rearing periods, social security assets in the statutory pension scheme represent an important component in household assets. Evaluations of pension insurance data show that 91 percent of men and 87 percent of women aged 65 or over have statutory pension entitlements. (In eastern Germany, the corresponding ratios are even higher at 99 percent.)¹

Other asset components also cause difficulties in population surveys. According to the concept, household effects are categorized as tangible assets and include all vehicles in the household. Since it is difficult for respondents to give an estimate of the current market value of their entire household effects, the present study only asked about tangible assets in the form of valuable collections, such as gold, jewelry, coins, or objets d'art. As a result of this limitation, tangible assets here are underestimated compared to the national accounts.

In population surveys, assets are usually recorded at the household level and represented in the form of per capita wealth.² The SOEP has a methodological feature, here, since it records the individual assets of each respondent aged 17 or over. Thus, differences between households and partnerships can be shown in a per capita comparison. The present analyses (with the exception of Table 5 and Figures 4 and 5) refer to the individual assets of people aged 17 or over³, i.e., the redistribution of wealth from people with lots of assets to household members with few

or no individual assets in a household is not taken into account.

A comparison of aggregated assets based on the SOEP and the sectoral and overall economic balance sheets of the Federal Statistical Office is complicated by a number of differences in distinctions and definitions. First, the Federal Statistical Office lumps households together with private non-profit organizations. Second, in addition to durable consumer goods, other types of assets are also included which are not recorded in the SOEP. These include cash, the value of livestock and crops, equipment, intangible fixed assets, claims against private health insurance companies, commercial loans and commercial holdings in residential buildings. Third, the SOEP records the current market value of real estate while the Federal Statistical Office uses its replacement value. But market value differs significantly from the replacement value of real estate. As a result, in 2002, net assets calculated on the basis of the SOEP totaled almost 90 percent of the figure calculated on the balance sheet of the Federal Statistical Office, but it was only 64 percent in 2012. In the case of real estate, the quantitatively most important asset component, the coverage rate fell from 110 percent to just 82 percent. Here, 73 percent of liabilities are recorded. At 33 percent, aggregate gross monetary assets are significantly underestimated in the SOEP. This is also the case in all other wealth surveys worldwide.

A comparison with the wealth survey conducted by the German Federal Bank in 2010/11 (PHF) shows that the SOEP slightly underestimated per capita net assets at 86,000 euros, compared to 95,000 euros in the PHF. It should also be taken into account here that the PHF conducts a far more detailed survey of the asset situation and thus also takes into account, for example, the value of vehicles.⁴

Since 2002, the SOEP has attempted to counteract the problem encountered in population surveys of not ascribing meaningful representation to higher income and assets by introducing a partial sample of "high-income households." Against the background of high inequality in personal wealth distribution, particular importance is accorded this sub-sample and the sufficiently large number

1 Federal Ministry for Labour and Social Affairs, Alterssicherungsbericht 2008, 83. (www.bmas.de/coremedia/generator/29492/property=pdf/2008__11__19__alterssicherungsbericht.pdf).

2 See, for example, results based on the income and consumption sample (EVS) from the Federal Statistical Office or the PHF study by Deutsche Bundesbank; U. Kalkreuth and H. Hermann, "The PHF: a survey on the assets and finances of households in Germany," Monatsbericht der Deutschen Bundesbank, no. 1.

3 Assets held by children (under 17 years of age) are ignored as it is assumed these constitute only a very small proportion of total assets.

4 Kalkreuth and Hermann, "The PHF."

Table 2

Influence of the Data Revision on Asset Amounts and Distribution¹ in 2002 and 2007

	2002						2007					
	SOEPv29			SOEPv24/v25			SOEPv29			SOEPv24/v25		
	Lower threshold ²	Estimate	Upper threshold ²	Lower threshold ²	Estimate	Upper threshold ²	Lower threshold ²	Estimate	Upper threshold ²	Lower threshold ²	Estimate	Upper threshold ²
Gini coefficient	0.774	0.786	0.798	0.773	0.785	0.798	0.794	0.807	0.819	0.785	0.802	0.818
Percentile ratio p90/p50	13.3	14.0	14.7	13.1	13.9	14.7	12.7	14.0	15.3	12.6	14.4	16.3
Mean in euros	79,163	83,783	88,403	78,004	82,436	86,869	78,794	84,257	89,720	83,040	89,823	96,607
Percentile in euros												
p99	698,761	759,969	821,176	704,978	757,475	809,971	700,282	787,500	874,718	729,408	822,185	914,962
p95	311,660	323,722	335,784	299,470	318,357	337,245	302,437	319,731	337,025	312,306	336,380	360,453
p90	203,464	210,134	216,803	200,520	208,306	216,092	199,062	207,695	216,327	208,401	221,503	234,604
p75	94,046	98,130	102,214	92,694	96,660	100,627	87,020	91,374	95,727	92,965	98,433	103,901
Median	14,296	15,000	15,704	14,250	15,000	15,750	13,409	14,818	16,228	13,117	15,351	17,585
p25	0	0	0	0	0	0	0	0	0	0	0	0
p10	0	0	0	0	0	0	0	0	0	0	0	0
p5	-2,757	-1,610	-463	-2,959	-1,881	-803	-5,012	-4,000	-2,988	-5,484	-3,900	-2,316
p1	-23,683	-20,360	-17,037	-22,311	-19,455	-16,600	-36,299	-30,260	-24,221	-35,333	-30,000	-24,667

¹ People in households, individual assets; ² 95-percent confidence interval.
Source: SOEPv29, without top coding.

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of cases of wealthy households in the SOEP.⁵ In particular, the relationship between income and wealth distribution for the group of high-income earners can also be represented in more detail, since assets, asset income, and savings depend to a large extent on disposable income. Nevertheless, the problem remains that there are simply no very wealthy people in a sample such as the SOEP. In particular, this applies to billionaires and multi-millionaires. The end result is that the true extent of wealth inequality is underestimated. There are currently no external statistics available in Germany to validate this underestimation, for instance, wealth tax statistics.

Estimating fair market value in a survey is difficult, especially when the object was inherited or purchased a long time ago and respondents do not have sufficient knowledge of the current market. Also, valuing business assets is particularly difficult. In contrast to regular income, asset values can be very volatile and this further complicates their evaluation. This leads, in addition to the overall sensitivity of this issue, to increasing refusals to answer questions or a lack of information on asset-related issues.

As well as extensive checks on the consistency of individual data being conducted, all missing assets in the SOEP

are replaced using multiple imputations.⁶ Due to the use of longitudinal data as part of repeated wealth surveys in 2002, 2007, and 2012, the quality of the imputation was better than would have been the case with a single survey.

After extrapolation and weighting factors were applied, SOEP microdata underlying these analyses give a representative picture of the population in households and thus allow conclusions to be drawn about the entire population. Members of the population in institutions (for example, in nursing homes) were not taken into account. The weighting factors correct differences in the designs of the various SOEP samples, as well as the participation behavior of respondents after the first interview. The framework data of the microcensus is adjusted to increase its compatibility with official statistics.

The asset data presented here for 2002 and 2007 deviates from those of earlier publications because repeated revisions of weighting factors were required in the SOEP in the past and the imputation procedure has since undergone a fundamental reworking. Selected key figures are shown in the table before and after revised weighting and improved imputation. There are no significant changes, i.e., the deviations between previous and revised data for 2002 and 2007 still fall within the usual fluctuation range of samples.⁷

5 J. Schupp, J. R. Frick, J. Goebel, M. M. Grabka, O. Groh-Samberg, and G. G. Wagner, "Zur verbesserten Erfassung von Haushaltsnettoeinkommen und Vermögen in Haushaltssurveys," in T. Druyen, W. Lauterbach, and M. Grundmann (pub.), *Reichtum und Vermögen – Zur gesellschaftlichen Bedeutung der Reichtums- und Vermögensforschung* (Wiesbaden: 2009), 85-96.

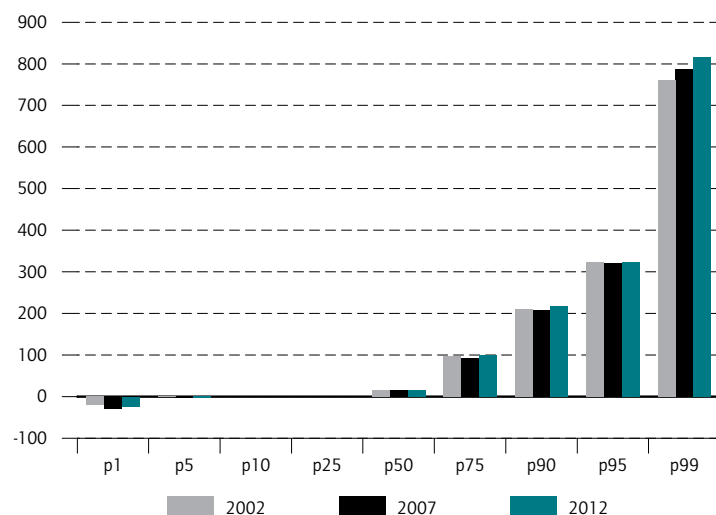
6 J. R. Frick, M. M. Grabka, and J. Marcus, "Editing and Multiple Imputation of Item-Non-Response in the 2002 Wealth Module of the German Socio-Economic Panel (SOEP)," SOEPpapers on Multidisciplinary Panel Data Research at DIW Berlin, no. 18 (Berlin: 2007).

7 Frick and Grabka, "Zur verbesserten Erfassung."

Figure 1

Individual¹ Net Assets by Selected Percentiles in Germany In thousands of euros

In thousands of euros



1 Individuals aged 17 or older in private households
Source: SOEPv29, with 0.1 percent top coding.

© DIW Berlin

Half the population has net assets of less than 17,000 euros.

adults; in western Germany, this line is crossed at just under 240,000 euros. While average net assets did not change significantly in western Germany between 2002 and 2012, it first declined in eastern Germany and then increased distinctly between 2007 and 2012. This is due to a slight rise in the value of owner-occupied property. The recovery on the eastern German labor market may well have also played a role.

Wealth Inequality Remains High

The Gini coefficient is a standard measure of wealth inequality. The higher its value, the greater the measured inequality.¹¹ The coefficient for 2012 is 0.78 (see Table

11 On the Gini coefficient, see also DIW Glossar, www.diw.de/de/diw_01.c.413334.de/presse_glossar/diw_glossar/gini_koeffizient.html (in German only). If all assets are positive, the Gini coefficient is between 0 and 1. A value of 0 means that all the individuals in the comparison hold exactly the same assets. In contrast, a value of 1 means that one person holds all the assets and all the others hold none. In fact, however, net assets may also be negative. In 2012, this was the case for just over seven percent of adults in Germany. In extreme cases, the Gini coefficient could then take on values greater than 1.

1).¹² This makes Germany the country with the highest wealth inequality in the euro area, followed by Austria in second place. The Gini coefficient for France is 0.68, for Italy 0.61, and for Slovakia 0.45.¹³ Wealth inequality in the US (Gini coefficient of 0.87 for 2010) is greater than in Germany.

An alternative measure of distribution is the 90-50 decile ratio, which relates the lower bound of the wealth of the richest ten percent of the population to the median of the wealth distribution. In other words, this figure indicates the multiple of “rich” persons’ wealth in relation to the midpoint of the wealth distribution. In 2012, the wealth of the “poorest” person in the top ten percent was 13 times greater than that of the person in the middle of the distribution. A comparison of the three years under observation does not show any significant change in wealth inequality.

When interpreting these results, it must be taken into account that a sample which is representative of the population, such as the SOEP, tends to under-report people with very high wealth and consequently underestimates the degree of wealth inequality. It is safe to assume that wealth inequality has increased over the past ten years since, according to the system of national accounts, incomes from entrepreneurial activities and investment incomes have seen above-average growth compared to compensation of employees. These types of incomes are primarily concentrated in the highest decile of income recipients. Wealth is concentrated even more strongly in the top percentiles of the distribution.¹⁴

Owner-Occupied Housing of Great Importance

Observing net values exclusively generally conceals important structural differences, both in terms of the composition of wealth and potentially existing debt. For example, low net assets may be the result of high net as-

12 If based on net assets, the Gini coefficient is more than twice as high as it is if based on disposable income, see M. M. Grabka, J. Goebel, „Reduction in Income Inequality Faltering,” DIW Economic Bulletin, no. 1 (2014).

13 P. Mooslechner, „Der ‚Household Finance and Consumption Survey’ des Eurosystems: Konzeption und Ergebnisse der ersten Erhebungswelle 2010.” Paper presented to the General Council of the OeNB, April 25, 2013. The fact that wealth inequality is relatively low in southern European countries may also be due to the fact that property ownership is more widespread there than in Germany. The figures published by the ECB on the level of assets in the euro area have been criticized repeatedly. The Gini coefficient as a measure of wealth inequality is not affected by this as it is independent of the levels of assets.

14 S. Bach, M. Beznoska, and V. Steiner, „A Wealth Tax on the Rich to Bring down Public Debt? Revenue and Distributional Effects of a Capital Levy,” SOEPpaper, no. 397, to be published in Fiscal Studies no. 1 (2014).

Table 3

Distribution of Wealth¹ in Western and Eastern Germany

	2002			2007			2012		
	Lower threshold ²	Estimate	Upper threshold ²	Lower threshold ²	Estimate	Upper threshold ²	Lower threshold ²	Estimate	Upper threshold ²
Western Germany									
Gini coefficient	0.750	0.761	0.771	0.771	0.784	0.797	0.751	0.768	0.786
Percentile ratios									
p90/p50	10.8	11.9	13.1	11.0	12.7	14.3	9.8	11.3	12.8
p75/p50	5.2	5.6	6.1	5.1	5.8	6.5	4.8	5.5	6.2
Mean, in euros	85,724	90,004	94,283	87,824	93,651	99,478	89,171	93,790	98,409
Percentiles, in euros									
p99	741,771	834,853	927,935	699,732	897,841	1,095,949	765,572	876,050	986,528
p95	336,483	353,200	369,917	345,001	366,300	387,599	342,559	363,980	385,401
p90	225,277	235,700	246,123	228,855	239,700	250,545	228,700	239,300	249,900
p75	106,958	111,535	116,111	105,004	109,900	114,796	109,784	116,445	123,106
Median	17,964	19,800	21,636	16,433	18,910	21,387	18,061	21,200	24,339
p25	0	0	0	0	0	0	0	0	0
p10	0	0	0	0	0	0	0	0	0
p5	-2,631	-1,271	89	-4,649	-3,610	-2,571	-4,339	-3,000	-1,661
p1	-22,995	-19,500	-16,005	-36,306	-29,800	-23,294	-32,691	-26,380	-20,069
Proportion of individuals with net assets of less than 0 euros, in percent	4.6	5.0	5.5	6.4	7.1	7.8	6.4	7.1	7.7
Proportion of individuals net assets equaling 0 euros, in percent	19.9	20.6	21.4	18.5	19.3	20.1	19.0	19.8	20.7
Eastern Germany									
Gini coefficient	0.757	0.816	0.875	0.792	0.823	0.854	0.767	0.792	0.817
Percentile ratios									
p90/p50	12.1	14.10	15.8	10.2	12.8	15.5	11.1	13.8	16.5
p75/p50	5.2	6.0	6.7	4.5	5.6	6.7	5.2	6.2	7.2
Mean, in euros	32,281	36,713	41,145	29,188	32,007	34,827	37,211	41,138	45,065
Percentiles, in euros									
p99	263,346	341,657	419,967	226,245	274,704	323,164	319,600	399,820	480,040
p95	143,744	153,580	163,416	122,440	134,917	147,393	152,386	171,359	190,332
p90	98,627	104,938	111,249	84,231	91,014	97,796	102,342	111,580	120,818
p75	40,931	44,850	48,769	35,083	39,820	44,557	45,422	50,000	54,578
Median	6,427	7,500	8,573	5,607	7,100	8,593	6,429	8,080	9,730
p25	0	0	0	0	0	0	0	0	0
p10	0	0	0	-33	0	33	-107	0	107
p5	-4,386	-3,000	-1,614	-6,363	-4,731	-3,100	-4,879	-3,600	-2,321
p1	-31,746	-24,840	-17,934	-39,458	-28,120	-16,782	-18,991	-15,600	-12,209
Proportion of individuals with net assets of less than 0 euros, in percent	5.2	6.0	6.8	7.3	8.5	9.7	7.4	8.9	10.3
Proportion of individuals with net assets equaling 0 euros, in percent	19.4	20.7	22.1	19.6	21.0	22.4	20.0	21.9	23.8

1 Individual net assets of individuals aged 17 or over in private households.

2 95-percent confidence interval.

Statistically significant changes relative to the previous survey year are shaded gray.

Source: SOEPv29, with 0.1 percent top coding.

On average, net assets in western Germany are more than twice as high as in eastern Germany.

sets and simultaneous high debt (for example, young families burdened with mortgages just after purchasing a home), or it might simply mean low monetary assets.

Just under half of the adult population (47 percent) had monetary assets in 2012 (savings accounts, savings bonds and Pfandbriefe, stocks, and investment certificates) or assets in the form of private insurance policies and building loan contracts (51 percent) (see Table 3). The

prevalence of private insurance policies has increased significantly since 2002. One reason for this is Riester retirement plans, introduced in early 2000.¹⁵ On average, the value of these investments was approximately 29,000 euros in monetary assets and about 18,000 euros in private insurance policies. The value of monetary assets has increased by 7,000 euros or 30 percent since 2002.¹⁶

For all adults, owner-occupied property is the quantitatively most important form of wealth, at 54,000 euros. Almost 40 percent have this form of investment in their portfolios;¹⁷ just one-tenth hold other types of real estate, which are clearly much less prevalent. For those with owner-occupied real estate, this accounts for approximately 141,000 euros on average. The corresponding figure for other real estate is 156,000 euros.

Liabilities have increased significantly: the proportion of Germans in debt rose from 27.5 in 2002 to just under 32 percent in 2012. This is the result of a single factor: the greater prevalence of consumer loans. The volume of these loans has declined significantly, however—from over 21,000 euros to just under 15,000 euros. In other words, smaller liabilities, for example, for purchasing articles of daily use, play a more important role.¹⁸ The situation is different for mortgages on owner-occupied housing. Although the prevalence of these liabilities has not changed, their values increased by 17 percent, from 47,000 euros in 2002 to 55,000 euros in 2012. Low interest rates for financing real estate purchases are likely to have had an effect here, leading to a demand for bigger mortgages.

Only four percent of all individuals own business assets, yet they account for just below ten percent of total net assets. Accordingly, the average amount of business assets held by people owning a business was more than 190,000 euros in 2012.

Owning property and taking out mortgages are still more prevalent in western than eastern Germany. In contrast, consumer loans are significantly more com-

mon in eastern Germany. As expected, the value of owner-occupied housing was considerably lower in eastern Germany (88,000 euros) in 2012 than in western Germany (151,000 euros).¹⁹ The volume of consumer loans, however, did not differ significantly, at 12,000 and 15,000 euros, respectively.

Individual Position Regarding Wealth Strongly Dependent on Age

For western Germany, a comparison of wealth across age groups shows a distinct life-cycle pattern (see Figure 2): in 2012, the average net assets of young adults up to 25 years of age were less than 7,000 euros. After completing their education and entering the labor force, they have the opportunity to save and accumulate wealth; at the same time, the probability of inheriting or being endowed with wealth is higher. As a result, average net total assets increase markedly from age 26 on. The highest average individual net assets—just under 175,000 euros—are owned by the group aged 66 to 70. Here, the establishment of net assets in the form of real estate is particularly important as it is often paid off by retirement age. In older age, wealth is typically drawn on, resulting in a slight decline in average net wealth.

A comparison of western and eastern Germany reveals that there are no longer any significant differences in net wealth up to the age of 40. When entering the labor force, people usually have few assets, so the significant differences are in fact of little consequence. However, older cohorts in eastern Germany fall far behind the level in western Germany since their average assets total only just over 50,000 euros.²⁰ The large difference can be explained by the fact that citizens of the former German Democratic Republic have lacked opportunities to save because of a low wage level and high unemployment in eastern Germany. The differences in wealth between east and west are therefore expected to continue to exist as they carry over in the form of intergenerational transfers.

15 J. Geyer, „Riester-Rente: Rezept gegen Altersarmut?“, Wochenbericht des DIW Berlin, no. 45 (2011).

16 According to the Federal Statistical Office, Sektorale und Gesamtwirtschaftliche, aggregate gross monetary assets held by private households increased by 38 percent between 2002 and 2012.

17 Although it is true that 53 percent of all residents of Germany lived in households with owner-occupied property in 2011, the proportion of people with owner-occupied property was only 38 percent. In many households, owner-occupied property belongs to just one household member; in particular, grown children still living with their parents are generally only „co-residents“ but not „co-owners.“

18 Zero-interest financing offered by retailers likely contributed to this situation.

19 The strong increase in rental and purchase prices for real estate since 2010, which has been reported on frequently, is concentrated primarily on certain metropolitan regions such as Munich or Berlin. On average, real estate prices have increased by only 1.7 percent per year in real terms, following more than ten years of declining real house prices, see J. Möbert, H. Peters, and M. Lechler, „Deutschlands Hauspreise aus internationaler und historischer Perspektive“, Wirtschaftsdienst, no. 1 (2014): 76-78.

20 It is striking that a comparison of cohorts shows that eastern Germans born in 1957 or earlier (at least 51 years of age in 2012) have not been increasing their assets over the past ten years.

Table 4

Components of Individual¹ Net Assets

	Germany									Western Germany			Eastern Germany		
	2002			2007			2012			2002	2007	2012	2002	2007	2012
	Lower ²	Estimate	Upper ²	Lower ²	Estimate	Upper ²	Lower ²	Estimate	Upper ²						
Percentage of people owning assets in the population aged 17 or older															
Gross wealth	69.7	70.4	71.1	73.5	7.3	75.1	756	76.5	77.4	70.4	74.4	76.9	70.4	73.6	74.7
Owner-occupied property	37.0	3.7	38.3	35.2	36.1	37.0	37.3	38.2	39.1	39.6	38.1	400	294	28.2	30.8
Other real estate	9.2	9.7	10.2	9.3	9.9	10.4	9.3	10.0	10.7	10.5	10.7	10.7	6.5	6.7	7.0
Financial assets	44.7	45.5	46.3	46.8	47.7	48.7	45.7	46.8	47.9	45.3	48.3	47.4	46.2	45.6	44.3
Business assets	4.1	4.4	4.7	3.6	4.0	4.5	3.9	4.2	4.5	4.5	4.1	4.3	4.0	3.7	4.0
Valuables	8.5	9.0	9.5	5.3	5.8	6.2	5.7	6.2	6.7	10.1	6.4	7.0	4.2	3.4	2.9
Insurance policies and building loan contracts	46.9	48.0	49.1	50.9	51.8	52.8	49.5	50.5	51.4	47.5	52.1	50.2	50.1	50.8	51.6
Insurance policies	–	–	–	39.0	39.7	40.5	38.1	39.1	40.1	–	39.9	38.4	–	39.0	41.9
Building loan assets	–	–	–	28.6	29.4	30.2	28.2	29.1	29.9	–	29.9	29.7	–	27.3	26.6
Debt	26.8	27.5	28.3	30.0	30.9	31.8	30.8	31.7	32.6	28.4	31.4	32.2	23.7	28.9	29.6
Mortgages on owner-occupied housing	17.9	18.5	19.2	16.9	17.5	18.1	17.0	17.7	18.4	19.4	18.5	18.7	14.6	13.9	13.4
Mortgages on other real estate	3.9	4.2	4.5	3.9	4.3	4.7	3.7	4.1	4.6	4.8	4.8	4.6	1.7	2.3	2.2
Consumer loans	11.2	11.7	12.3	15.6	16.4	17.2	15.8	16.4	17.1	11.5	15.9	15.5	13.0	18.4	20.1
Asset components as percentages of net assets															
Gross wealth	119			120			119			118	117	116	125	124	119
Owner-occupied property	62			59			63			62	52	57	69	61	57
Other real estate	20			21			18			21	19	17	10	8	9
Financial assets	12			15			16			12	13	14	16	16	16
Business assets	11			11			9			11	10	8	13	10	10
Valuables	2			2			1			2	1	1	3	1	1
Insurance policies and building loan contracts	11			12			11			11	11	10	14	14	13
Insurance policies	–			9			8			–	8	7	–	9	9
Building loan assets	–			3			3			–	3	3	–	5	4
Debt	19			20			19			18	17	16	25	24	19
Mortgages on owner-occupied housing	10			11			11			10	10	10	15	15	11
Mortgages on other real estate	5			5			4			5	5	4	3	3	3
Consumer loans	3			3			3			3	2	2	7	6	5
Net assets	100			100			100			100	100	100	100	100	100
Assets per owner aged 17 or older (mean)															
Gross wealth	125,921	13,504	137,087	124,284	131,525	138,765	127,338	132,596	137,855	147,755	150,592	148,368	61,426	55,001	67,287
Owner-occupied property	136,041	13,752	141,463	134,442	138,354	142,266	136,551	141,085	145,618	147,627	149,276	151,356	87,499	80,785	87,338
Other real estate	149,763	171,980	194,197	154,102	175,943	197,784	129,804	155,553	181,301	188,034	196,690	170,498	60,150	46,945	62,921
Financial assets	21,121	22,306	23,491	23,479	26,889	30,300	26,354	28,996	31,637	24,540	30,177	31,737	12,892	13,281	17,198
Business assets	135,485	212,347	289,208	157,212	222,933	288,655	147,409	191,368	235,326	231,670	251,535	208,442	118,368	98,320	118,662
Valuables	10,091	18,089	26,087	8,203	22,452	36,701	11,896	15,438	18,980	17,614	24,344	15,824	22,975	8,776	11,713
Insurance policies and building loan contracts	18,283	19,569	20,854	18,587	19,718	20,848	17,490	18,634	19,779	21,899	22,061	20,288	10,072	10,322	12,164
Insurance policies	–	–	–	17,081	18,401	19,721	15,465	16,678	17,890	–	20,761	18,375	–	8,957	10,431
Building loan assets	–	–	–	9,076	9,894	10,712	9,380	9,931	10,482	–	10,707	10,550	–	6,411	7,154
Debt	49,637	53,040	56,444	48,338	51,362	54,387	47,167	50,079	52,990	56,325	56,188	54,445	36,087	30,557	30,936
Mortgages on owner-occupied housing	45,006	47,412	49,817	51,625	53,635	55,646	51,947	55,314	58,681	49,119	56,290	58,166	37,675	39,840	39,256
Mortgages on other real estate	86,035	103,344	120,653	88,199	105,391	122,584	68,348	89,380	110,411	106,567	111,977	92,129	62,907	51,878	66,335
Consumer loans	17,620	21,407	25,194	13,497	14,853	16,209	12,637	14,691	16,746	21,742	15,613	15,532	20,134	12,293	12,084

1 Individual net assets of individuals aged 17 or older in private households.

2 95-percent confidence interval. Statistically significant changes relative to the previous survey year are shaded in light gray. Statistically significant changes between 2002 and 2012 are shaded in dark gray.

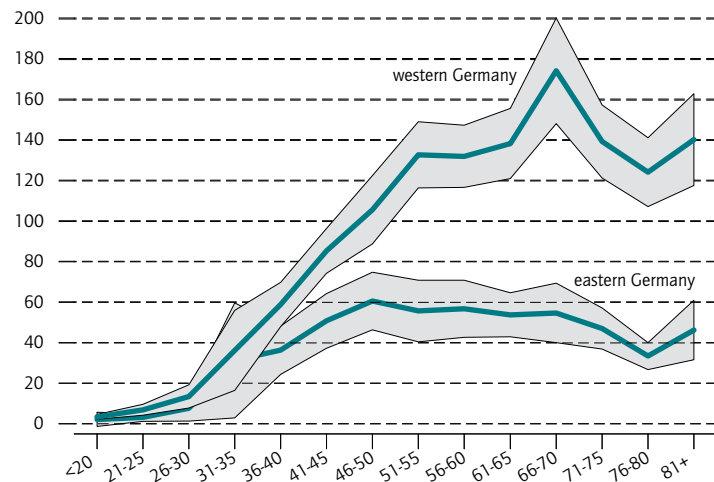
Source: SOEPv29.

The fraction of people with consumer loans has increased.

Figure 2

Individual¹ Net Assets by Age Groups and Region in 2012

In thousands of euros



¹ Individuals aged 17 or older in private households
Source: SOEPv29, with 0.1 percent top coding. Gray area = 95-percent confidence region.

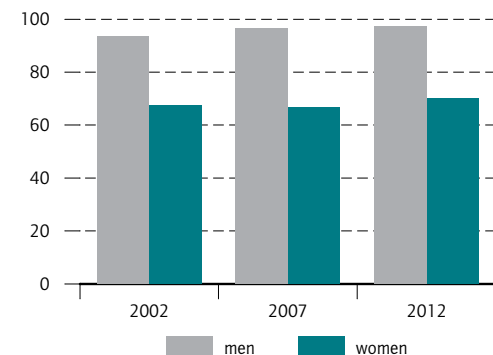
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Middle-aged or older eastern Germans have significantly fewer assets.

Figure 3

Individual¹ Net Assets by Gender

In thousands of euros



¹ Individuals aged 17 or older in private households
Source: SOEPv29, with 0.1 percent top coding.

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Men's net assets are higher than women's.

Men Have Greater Assets than Women

Studies on wealth typically survey only one representative of a household about the assets of all members of the household. This does not allow an analysis of gender-specific differences in assets. The SOEP is one of the few data sources surveying assets at the individual level. In 2012, men's individual net assets averaged 97,000 euros, 27,000 euros more than women's (see Figure 3). This equates to women having only 72 percent of the assets held by men.

Self-Employed Have the Highest Net Assets

A person's net assets grow as they climb the career ladder. There are, however, significant differences among the various groups of employees. Unskilled or semi-skilled workers and employees had assets of approximately 33,000 euros in 2012, whereas skilled workers had assets of 45,000 euros (see Table 4). Supervisors, specialists, and employees with qualified activities owned 83,000 euros, while employees with comprehensive leadership tasks attained an average individual net assets of almost 210,000 euros. At the same time, the proportion of people with assets of zero or less decreased as their career position improved.

Subdivided into service grades, public officials with a low or medium grade had net assets of 80,000 euros and therefore owned as much as employees carrying out qualified activities. In contrast, public officials with a higher grade had net assets of more than 110,000 euros.

The self-employed had the highest assets of all. On the one hand, the self-employed are generally not entitled to statutory pensions and more likely to have private pension plans in the form of private insurance or real estate. On the other hand, this is due to business assets. The self-employed with no employees had net assets of slightly more than 170,000 euros, with this figure rising to just under one million euros for the self-employed with more than ten employees.

The unemployed and non-workers owned relatively few assets. Non-workers had by far the lowest assets—apart from trainees—with an average of 18,000 euros. In addition, the assets of the unemployed have fallen significantly over time; in 2002, this figure was still over 30,000 euros.²¹ The proportion of people with assets of less than or equal to zero in 2012 was highest among the unemployed at 65 percent.

²¹ Hartz IV legislation may have played a role here. It states that all assets up to the allowed exemption (including owner-occupied real estate) must be used up before a person can draw unemployment benefits known as Arbeitslosengeld II (paid after the first 12 to 18 months of unemployment).

Table 5

Individual¹ Net Assets by Social Status in 2012

	Lower threshold ³	Mean	Upper threshold ³	Median	Fraction with assets less than or equal to 0 euros	For informational purposes: structure of the population aged 17 or older
	In euros				In percent	
Apprentice, intern	5,310	7,881	10,452	10	49.9	7.2
Unskilled, semi-skilled workers, employees without any qualifications	27,417	32,527	37,637	2,000	43.8	10.6
Skilled workers, employees with low-qualification positions	39,690	45,076	50,462	9,858	27.6	10.6
Supervisors, specialists, employees with qualified positions	76,466	83,039	89,611	34,000	15.3	23.6
Employees with extensive managerial responsibilities	162,013	209,096	256,178	114,595	13.8	0.7
Lower- and middle-level civil servants	60,813	79,776	98,738	42,468	11.0	1.2
Upper-middle-level and upper-level civil servants	95,329	113,810	132,291	80,100	9.7	2.4
Self-employed without employees	131,671	172,334	212,996	50,018	19.1	3.6
Self-employed with 1 to 9 employees	266,513	329,044	391,576	145,124	6.5	1.8
Self-employed with 10 or more employees	551,172	952,264	1,353,355	504,860	3.0	0.3
Not gainfully employed	51,911	61,901	71,890	5,578	39.1	5.8
Unemployed	12,560	17,797	23,035	0	65.5	5.0
Pensioners	104,056	112,163	120,269	49,900	21.9	27.2
Total	79,218	83,308	87,399	16,663	7.4	100.0

1 Individual net assets of individuals aged 17 or older in private households.

2 95-percent confidence interval.

Statistically significant changes relative to 2002 are shaded gray.

Source: SOEPv29.

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The unemployed and apprentices have the fewest assets.

Single Parents with the Lowest Assets

To differentiate by household type in the asset analysis, the following considers the per capita household wealth instead of individual assets per adult. In 2012, single parents with two or more children were in possession of almost 21,000 euros and had the lowest volume of per capita net assets (see Table 5). If a single parent lives with only one child, his or her net assets rise to 35,000 euros, but this figure is still significantly below that of a couple household with only one child (around 63,000 euros). It is also evident in couple households that per capita wealth decreases with an increase in the number of children. In 2012, couple households with two children had slightly more than 50,000 euros, and with three or more children only 44,000 euros. In contrast, (married) couples with no children had average assets of 108,000 euros. Men living alone aged 60 or over had the highest per capita assets of 150,000 euros. It can be assumed here that many are widowers and have inherited the assets of a former spouse. The average net assets of this group of widowed men living alone was around 190,000 euros, almost 80,000 euros more than widowed older women living alone.

The Higher the Net Income, the Greater the Assets

Disposable income²² is more evenly distributed than assets. Nevertheless, there is a close link between the two economic figures—not least due to income from capital assets, such as interest and dividends or rental income.

For all the three years monitored, there was a significant positive correlation between per capita household net income and per capita net assets (see Figure 4). While the lowest 10 percent of incomes only had average assets of nearly 20,000 euros, the corresponding figure for the ninth decile was just under 130,000 euros, and the highest ten percent of the population had almost 285,000 euros.

From 2002 to 2012, the upper income groups were able to further increase their assets. The ninth and tenth income decile showed increases in average per capita assets of more than 25,000 euros. This was also statistically significant for the ninth decile. In contrast, the

22 Grabka and Goebel, "Rückgang der Einkommensungleichheit," 13–23.

Table 6

Per Capita Net Assets¹ by Household Type in 2012

	Lower threshold ²	Mean	Upper threshold ²	Median	Fraction with assets less than or equal to 0 euros	For informational purposes: structure of the population
	In euros				In percent	
1-person household, under 60, male	40,668	81,349	122,030	3,572	39	10.6
1-person household, aged 60 or older, male	120,821	150,047	179,272	48,080	25	6.5
1-person household, aged 60 or older, male, widowed	146,039	188,784	231,529	85,138	19	2.7
1-person household, under 60, female	39,888	49,030	58,173	6,402	35	9.6
1-person household, aged 60 or older, female	89,451	105,362	121,272	26,365	26	14.2
1-person household, aged 60 or older, female, widowed	96,560	110,425	124,291	40,800	22	8.6
(Married) couple with no children	100,185	108,028	115,870	56,004	13	31.0
Single parent with one child	22,658	35,038	47,417	1,591	43	3.1
Single parent with two or more children	10,860	20,800	30,741	1,443	37	2.0
(Married) couple with one child	52,412	62,579	72,745	31,100	17	10.6
(Married) couple with two children	42,412	50,586	58,760	28,267	15	8.7
(Married) couple with three or more children	33,269	44,034	54,800	20,297	20	2.8
Other households	29,897	54,488	79,079	24,415	23	1.1
Total	79,026	85,663	92,301	25,200	23	100
<i>For informational purposes:</i>						
Gini coefficient	0.736	0.756	0.776			
P90/p50 ratio	7.6	8.4	9.2			

¹ Individual net assets of individuals in private households.

² 95-percent confidence interval.

Source: SOEPv29.

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(Married) couples with no children have over 108,000 euros in assets per capita.

assets of the lowest 30 percent of incomes remain unchanged during the observation period.

Asset Poverty Decreases With Age

One of the core functions of assets is to stabilize consumption in the event of income losses. This applies in the short term during a period of unemployment as well as in the long term, especially during the transition from work to retirement.²³

Contrary to the standard developed in particular at the European level to describe relative income poverty risk,²⁴ there is still no universally accepted definition of asset poverty. By analogy to determining poverty risk through income, individuals are defined here as being threatened by relative asset poverty if they have per capita house-

hold net assets of less than 60 percent of the median of the total population.²⁵

The proportion of adults affected by relative income poverty in 2012 was approximately 16 percent (see Figure 5). Since assets are significantly less evenly distributed than income, the ratio of those affected by relative wealth poverty was notably higher at 44 percent. In total, 12 percent are affected by both relative income and asset poverty, while four percent of the total population earn low incomes, but, at the same time, are able to rely on significant assets of their own or from other household members.

Since wealth is normally accumulated over the course of an individual's life, the proportion of those not on low incomes or having few assets increases with age. In 2012, two-thirds of households with a head of the household aged 66 to 75 were part of this group. At the same time, the proportion of those with few assets but not on low

²³ It should be noted here that the various forms of investment have different liquidity so in the event of a loss of income, assets cannot always be liquidated and, in addition, assets up to the allowed exemption are taken into account for benefit claims.

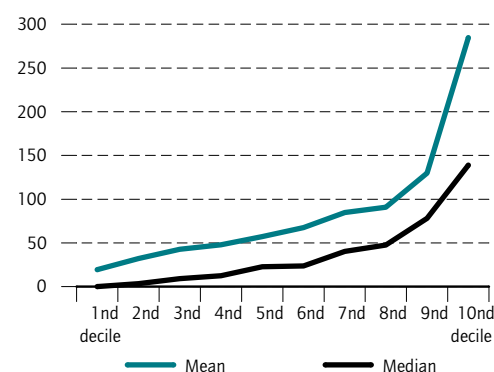
²⁴ See also Tony Atkinson, Bea Cantillon, Eric Marlier, and Brian Nolan, Social Indicators. The EU and Social Inclusion (Oxford: 2002).

²⁵ The poverty threshold for 2012 was just under 15,000 euros per capita and therefore significantly higher than using data on individual wealth. Here, the household's internal „redistribution process“ also reflects that individuals with no assets will benefit from the assets of other household members.

Figure 4

Average Per Capita Assets¹ by Income Deciles in 2012

In thousands of euros



¹ Income information based on the previous year's income surveyed retrospectively. Net household income of individuals in private households. Source: SOEPv29.

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The higher the net income, the higher the net assets.

incomes as well as those with low incomes and few assets declined. There was a sharp contrast between 34 percent of households with a head of household aged 17 to 25 years in this category compared to only five percent of those at retirement age. For households where the head of household is older (aged 76 or over), the proportion of those with few assets increases slightly because at this age, capital transfers are often made in the form of gifts to the next generation.

Conclusion and Outlook

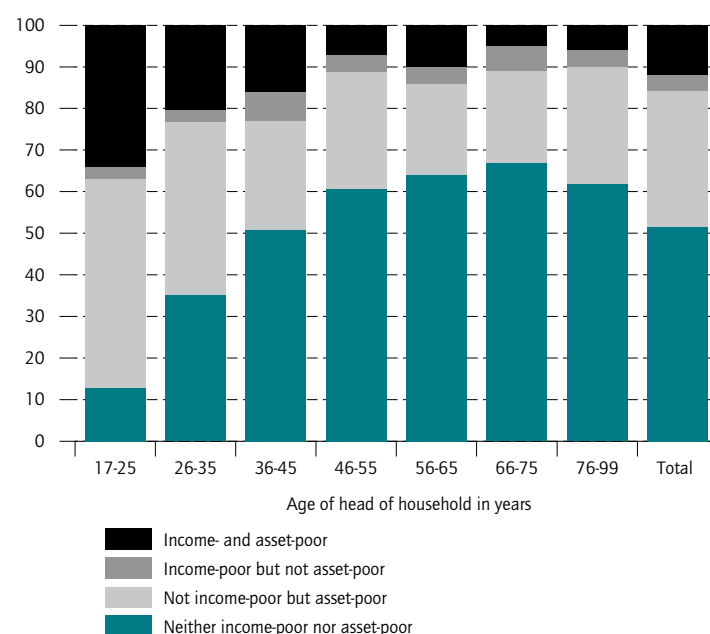
Between 2007 and 2012, individual average net assets in Germany did not increase significantly, according to the SOEP. With a Gini coefficient of 0.78, wealth inequality remained high compared to other countries.

Against a background of private pensions becoming increasingly common, the significant rise in the number of people with negative net assets is problematic. On the other hand, the proportion of people with private insurance has increased significantly since 2002. This is presumably also due to Riester retirement plans. The average asset value of private insurances (including building loan contracts) in 2012 was only approximately 19,000 euros. It remains to be seen whether the gap in pension coverage can be closed by the statutory pension scheme. Net assets in eastern Germany are still significantly low-

Figure 5

Relative Income Poverty Risk and Asset Poverty Risk¹ by Age of Head of Household in 2012

Percentage



¹ Income information based on the previous year's income surveyed retrospectively. Net household assets of individuals in private households. Source: SOEPv29.

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The proportion of income-poor and asset-poor people declines up until retirement age.

er than in western Germany. In particular, with the increasing number of new pensioners, eastern Germans are not able to combat the increasing risk of poverty in old age with their private assets.²⁶

Markus M. Grabka is a Research Associate at the Research Infrastructure Socio-Economic Panel Study at DIW Berlin | mgrabka@diw.de

Christian Westermeier is a Research Associate at the Research Infrastructure Socio-Economic Panel Study at DIW Berlin | cwestermeier@diw.de

JEL: D31, I31

Keywords: Wealth inequality, wealth portfolio, SOEP

26 J. Simonson, N. Kelle, L. Romeu Gordo, M. M. Grabka, A. Rasner, and C. Westermeier, "Ostdeutsche Männer um 50 müssen mit geringeren Renten rechnen," DIW Wochenbericht, no. 23 (2012): 3-13.

Gender Pension Gap in Eastern and Western Germany

By Anika Rasner

Now, 25 years after the fall of the Berlin Wall, eastern and western German men are receiving similar state pensions, the main pillar in the system of old age provision in Germany. In contrast, the average pension paid to eastern German women far exceeds that of their western counterparts. A cohort comparison shows a narrowing of the gender gap when it comes to pension entitlements in eastern Germany. This decline is less a result of higher pension entitlements among eastern German women than a consequence of significant drops in pensions among eastern German men. In western Germany, however, the gender pension gap has remained consistently high throughout the cohort comparison. Western German women born in the baby boom years have only managed to narrow the gender gap to a limited extent despite their increasing labor participation.

The present analysis first compares the development of average pension payments received by pensioners in eastern and western Germany who retired between 1993 and 2013. A cohort comparison analyzes the extent to which the existing East-West differences, particularly among women, are likely to continue into the future.

With the passing of the Unification Treaty of August 31, 1990 and the Pension Transfer Law of July 25, 1991, the German pension laws set down in Book VI of the German Social Code were extended to include the states of the former German Democratic Republic (GDR).²⁷ Consequently, on January 1, 1992, the day on which the new regulations came into effect, almost eight million people who are insured in the statutory pension insurance and just under four million pensioners from the former GDR were merged with the western German system.²⁸

One of the biggest challenges that arose in connection with the alignment of the two pension insurance systems was recalculating existing eastern German pensions on the basis of western German pension laws. Although pension insurance in the GDR was also organized on the basis of a pay-as-you-go (PAYG) system, there were still substantial differences between east and west. At the time of reunification, for example, pension levels in the GDR were still very low,²⁹ with many pensioners on minimum-level pensions.

The German Pension Transfer Law meant existing pension entitlements were re-calculated, taking into consideration the number of contribution years, as well as the individual average incomes for the last 20 years. Owing to the clear differences in income in the east and west, eastern German incomes had to be upscaled.³⁰ This

27 These analyses came about during the Hans Böckler Foundation-backed project "Die Entwicklung der geschlechtsspezifischen Rentenlücke in Deutschland: Analysen zu Entstehung und Bestimmungsfaktoren im Lebenslauf," project no. S-2012-613-4.

28 One of the main criticisms made was the fact that reunification-related costs were financed to a certain extent through pension and unemployment insurance. An overview of pension insurance during the process of reunification is provided by G. Ritter, "Die Rentenversicherung im Prozess der deutschen Wiedervereinigung," (2011), in: E. Eichenhofer, H. Rische, and W. Schmähl, eds., "Handbuch der gesetzlichen Rentenversicherung," Book VI of the German Social Code (Cologne): 67-103.

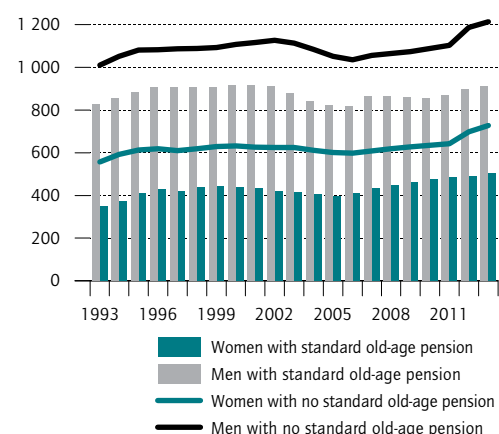
29 E. Kirner, H. Vortmann, and G.G. Wagner, "Übergang zum neuen Rentensystem ist schwierig," DIW Wochenbericht, no. 14 (1990): 167-171.

30 The conversion rates used to upwardly adjust the eastern German payments can be found in Schedule 10 of the German Social Code Book VI. Owing to the different standards of living and wealth in the east and west, the

Figure 1

Average Monthly Pensions for All Old-Age Pensioners for Those Entering Retirement from 1993 to 2013 (West)

In euros (nominal)



Sources: German Statutory Pension Insurance (DRV) statistics: *Rentenversicherung in Zeitreihen* – DRV Brochure, no. 22 (Berlin: 2013); calculations by DIW Berlin.

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A slight upward trend can be seen in pension rates for western German women.

provided a basis for recalculating existing pensions, as well as for new pension entitlements for those retiring after reunification. The aim here was to achieve a comparable level of old-age provision in eastern and western Germany.

The present article shows, first and foremost, the development of statutory pension payments since reunification for women and men in eastern and western Germany. The extent to which the existing east-west differences will affect future pension generations is analyzed on the basis of projected data.

Development of Pension Payments since Reunification

Figures 1 and 2 show an east-west comparison of average monthly pensions for men and women who reached pension entitlement age between 1993 and 2013.³¹ The figures for new pensioners include all those who started receiving an old-age pension within the given calendar year. The columns in the figures denote the nominal averages for all old-age pensions in a given year, while the horizontal lines represent those receiving a

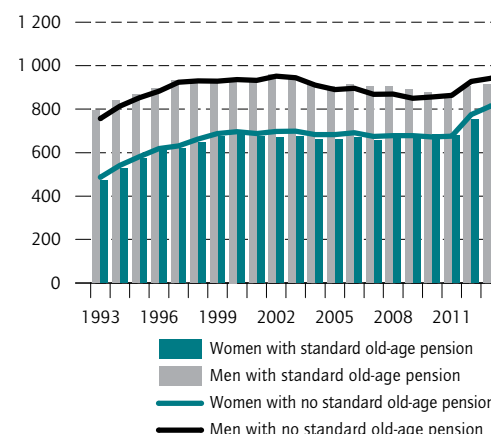
eastern German entitlements are assigned a higher value even 25 years after the fall of the Wall.

31 The first ever reliable statements on the development of pension payments in eastern Germany were made in 1993.

Figure 2

Average Monthly Pensions for All Old-Age Pensioners for Those Entering Retirement from 1993 to 2013 (East)

In euros (nominal)



Sources: German Statutory Pension Insurance (DRV) statistics: *Rentenversicherung in Zeitreihen* – DRV Brochure, no. 22 (Berlin: 2013); calculations by DIW Berlin.

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The gender pension gap in eastern Germany is less striking.

“standard old-age pension”, who are not included in the calculations (see Box 1). The low standard old-age pension payments have a dampening effect on average pension levels.

During the period under observation, no notable increase in nominal average pensions for western German men was evident (825 euros in 1993 compared with 913 euros in 2013). In the case of western German women, in contrast/conversely, an upward trend, albeit rather slight, can be observed. Average pensions rose from 350 euros in 1993 to 505 euros in 2013.³² The gender pension gap narrowed from around 58 to just below 45 percent during this period.³³

If standard old-age pensions are not included in the calculations,³⁴ the average pensions for men in western Germany increase from 1,010 euros in 1993 to 1,213 euros in 2013, while in the same period western German women's pensions went up from 558 to 728 euros. Here, the reduction in the gender pension gap from 45 to 40 per-

32 At an average rate of inflation of just under two percent per year, this resulted in losses in real pension payments.

33 The gender pension gap measures the difference (in percent) between the average statutory pension payments for men and women. See A. Rasner, “Das Konzept der geschlechtsspezifischen Rentenlücke,” *Deutsche Rentenversicherung*, vol. 55 (2006): 270–284.

34 In 2013, 42 percent of women qualified for a standard old-age pension, while the equivalent for men was only 32 percent.

Box 1

Glossary of Pension Terms

Earnings-related pension points: In order to calculate the pension level, the time a person has paid into the statutory pension scheme is converted into points. For this calculation, the individual earnings of the insured person are divided by the average earnings of all those who have paid into the system. One point is awarded for each year at average earnings. For half the average wage, 0.5 points are counted. Additional pension points can be earned for periods that are of relevance for pension insurance, such as maternity leave. Due to the persistent salary differences in eastern and western Germany, a conversion factor is applied to bring points earned in eastern Germany in line with western levels (see Schedule 10 of Book IV of the German Social Code (SGB IV)).

Standard old-age pension: The eligibility age for a standard old-age pension is gradually being increased to 67 years. For those born in 1949 the standard old-age pension is payable at age 65 and three months. To be eligible for a standard old-age pension, the only requirement is a minimum of five years' contributions. Those receiving a standard old-age pension are a rather heterogeneous group, including, on the one hand, civil servants who had paid into the statutory pension fund for a number of prior years, making them eligible for a standard old-age pension, and, on the other hand, western German women with low labor market participation. Due to the relatively short contribution periods, standard old-age pensions are rather low. When calculating averages for all old-age pensions, the standard old-age pension payments have a cushioning effect on the resulting averages.

cent is less significant. The different results can be attributed to the large proportion of western German women claiming a standard old-age pension, who, owing to their low level of labor participation, fail to meet the eligibility requirements for early old-age pensions such as the old-age pension for women.

A comparison of all old-age pensioners with those not claiming a standard old-age pension shows the differences in eastern Germany are less striking. For both men and women, an increase in average nominal pensions from 1993 to 2013 was observed. For eastern German men, average pensions rose slightly from 794 to 915 euros, as compared with an increase from 471 to 786 euros for women in eastern Germany. Between 1993 and 2013, the gender pension gap closed from 41 to 14 percent. The considerable differences in pension payments between eastern German men and women shortly after reunification are surprising; the efforts to improve gen-

der equality in the former GDR would appear to have been more fruitful than in West Germany. Having said that, this did not apply to eastern German women who retired post-reunification. Many of the women had no formal professional training and were earning far less than their male counterparts. In addition, many women had to stop working to raise their children.³⁵ This would suggest that it is younger birth cohorts that profit most from the gender equality. For this age group, full-time employment for men and women was actively encouraged in the GDR and supported by extensive childcare opportunities.³⁶ Consequently, the gender pension gap for the newly retired is much less pronounced than is the case in western Germany.

While the increase for eastern and western men was rather moderate during the period of observation, the average pensions of their female counterparts were on the rise. In eastern Germany, the gender pension gap had narrowed significantly, whereas in western Germany the gap was closing very slowly, leaving it still relatively wide. In terms of east-west differences, 25 years after the fall of the Wall, it can be said that, on average, eastern and western German men are almost on an equal footing when it comes to the most important pillar of the system for old-age provision in Germany. The situation for their female counterparts, on the other hand, is very different with the pensions of eastern German women far exceeding those of their western German counterparts. The standard pension alone, however, cannot be taken as an indicator for social security in old age. Furthermore, if occupational and private pension funds are also taken into account, the disposable income of western German pensioners is in fact far higher since supplementary insurance schemes continue to be less widespread in eastern Germany.³⁷ In addition, since women have less frequent and overall lower pension entitlements in occupational and private pension schemes, the gender pension gap would become even wider, particularly in western Germany.

Various Reasons for Gender Pension Gap

In the German statutory pension insurance scheme (GRV), those in dependent employment essentially begin to accumulate pension entitlements when they start their first job where they are liable for social security contributions. The greatest share of pension entitlements

35 H. Trappe, "Lost in Transformation? Disparities of Gender and Age," in: M. Diewald, A. Goedicke, and K.U. Mayer, eds., *After the Fall of the Wall: Life Courses in the Transformation of East Germany*, (Stanford, 2007): 116-139.

36 B. Hanel, and R. T. Riphahn, "The Employment of Mothers - Recent Developments and their Determinants in East and West Germany," *Journal of Economics and Statistics* 232(2) (2012): 146-176.

37 K. Kortmann and T. Heien, *Alterssicherung in Deutschland 2011 (ASID 2011) - Zusammenfassender Bericht*, (Munich: TNS Infratest Sozialforschung, 2012).

comes from employment subject to social insurance contributions. For this reason, the statutory pension insurance in Germany is regarded as earnings-centered. Nonetheless, some forms of non-gainful employment can also earn a person pension entitlements, for example, during studies, periods of unemployment or sick leave, as well as when bringing up children or taking care of sick or elderly relatives (unpaid). Such attempts at achieving social equality help close certain gaps in the individual employment history and mitigate the negative effects that temporary non-gainful activities may have. On average, women profit from this pension-related recognition of periods of non-gainful employment more than men.³⁸

There are many different reasons for the gender pension gap. When men and women enter into employment for the first time, they make various choices as to profession and studies with men tending to opt for those areas with higher average salaries and salary increases.³⁹ Men and women also differ with regard to educational return on investment. In other words, even in cases where women and men do enter the same profession, women will have lower average earnings.⁴⁰

In a pension scheme that is largely earnings-based, as is the case in Germany, differences in salary between women and men⁴¹ are one of the major factors contributing to the gender pension gap. Salary differences are also a result of women often being employed in low-salary jobs.⁴² In addition, more women work part-time with correspondingly lower earnings or take on “mini-jobs,”⁴³ where no pension entitlements can normally be accumulated.⁴⁴ Besides lower labor market participation, women also take breaks in employment more often and for longer periods, in particular to raise their children and

help care for family members.⁴⁵ On the one hand, this interruption to working life may be an expression of personal preference. It may, however, also be due to insufficient childcare facilities and care support systems. Part-time employment and mini-jobs often provide women with the flexibility they need to be able to combine work and family life. The low employment prospects for women may, however, also be a result of income splitting, which can bring about particularly good tax benefits if one spouse—normally the husband—has a higher salary and the other spouse—normally the wife—has very little or no taxable income at all.⁴⁶

The gender pension gap continues to widen when employment ends and people reach retirement age. For instance, married couples tend to retire at the same time.⁴⁷ With married women often being a number of years younger than their husbands, their pensions will be correspondingly lower.⁴⁸ A large proportion of women also cease to be active on the labor market towards the end of employment age (between their 58th and 65th years).⁴⁹

The aforementioned reasons do not affect women and men in eastern and western Germany to the same extent. First, full-time employment for eastern German women has been actively encouraged. Second, there are considerable east-west differences in childcare options and attitudes to non-parental childcare, which still exist, albeit to a lesser extent, even 25 years after the fall of the Wall.⁵⁰ In addition, eastern German women have, on average, worked far more hours per week than their western counterparts.⁵¹ Consequently, the salaries of eastern German women are higher, which implies that they benefit to a lesser extent from the income splitting in the German tax law.

38 For a discussion on the effectiveness of spouse- and family-related benefits in the statutory pension insurance scheme, see H. Buslei, P. Haan, R. Ochmann, and B. Rürup, “Ehe- und familienbezogene Leistungen in der Alterssicherung: Wichtig für die wirtschaftliche Stabilität von Familien,” DIW Wochenbericht, no. 23 (2014).

39 S. Gundert and K.U. Mayer, “Gender Segregation in Training and Social Mobility of Women in West Germany,” *European Sociological Review*, no. 28(1) (2012): 59-81; E. Smyth and S. Steinmetz, “Field of Study and Gender Segregation in European Labour Markets,” *International Journal of Comparative Sociology*, vol. 49, no. 4-5 (2008): 257-281.

40 D. Glocker and J. Storck, “Risks and Returns to Educational Fields – a Financial Asset Approach to Vocational and Academic Education,” *Economics of Education Review* 42 (2014): 109-129.

41 OECD, *Closing the Gender Gap* (Paris, 2012).

42 T. Kalina and C. Weinkopf, “Niedriglohnbeschäftigung 2008: Stagnation auf hohem Niveau – Lohnspektrum franst nach unten aus,” *IAQ Report*, no. 2010-06.

43 D. Voss and C. Weinkopf, “Niedriglohnfall Minijob,” *WSI Mitteilungen*, no. 1 (2012): 5-12.

44 Since January 1, 2013, mini-jobs have been liable to pension insurance contributions, although those employed in mini-jobs can apply for exemption from this liability, which the German legislature introduced to improve the precarious “security” situation in this form of employment. The majority of people employed in mini-jobs, however, make use of the possibility of exemption.

45 C. Boll, *Lohneinbußen von Frauen durch geburtsbedingte Erwerbsunterbrechungen. Der Schattenpreis von Kindern und dessen mögliche Auswirkungen auf weibliche Spezialisierungsentscheidungen im Haushaltszusammenhang. Eine quantitative Analyse auf Basis von SOEP-Daten* (Frankfurt am Main: 2011).

46 V. Steiner and K. Wrohlich, “Introducing Family Tax Splitting in Germany: How Would It Affect the Income Distribution, Work Incentives and Household Welfare?,” *Finanzarchiv*, vol. 64, no.1 (2008) 115-142.

47 M. Coppola and C.B. Wilke, “How Sensitive Are Subjective Retirement Expectations to Increases in the Statutory Retirement Age? The German Case,” *MEA Working Paper Series*, no. 207 (Mannheim: Mannheim Research Institute for the Economics of Aging, 2010).

48 M. Brüssig, “Fast Die Hälfte aller neuen Altersrenten mit Abschlägen – Quote weiterhin steigend: Probleme mit dem Anstieg der Altersgrenzen vor allem bei Arbeitslosen, aber auch bei Erwerbstätigen,” *Altersübergangs-Report*, no. 1 (Duisburg: Institut Arbeit und Qualifikation, 2010).

49 A. Rasner and S. Etgeton, “Rentenübergangspfade: Reformen haben großen Einfluss,” *DIW Wochenbericht*, no. 19 (2014).

50 See the 3rd report in this issue of *DIW Economic Bulletin*.

51 See the 4th report in this issue of *DIW Economic Bulletin*.

Box 2

Statistical Data Fusion and Data Projection

Statistical data fusion was applied to obtain the set of data used for this report, the basis being anonymous data from the Socio-Economic Panel (SOEP) study¹ collected by the field-work organization TNS Infratest Sozialforschung on behalf of DIW Berlin, as well as the Sample of Active Pension Accounts (VSKT) provided by the research data center of the German Pension Insurance scheme (FDZ-RV) for those born between 1936 and 1965.² Unlike with record linkage approaches, where identical observations in two data sources are linked by means of an unambiguous ID number, data fusion involves combining "statistical twins" on the basis of socio-demographic characteristics found in both. The identity of the people is not known at any point. The main purpose is to fuse data that display as many similar attributes as possible.

The aim of data fusion is to merge the in-depth and complex data from the SOEP study—which contains information on household context, education, and employment history, as well as various other earnings and income types (including pension payments from private and workplace pension plans)—with detailed longitudinal pension entitlement data and insurance periods contained in the Sample of Active Pension Accounts (VSKT).

To enable the old-age income of those in the baby-boom group to be compared with that of predecessor cohorts, the LAW life projection model developed by DIW Berlin was

1 The SOEP study is a representative longitudinal study of households conducted annually since 1984 in western Germany and since 1990 in eastern Germany. See G.G. Wagner, J. Göbel, P. Krause, R. Pischner, and I. Sieber, "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*, vol. 2, no. 4 (2008): 301–328

2 See A. Rasner, J.R. Frick, and M.M. Grabka, "Statistical Matching of Administrative and Survey Data: An Application to Wealth Inequality Analysis," *Sociological Methods & Research*, vol. 42, no. 2 (2013): 192–224.

applied; this model delivered consistent projections on the individual earnings, family, and income biographies of the three analysis cohorts up to the age of 67.3 For younger insured people, this means that expected pension entitlements up to a person's 67th birthday are filled up." For those who are 66 years old in 2007, this is just one year, while for 42-year-olds this would mean filling up 25 years.

Unlike model-based projection methods which simulate results year for year, the LAW life projection model forecasts matching sequences in different life courses. Here, entire biographies of older years (donors) are used on the basis of the similarity between earnings-related and family biographical data (number of years in first marriage, age when second child was born, number of years in unemployment, etc.), as well as age-specific pension entitlements in eastern and western Germany, and sequential projections made for incomplete biographies of younger birth years (recipients). This method does not produce oversimplified life courses, as is the case with model-based imputations, but models the diversity of the life courses in the dataset in its entirety.

In the projection model used here, neither cohort effects nor the mortality of the people in the sample are taken into consideration. The basic economic conditions were kept constant for the reference year 2007. Similarly, changes to the recognition of pension entitlement during periods of unemployment were not adequately considered, either, meaning the projections made here can be seen as optimistic.

3 See C. Westermeier, A. Rasner, and M.M. Grabka, "The Prospects of the Baby Boomers: Methodological Challenges in Projecting the Lives of an Aging Cohort," *SOEP Papers*, no. 440 (DIW Berlin, 2012).

Future Development of Gender Pension Gap

A cohort comparison examines the extent to which east-west pension differences for men and women are likely to exist in future. To this end, the accumulation of pension entitlements between the 15th and 58th years is broken down using model calculations and the birth cohorts compared.⁵² The baby boomer cohort born be-

tween 1956 and 1965 are of particular interest here. They are compared with two predecessor cohorts: those born between 1936 and 1945 (war-years cohort), almost all of whom have already retired, and those born between 1946 and 1955 (post-war cohort), who are about to reach retirement age.

To calculate the accumulation of pension entitlements in the course of a person's life, as well as the develop-

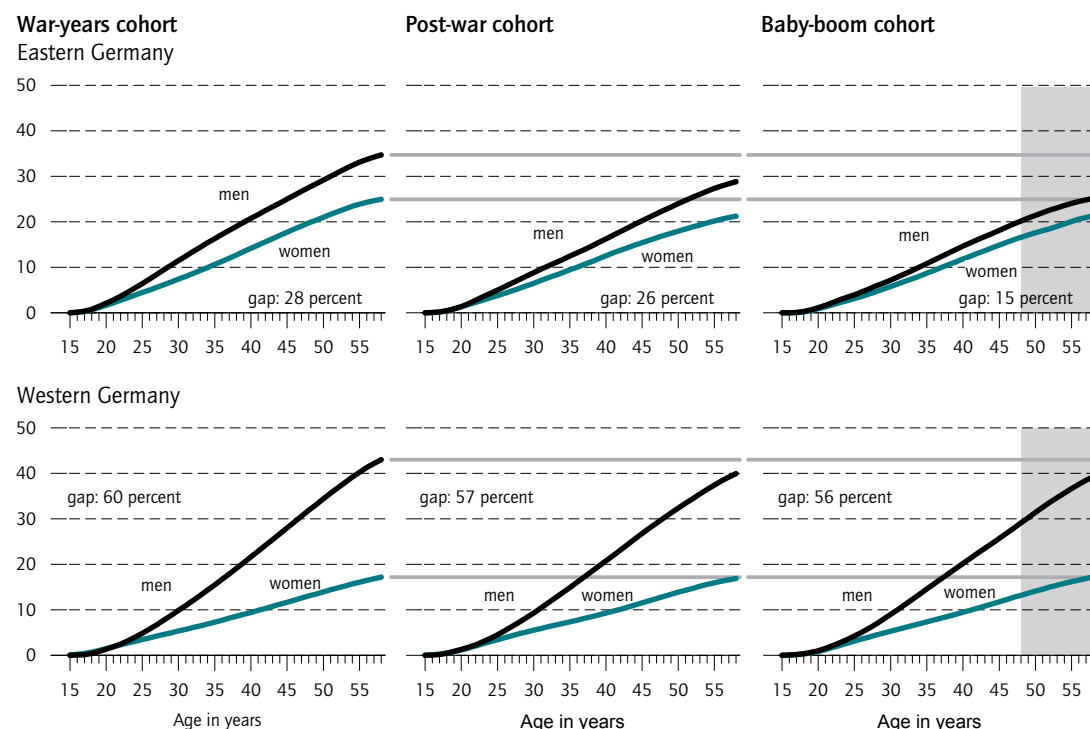
52 The analysis of the accumulation of pension entitlements was conducted until the 58th year of the insured's life only. The reason for this is that forecasts on pension transition for those from the baby-boom cohort involve considerable uncertainty. The average pension entitlements specified here are thus lower than the actual pension entitlement that is expected on reaching retirement

age. In addition, once a person reaches pension eligibility age, a final calculation including any periods where no or reduced contributions were made is carried out. This final calculation will increase the actual pension payment.

Figure 3

Pension Entitlements from Employment Subject to Social Security Contributions

Total pension points



The shaded area denotes the projected period, while the gray line shows the starting pension level for the war-years cohort. Civil servants, the permanently self-employed, and migrants are not included in the calculations.

Source: SOEP v.27; SUF-VSKT-LAW-2007, LAW Life Projection; calculations by DIW Berlin.

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The gender pensions gaps in entitlements from gainful employment are on the decline.

ment of future pensions, statistical data fusion was applied: the fused dataset containing data from the Socio-Economic Panel (SOEP) study and the sample of insured persons and their insurance accounts (Sample of Active Pension Accounts, VSKT) was then analyzed (see Box 2). For the youngest and oldest in the “baby boom” group, data on pension entitlements were available up to the 42nd and 51st year, respectively. To make the pension entitlement accumulated during working life comparable with earlier cohorts, the time left till retirement is completed using a projection model.

The baby boomers differ from the pension generation of today in many ways. It is in this cohort that a clear increase in gainful employment and employment orientation is evident for women—particularly in western Germany. Eastern German baby boomers, in contrast, were strongly affected by the high unemployment rate that continued into the post-reunification years.⁵³ This

is also the age group that, owing to educational expansion in the 1970s, now has better formal education qualifications than the post-war generation. This group also includes more cases of separation and divorce in the course of their lives, however.⁵⁴ Besides the general increase in life expectancy in recent years, the fast approaching pension age of the “baby boomers” has been another of the motives for the extensive reforms in the past few decades which have resulted in fundamental changes to old-age provision in Germany.

To begin with, the accumulation of pension entitlements between the 15th and 58th year acquired solely from employment subject to social security contributions is analyzed by cohort. The second step is to factor in all pension entitlements from all pension-relevant periods in a person’s life. The cohort comparison showed a drastic decline in pension entitlements from employment subject to social security for eastern German men (see

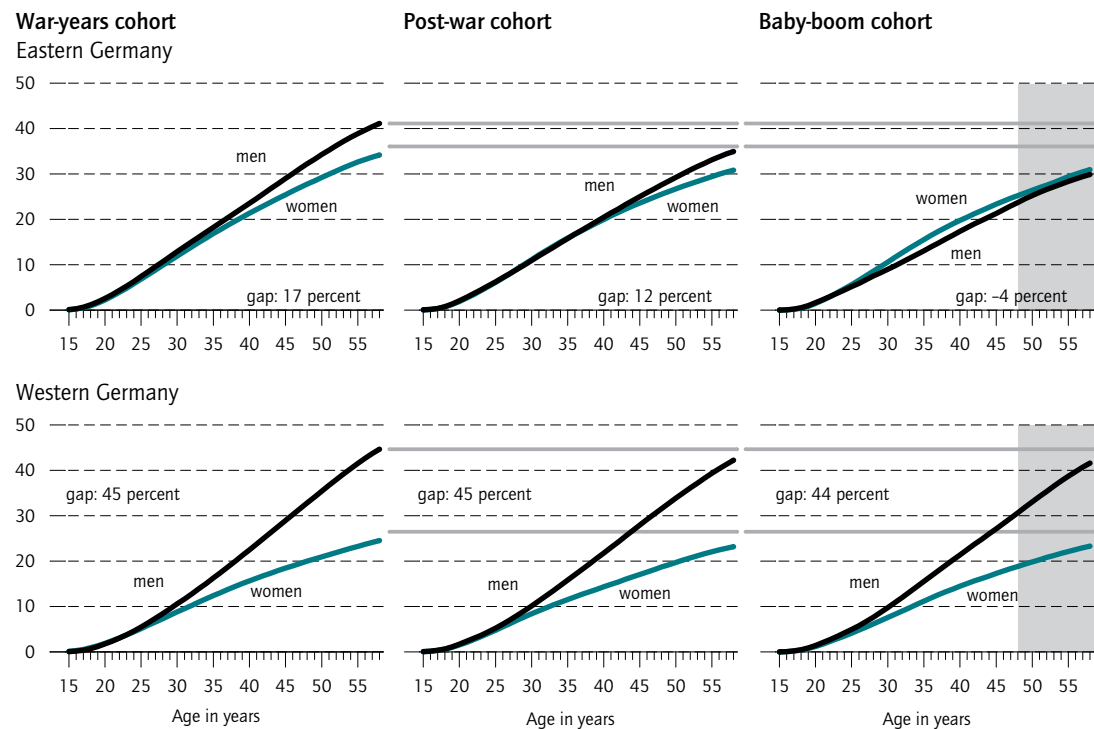
53 J. Simonson, N. Kelle, L. Romeu Gordo, M.M. Grabka, A. Rasner, and C. Westermeier, “Babyboomer: Mehr Brüche im Erwerbsleben, weniger Rente,” DIW Wochenbericht, no. 23 (2012).

54 E. Grünheid, “Ehescheidungen in Deutschland: Entwicklungen und Hintergründe,” BiB Working Paper 1 (Wiesbaden: Bundesinstitut für Bevölkerungsforschung, 2013).

Figure 4

Pension Entitlements from All Pension-Relevant Activities

Total pension points



The shaded area denotes the projected period, while the gray line shows the starting pension level for the war-years cohort. Civil servants, the permanently self-employed, and migrants are not included in the calculations.

Source: SOEP v.27; SUF-VSKT-LAW-2007, LAW Life Projection; calculations by DIW Berlin.

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Only a slight narrowing of the gap between western German women and men can be observed.

Figure 3). While eastern German men in the war-years group had earned an average of 35 pension points by the time they reached the age of 57, the baby boomers were predicted to earn as little as 25 pension points. In terms of the current pension-point value⁵⁵ for eastern Germany (currently 26.39 euros), this is equivalent to a drop in monthly pension of 264 euros. One reason for this is the persistently high unemployment rate in the post-reunification years. For eastern German women, the comparison also showed a decline, albeit not quite as severe, in pension entitlements from employment liable to social security contributions. Women in the war-years cohort had earned 25 pension points by the age of 57. Eastern German baby-boom women were projected to earn 21.5 pension points. In terms of the current pension-point value for eastern Germany, this is a 93-euro fall in pension payments. This development causes the

gender pension gap to close, taking it from 28 percent for the war-years cohort to 15 percent in the baby-boom cohort. This decrease is, however, less the result of increasing pension entitlements for women and more the consequence of significant losses for eastern German men. Overall, one can state that in an employment-centered pension system as the German, the share of earning points coming from employment is constantly decreasing across cohorts.

The cohort comparison revealed a decline in pension entitlements from employment subject to social security contributions for western German men, too, with those from the war-years cohort demonstrating, on average, a stronger decrease than for the baby-boom cohort, which was more moderate on the whole. On the basis of the current pension-point value for western Germany (equivalent to 28.61 euros), the pension payment for the baby boomers is 105 euros lower. Contrary to expectations, western women barely caught up with the men. A comparison between the war-years cohort and the baby boomers showed pension entitlements from employment subject to social security contributions stagnating

55 The current pension-point value is one factor of the pension benefit calculation formula that is independent of individual-level factors. The current pension-point value is recalculated each year with the help of the benefit indexation formula. Multiplied with the individual earning points the current pension-point value reflects the actual pension entitlement.

at a consistently low level, causing the gender pension gap to narrow slightly from 60 percent to 56 percent, although this is also a consequence of the reduced entitlements among western German men. A more differentiated view at the earnings histories of western German women shows that the number of years in full employment is on the decline, while more and more western German baby-boom women are taking on mini-jobs and working part-time. As mentioned above, these forms of employment generate very little pension entitlement (part-time employment) or none at all (mini-jobs).

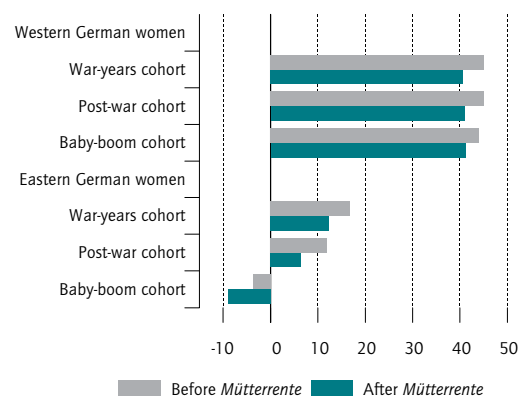
The accumulation of pension entitlements between the 15th and 58th year of life obtained from all periods of activity is compared below. This includes periods of study, raising children, non-gainful care work, unemployment, or illness. The entitlement assigned to these periods varies over the course of time. For example, for every child born before 1992, women are granted two years of parental leave under the current law, while three years are granted for each child born after 1992.⁵⁶

The clear decline in pension entitlements for eastern German men is even more apparent if all pension-relevant periods are factored in. A comparison between the war-years cohort and the baby boomers revealed a decrease in pension entitlements from 41 to 30 pension points (see Figure 4). In terms of the current pension point value for eastern Germany, this is a drop in monthly pension of 290 euros. For eastern German women, the average pension entitlements from all pension-relevant periods are also on the decline. While the women in the war-years cohort managed to accumulate more than 34 pension points by the time they reached their 58th year, the baby boomers had earned just 31 pension points. The decline in this case is less marked. If total pension entitlements are taken into consideration, eastern German women in the baby-boom cohort would in fact overtake eastern German men in terms of average pension points accumulated.

In western Germany, if the entire pension entitlements are considered rather than just those earned from employment liable to social security tax, the gender pension gap may not be strikingly wide. The huge disparity between men and women, however, is ever present. For western German baby boom men, a decline in pension entitlements by three pension points was seen (a fall from 44.5 to 41.5 points), compared with the war-years cohort. Western German women from the baby-boom cohort dropped one point on average in comparison to those in the war-years cohort (taking it from 24.5 to

Figure 5

Gender Pension Gap Before and After *Mütterrente* In percent



Source: SOEP v.27; SUF-VSKT-LAW-2007, LAW Life Projection; calculations by DIW Berlin.

© DIW Berlin

Eastern German women from the baby-boom cohort are overtaking men.

23.5 points). Despite them demonstrating the smallest decline in entitlements among all the groups examined, western German women still continue to accumulate by far the least pension entitlements between their 15th and 58th years. The gender pension gap in western Germany remains virtually unchanged at 44 percent.

In Germany, the *Mütterrente* (effective as of July 1, 2014, see footnote 29), which resulted in the recognition of periods spent bringing up children in pension care entitlements, has not yet been factored into the calculations implemented here. This can, however, be approximated using the existing data. Women from the war-years and post-war years cohorts profit to a large extent from the *Mütterrente*, since they have more children on average, mainly born before 1992. Figure 5 shows what effects this change in entitlement recognition may have on the gender pension gap. In western Germany, the disparity between men and women in the baby boomer cohort decreased from 44 to 41 percent, while in eastern Germany, the gap between women and men worsened, with women in the baby boomer cohort having nine percent greater pension entitlements.

Even if the *Mütterrente* were introduced for reasons of fairness, in western Germany, in particular, this did not lead to any substantial change in the gender pension gap.

Conclusion

Twenty-five years ago, four million pensioners and eight million insured individuals were integrated from the pension system of the former GDR into a new system

⁵⁶ Since 2014, mothers of children born before 1992 have been granted two years of maternal leave recognized in pension entitlements. This entitlement, which is known as the *Mütterrente* (literally: mother's pension) was part of a parliamentary act on the improvement of statutory pension entitlements which entered into effect as of July 1, 2014.

for the whole of Germany. Despite the continuing institutional differences between east and west, the ongoing difference in pension payments, and the continuing need for transfer in eastern Germany, the integration of the eastern German pension scheme can be regarded as a success. Analyses have shown that average statutory pensions for men in eastern and western Germany are more or less equal, while the pensions for women in eastern Germany remain higher than those for women from western Germany as a result of far higher labor market participation by eastern German women since the 1950s.

As regards ensuring a good standard of living and avoiding old-age poverty, the development of pension entitlements for future generations of pensioners is a matter of concern. With the exception of western German women, for whom the cohort comparison showed insignificant changes only in pension entitlements, entitlements for all other groups are on the decline. Particularly drastic was the drop for eastern German men from the baby-boom cohort, who were affected worst by the high unemployment levels following reunification, as well as the structural changes on the eastern German labor market. For western German women, too, no substantially positive development can be expected in the near future. Their pension entitlements are exceedingly low and will presumably remain so in future. Even if the statutory pension level is not an indicator of material wealth and security in old age, pension entitlements for western German women are so low that many of them will be forced to rely on other sources of income or old-age security in the household context. In times where divorce rates are high, however, the overall pension situation in the household context as a result of the husband's higher pension is becoming increasingly uncertain.

Anika Rasner is a Research Associate of the Research Infrastructure Socio-Economic Panel (SOEP) at DIW Berlin | arasner@diw.de

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Keywords: Statutory pension insurance, east-west comparison, baby boomer, SOEP, projection

Wages in Eastern Germany Still Considered More Unjust Than in the West

By Stefan Liebig, Sebastian Hülle, and Jürgen Schupp

Almost twenty-five years after the fall of the Berlin Wall, far more eastern Germans are unhappy with their income than western Germans. In 2013, around 44 percent of employed eastern Germans rated their earnings as unjust compared with approximately one-third in western Germany. Although the east-west gap has been diminishing since 2005—to around 12 percent in 2013—this is not because eastern Germans feel that they are now being paid more fairly, but rather because the perceived injustice in western Germany increases. One of the reasons why a relatively high level of perceived wage inequality persists in eastern Germany is the fact that there are still differences between East and West in incomes within occupations. Evidence of this is seen in analyses conducted by the Socio-Economic Panel (SOEP).

In the summer of 1989, when more and more citizens of the German Democratic Republic (GDR) were actively protesting against the existing political and economic system, one of their key demands was performance-related pay. The income structure in the GDR was known for having a much smaller spread, so that only minor differences in income existed, in particular, between “production workers on the one hand and master craftsmen, university graduates and technical or economic specialists on the other hand.”¹ The Politburo of the Central Committee of the SED responded to the protesters’ demands: as part of a declaration to the 12th party congress on October 12, 1989, it made “performance-related pay” to one of the GDR’s main objectives to be realized in the GDR.² It is known that the east German public had little confidence that the SED could satisfactorily perform this task. Rather, they believed that the economic and political system of the Federal Republic of Germany was more likely to provide “just incomes and just remuneration”³. So today, twenty-five years after the fall of the Berlin Wall, the question comes up whether this hope has been fulfilled.

There are two methods of obtaining an answer to this question. The first is to consider the actual distribution of , calculate specific measures of distribution and then assess them on the basis of normative criteria that have been designated in the course of philosophical or political debate.³ The second is to ask the members of the workforce themselves whether they perceive their own income as just or unjust.⁴ We chose the second route,

1 See H. Stephan and E. Wiedemann, “Lohnstruktur und Lohn differenzierung in der DDR,” IAB Mitteilungen aus der Arbeitsmarkt- und Berufsforschung 4 (1990): 553; and “Ostmark zum Willkür-Kurs,” Der Spiegel, no. 48 (1989): 112-113.

2 Declaration by the Politburo of the Central Committee of the SED, Neues Deutschland, October 12, 1989, www.chronik-der-mauer-online.de.

3 See, for example, W. Merkel, Soziale Gerechtigkeit im OECD-Vergleich. Soziale Gerechtigkeit – eine Bestandsaufnahme (Gütersloh: 2007): 233-257; and Bertelsmann Stiftung, Social Justice in the EU – A Cross-National Comparison (2014), www.bertelsmann-stiftung.de.

4 Whereas the first method provides information about the extent of income injustice existing in a society on the basis of the normative notions of a given selection of experts (philosophers, economists, etc.), the second assesses it in terms of the population’s subjective perception.

Box

On the Methodology of the Questions Used in Empirical Justice Research in the SOEP

Since 2005, the Socio-Economic Panel (SOEP)¹ population survey, which is carried out every two years by DIW Berlin in collaboration with the fieldwork organization TNS Infratest Sozialforschung, has included questions about respondents' assessment of justice concerning the own net income.² The question in the SOEP questionnaire is phrased as follows: "Is the income that you earn at your current job just, from your point of view?" The respondents can answer either "Yes" or "No." If a respondent answers "No," he or she is asked: "How high would your net income have to be in order to be just?" and the respondent's actual income is recorded. Beginning with the survey in 2009, a question about the assessment of fairness of gross income has also been included.

In addition to distinguishing between justly and unjustly paid individuals, the justice formula J^3 developed by American sociologist Guillermina Jasso can be used to calculate an even finer distinction of the feeling of injustice.⁴ The logarithm of the relation between actual income and the income regarded as "just" generates the index J which can be used to quantify the intensity of perceived injustice.⁵ The arithmetic mean (JI1) of these individual J values, or the arithmetic mean of the absolute J values (JI2) can also be used to calculate two more indices which quantify the intensity of income injustice on the aggregate, i.e. on the level of groups or the society.⁶

$$J = q \ln \left(\frac{\text{actual earnings}}{\text{as just perceived earnings}} \right).$$

4 G. Jasso, "On the Justice of Earnings: A New Specification of the Justice Evaluation Function," *AJS*, no. 83 (1978): 1398–1419.

5 J takes the value 0 when there is perfect justice. A positive value of J results if a respondent states that his current income is higher than is needed for it to be just; a negative value of J is given when the actual income is lower than the income deemed to be just. The bigger the difference between actual income and that regarded as just, the greater is the deviation of the J value from 0.

6 G. Jasso, "How Much Injustice is There in the World? Two New Justice Indexes," *American Sociological Review*, vol. 64, no. 1 (1999): 133–168.

1 See J. Schupp, "25 Jahre Sozio-oekonomisches Panel – Ein Infrastrukturprojekt der empirischen Sozial- und Wirtschaftsforschung in Deutschland," *Zeitschrift für Soziologie* 38 (2009): 350–357.

2 In the survey of 2009, questions were asked not only about the subjective justice of personal net income but also about that of gross income.

partly because many empirical studies have shown that perceived injustice at the workplace can lead not only to reduced productivity or increased absenteeism, but above all to physical and mental health problems for the employees who feel unjustly paid.⁵

In order to assess whether, twenty-five years after the fall of the Wall, the working population of eastern Germany feels more justly paid, we used survey data collected at two-year intervals since 2005 by the Socio-Economic Panel. Respondents were asked whether they consider their income to be just and, if they perceive it as unjust, what specific net income from employment they would consider as just for themselves (see box). We have no way of making a direct comparison with the sense of justice in 1989. In order to find an answer to the question of perceived income injustice concerning the east Germans, we compared them in terms of extent and intensity with perceptions of income injustice in western Germany. This allowed us to identify regional developments during the period of observation and to describe

features peculiar to the Länder (federal states) that once constituted the GDR.

Share and Intensity of perceived income inequality in eastern Germany larger

If we look at the share of employees who felt unjustly paid during the observation period, the first thing that stands out is the large significant difference between eastern and western Germany (see Figure 1). In 2005, approximately 25 percent in the west were of the opinion that their income was unjust, whereas in the east the corresponding value was 42 percent. By 2013, this had increased slightly in the eastern Länder to 44 percent, while the west exhibited an increase of around seven percentage points to 32 percent. On average, the difference between eastern and western Germany is around 15 percentage points high. Hence, the question of just payment is evaluated very differently in the two parts of the country.

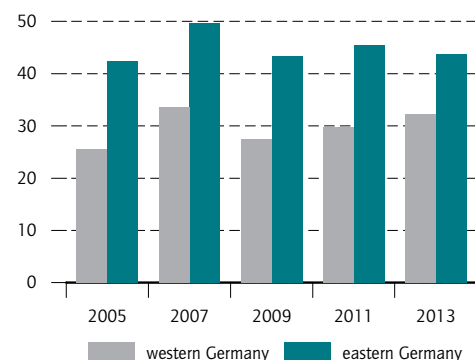
The majority perceived their income as just in 2013, both in the east and in the west. But the feeling of being unjustly paid is far more widespread in the east than in the

5 R. Schunck, C. Sauer, and P. Valet, "Macht Ungerechtigkeit krank? Gesundheitliche Folgen von Einkommens(un)gerechtigkeit," *WSI-Mitteilungen* 66 (2013): 553–561.

Figure 1

Share of Perceived Income Injustice

In percent



Source: SOEP v30; calculations by DIW Berlin.

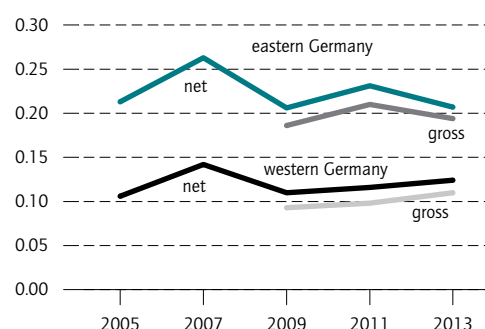
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In eastern Germany, the share of perceived income injustice is much higher.

Figure 2

Intensity of Perceived Income Injustice (Net and Gross Income)

Justice index JI2



Source: SOEP v30; calculations by DIW Berlin.

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The intensity of perceived income injustice concerning the net and gross income is more pronounced in eastern Germany, too.

west. In both parts of Germany this feeling of injustice peaked in the survey year 2007, when every second surveyed employee in the east evaluated the own income as unjust. In 2009, this proportion decreased in each part of the country, only to rise again by 2011. Between 2011 and 2013, the feeling of income injustice in eastern Germany declined, but in the west it continued to rise, almost reaching the level of 2007. Although the difference between eastern and western Germany shrank, this was not because people in the east felt more justly paid, but because more workers in the west evaluated their incomes as unjust.

The legitimacy gap in the assignment of earned income, which is expressed in the different shares employees that evaluate their own income as unjust, may have many causes. Of these, we consider the following two mechanisms to be the two most plausible: first, that the assignment criteria on the labor market are perceived as unjust and second, that state intervention in the form of taxation and welfare transfers is considered illegitimate.

To establish whether the feeling of injustice connected with taxation is rising or falling, the assessment of net and gross income are considered separately. This has been possible with the SOEP since 2009. It also allows us to quantify the intensity of perceived income injustice concerning both kinds of income using the JI2-index (see box)..

Considering the intensity of perceived injustice with respect to the net income, the annual average in the west is 0.120, but it is a lot higher in the east: 0.224 (see Figure 2). According to this, those in the east who feel unjustly paid judge the intensity of injustice with regard

to their net earnings to be on a level that is nearly twice that perceived in the west.

While the pattern in both parts of the country is very similar from 2005 to 2009, a difference has emerged since 2011: in the east, there was another increase in the intensity of perceived income injustice, followed by a renewed decline to the original level. In contrast, the west exhibited an uninterrupted increase in the intensity of perceived income injustice.

A greater feeling of injustice is also evident in the east with regard to the intensity of perceived injustice of gross income: the JI2-index annual average is 0.197 in the east, while in the west it is only half as much: 0.100. Chronologically, it runs broadly parallel to the assessment of net income. In other words, in both parts of the country, market wages are judged to be less unjust than the remaining net earnings after taxes and mandatory deductions. State intervention is therefore apparently an independent source of the feeling of injustice in both workforces. In many cases, progressive taxation is likely to play a part in this.⁶

Regional Differences among Occupations as Cause of Perceived Injustice

Why does the workforce in eastern Germany rate its gross or net income as significantly more unjust than its counterpart in western Germany does? The first stud-

6 See DIW glossary, www.diw.de/de/diw_01.c.412410.de/presse/diw_glossar/kalte_progression.html.

Table 1

East-West Difference in Median Income by Occupational Group of the Federal Institute for Vocational Education and Training (BiBB), 2005 to 2013

In euros

Position in the ranking	East-west difference ¹	N ²	No. of BiBB category	Occupational activity
1	-1,575	81	33	Aviation and maritime professions
2	-1,040	164	26	Technical specialists
3	-1,027	597	44	Legal professions
4	-800	256	22	Chemists, physicists, and other scientists
5	-650	1,864	21	Engineers
6	-621	1,340	23	Technicians
7	-540	2,314	35	Managers, auditors, management consultants
8	-530	117	17	Food, beverage, and tobacco manufacturing, other nutritional industries
9	-515	351	31	Advertising agencies
10	-500	1,200	8	Machine fitters, toolmakers
...				
45	-141	1,114	36	Public sector administration
46	-73	152	13	Textile processing, leather production
47	-50	4,946	39	Clerical professions
48	-20	2,339	27	Sales personnel (retail)
49	9	609	16	Cooks
50	20	69	25	Surveying
51	69	656	51	Journalists, librarians, translators, and related academic staff
52	255	485	40	Clerical office staff, switchboard operators
53	300	1,836	54	Cleaning, waste disposal personnel
54	400	755	47	Licensed health professionals
Average	-257.88			
Standard deviation	268.74			

1 Median income of the occupational group in eastern Germany minus the median income of the occupational group in western Germany.

2 Total: 51,922 observations.

Source: SOEP v30; calculations by DIW Berlin.

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ies after reunification showed that the point of reference for assessing one's own economic situation was the "west."⁷ Consequently, it may be the continuing earnings gap between the two regions that is contributing to the higher level of perceived income inequality in the east. To answer this more accurately, it should be noted that the justice of one's own earned income is generally estimated on the basis of comparisons—people compare their personal income with that of workmates or those who perform the same kind of work elsewhere.⁸ The crucial point is that on the level of occupations still differences in wages exist and that the convergence between east and west has progressed to a different extent from one occupational group to another. Within some

occupational groups, there are now no regional differences in wages, while in others they are still considerable. Table 1 lists the median income levels within occupations and gives an overview over occupations with high and low levels of regional wage differentials within occupations. Negative values indicate that the income level within the respective occupation is higher in western Germany than the eastern Germany.

Regression models can be used to determine the significance of earnings differences within a particular occupational group—given that the characteristics of the labor force are otherwise identical—and the extent to which this actually leads to an increase or decrease in perception of income injustice. The results of this are shown in Table 2. The key determinant of the subjective justice in both eastern and western Germany is, as could be expected, the hourly wage. This is not surprising, because a higher income for oneself tends to be perceived as just.

What is even more decisive is the result for occupational group differences (see Table 2). The coefficients listed

7 See S. Liebig and R. Verwiebe "Einstellungen zur sozialen Ungleichheit in Ostdeutschland. Plädoyer für eine doppelte Vergleichsperspektive," *Zeitschrift für Soziologie*, 29, (2000): 3-26.

8 A. E. Clark and C. Senik, "Who compares to whom? The anatomy of income comparisons in Europe," *The Economic Journal* 120 (544), (2010): 573-594; C. Sauer, P. Valet, and S. Liebig, "The impact of within and between occupational inequalities on people's justice perceptions towards their own earnings," SFB 882 Working Paper Series 21 (Bielefeld: SFB 882: From Heterogeneities to Inequalities, 2013).

Table 2

Evaluated Justice of Personal Net Income

Jasso index J

	Unbalanced models			Balanced models		
	M1	M2	M3	M4	M5	M6
Region: eastern Germany	-0.045***	-0.045***	-0.254***	-0.036***	-0.036***	-0.257***
Gender: male	-0.027***	-0.027***	-0.017***	-0.012	-0.012	-0.004
Age	-0.002***	-0.002***	-0.001***	-0.001**	-0.001**	-0.001
Hourly wage (log)	0.189***	0.188***	0.152***	0.137***	0.136***	0.104***
Actual weekly working hours	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***
Employment (reference: full-time)						
Part-time	-0.024***	-0.022***	-0.020***	-0.017	-0.016	-0.016
Marginal	-0.043***	-0.041***	-0.010	-0.021	-0.019	-0.011
Public sector	0.002	0.007	0.005	0.010	0.014*	0.011
Education (CASMIN)	-0.012***	-0.012***	-0.011***	-0.008***	-0.008***	-0.007***
Professional status (ISEI)	-0.001***	-0.001***	-0.001***	0.000	0.000	0.000
Occupational group (acc. to BiBB)	0.000	0.000	0.000	0.000	0.000	0.000
East-west difference in median income within occupational group	0,015**	0,012**	0,002	0,016*	0,013	0,002
0.015**	0.012**	0.002	0.016*	0.013	0.002	
Year (reference: 2013)						
2005		-0.004	-0.003		0.009	0.009
2007		-0.038***	-0.037***		-0.019***	-0.018**
2009		-0.013***	-0.013***		0.012*	0.012*
2011		-0.014***	-0.014***		0.002	0.003
Interaction effects:						
East x gender: male			-0.017*			-0.020
East x age			-0.002***			-0.001
East x hourly wage (log)			0.125***			0.112***
East x marginal employment			-0.144***			-0.153**
East x east-west difference in median income of the occupational group			0.030**			0.040**
Constant	-0.346***	-0.327***	-0.267***	-0.279***	-0.276***	-0.210***
N (observations)	45,188	45,188	45,188	11,650	11,650	11,650
N (people)	19,890	19,890	19,890	2,330	2,330	2,330
R ² within	0.043	0.046	0.051	0.022	0.026	0.032
R ² between	0.156	0.159	0.179	0.208	0.208	0.217
Chi ²	4,780.34	4,942.69	5,615.56	782.98	825.56	934.25
df	12	16	21	21	16	21
Rho	0.466	0.465	0.457	0.317	0.318	0.316

Random effect models; Only employed respondents; Significance thresholds: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.
Source: SOEP v30; calculations by DIW Berlin.

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The regional wage differential within specific occupations leads to an increased feeling of injustice in eastern Germany.

show that in the east, an increase in the regional income gap between the members of a particular occupational group is associated with a rise in perceived income injustice. This effect is only to be found in the east. If we compare two people who possess the same characteristics relevant to the labor market (gender, education, etc.), have the same gross income, and are employed in a profession that is subject to income differences between east and west, we see that the person in the east judges their income to be much more unjust than the person in the west does. It is therefore not only the level of personal income that produces feelings of injustice, but also the fact of whether wage differentials between east and west within the considered occupational group exist. Consequently, within a person's occupational group the mere fact that the part of the country where one is em-

ployed makes a difference is enough to increase the perception of injustice. This ties in with results from empirical justice research which indicate that questions of equal treatment play a central role in the allocation of rewards or punishments. Where individual groups are already systematically favored or discriminated in the decision-making process, a greater degree of injustice is perceived.⁹ It may be that the eastern Germans interpret the mere existence of regional wage differentials within their own occupation as unjustified unequal treatment. In fact, these wage differentials are influenced by the situation on the labor market in eastern Germany and

9 See S. Liebig and C.Sauer, "Soziologische Gerechtigkeitsanalyse. Überlegungen zur theoretischen Fundierung eines Forschungsfeldes," Analyse und Kritik 35 (2013): 371-394.

are also caused by still existing productivity differences.¹⁰ In this case, however, in the subjective experience and the value judgment of over 40 percent of the workforce in the new Länder, that is not a sufficient reason for receiving a lower income.

Summing up, differences continue to exist in the perceived justice of personal earned income across the former inner-German border, even if now the feelings of injustice in the east are no longer caused by the lack of income differences that was denounced in the summer of 1989, but by the existing income differences between east and west. Twenty-five years after the fall of the Berlin Wall, the frequently invoked “wall in the mind” is still very much present for many of the workforce in the former East German Länder, at least regarding their personal earned income.

10 See the first article in this issue of DIW Economic Bulletin.

Everyone Happy—Living Standards in Germany 25 Years after Reunification

By Maximilian Priem and Jürgen Schupp

It is now a quarter of a century since the fall of the Berlin Wall and the gap in living standards between eastern and western Germany is still not fully closed. Admittedly, this could not realistically have been expected. Despite the increase in life satisfaction in eastern Germany, the east-west divide prevails. Evidence of this can be found in the latest data from the long-term Socio-Economic Panel (SOEP) study gathered by DIW Berlin in cooperation with the fieldwork organization TNS Infratest Sozialforschung. According to the SOEP data, in 2013, eastern Germans were far less happy than western Germans, although the level of life satisfaction in the east was higher than at any other point in the history of the survey, which was conducted for the first time in eastern Germany in 1990—shortly before economic, currency, and social union. Other subjective indicators reveal differences in satisfaction with household income, health, and childcare. In contrast, job satisfaction, as well as satisfaction with housing, housework, and leisure time have converged. Eastern Germans worry more about crime levels and their own financial circumstances, whereas concerns about xenophobia and employment have diminished throughout Germany. The SOEP surveys show that, according to population, living standards in Germany are now largely aligned. Despite a number of specific problems which, in the coming years, will include the development of new pensions in eastern Germany in particular, German reunification has proven to be an extraordinary success story.

“The process of divided Germany growing together will begin [...] with the people and their standards of living.” These were the words of Lothar de Maizière,¹ the last Prime Minister of the German Democratic Republic (GDR), that accompanied the signing of the State Treaty between the Federal Republic of Germany and the German Democratic Republic establishing a monetary, economic and social union of 18 May 1990. His statement clearly reflects the fact that the reunification of the two German states, initiated through the peaceful revolution in November 1989, was intended primarily to achieve the socio-political alignment of living standards, with aspects relating to market economy playing a secondary role.²

In order to fully assess the progress made in the unification process, both objective living conditions and subjective well-being in Germany have to be taken into account according to the concept of quality of life.³ For this reason, this report presents selected areas of subjective well-being as well as their time sequence in eastern and western Germany: how has general life satisfaction developed in eastern and western Germany since 1990? In what areas of life are levels of satisfaction among eastern and western German citizens now converging and where do differences still exist? What concerns are Germans most frequently preoccupied with? Are people in the former Federal Republic of Germany happier than those in the former German Democratic Republic?

1 1989.dra.de/themendossiers/wirtschaft/waehrungs-wirtschafts-und-sozialunion.html.

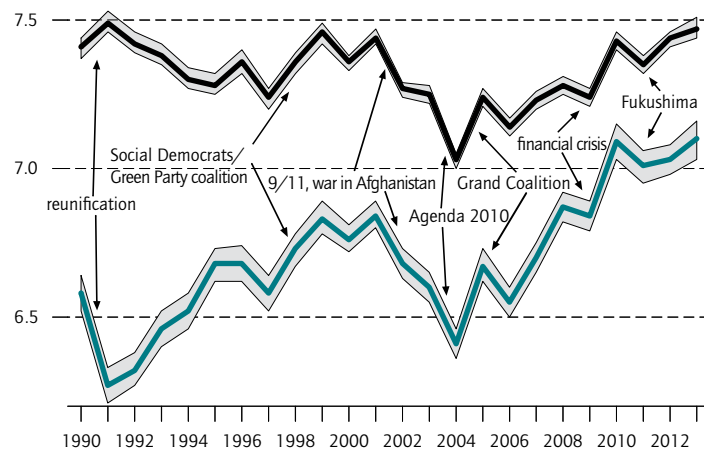
2 See, for example, the first report in this issue of DIW Economic Bulletin and K. Brenke and K. F. Zimmermann, “Ostdeutschland 20 Jahre nach dem Mauerfall: Ist die Flasche nun zu einem Drittel leer – oder ist sie zu zwei Dritteln voll?,” *Vierteljahrshefte zur Wirtschaftsforschung*, 78(2) (2009): 57.

3 See W. Zapf, “Individuelle Wohlfahrt: Lebensbedingungen und wahrgenommene Lebensqualität,” in: W. Glatzer and W. Zapf (eds.), *Lebensqualität in der Bundesrepublik* (Frankfurt/M., New York: 1984): 13–26. This concept for measuring the quality of life developed in the ‘80s for West Germany was further developed in the ‘90s for the adjustment process of western and eastern Germany. For details, see W. Zapf and R. Habich, *Die Wohlfahrtsentwicklung im vereinten Deutschland. Sozialstruktur, sozialer Wandel und Lebensqualität* (Berlin: 1999); for a similar analysis strategy to that used in the present report, see also J. Goebel, R. Habich, and P. Krause, “Zur Angleichung von Einkommen und Lebensqualität im vereinigten Deutschland,” *Vierteljahrshefte zur Wirtschaftsforschung* 78(2) (2009): 122–145.

Figure 1

Average Life Satisfaction¹ in Germany

Scale from 0 to 10 with 95-percent confidence interval



¹ Estimate corrected for repeat-survey effects. The basis of the estimated value for 2013 was a provisional weighting procedure (not including adults surveyed in the SOEP for the first time in 2013). Source: SOEP v30; calculations by DIW Berlin.

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Historical events have an impact on life satisfaction.

lic (GDR)? In order to present evidence-based answers to these questions, the development of both life satisfaction and concerns is examined using the longitudinal study SOEP.⁴ This is done descriptively and, in the case of general life satisfaction, by means of multivariate analyses. The SOEP is a particularly suitable data source for providing answers to these questions since it is one of the few studies that collected data in East Germany before reunification on October 3, 1990 and thus covers the entire period of transformation.

Life Satisfaction in Eastern Germany Higher Than Ever

In the year of reunification, 1990, the level of life satisfaction in East Germany was considerably lower than that of West Germany (see Figure 1).⁵ Initially, the east-west difference increased slightly; while in western Germany a slight collective increase in average life satisfaction was seen in the first few years after reunification, a decrease in life satisfaction occurred in the east follow-

ing the abrupt change in living conditions.⁶ This gap narrowed again in the ensuing years, although it did not cease to exist, i.e., the average level of life satisfaction prevalent in western Germany was not achieved in the east. As of the late '90s, the average levels of life satisfaction in the west and in the east have followed a virtually parallel pattern, with peaks and troughs occurring simultaneously.⁷ Since then, the average levels of life satisfaction in east and west have been converging gradually, causing the gap to virtually halve since the turn of the millennium. Over and above this, life satisfaction in Germany is at an all-time high; in western Germany the 1984 level has been attained again and in eastern Germany the level of general life satisfaction measured is unparalleled.⁸ Nevertheless, the difference still remains significant, since the confidence intervals of the two mean values do not intersect.

Equal Levels of Satisfaction with Work, Housing, and Leisure Time in East and West

A look at the satisfaction patterns in individual areas of life also shows that the process of harmonization of living standards does not follow a similar pattern in all spheres of life, and the convergence process between east and west is not yet complete (see Figure 2). Satisfaction with household income and standard of living⁹ in eastern Germany has not yet been able to attain the western German level over the past 25 years, although, as with general life satisfaction, the gaps have been continuously closing in recent years.

Trends can change, however, as can be seen in the example of job satisfaction. Up until six years ago, eastern Germans were less satisfied with their work. The mean values have since converged to such an extent that, since 2009, statistical differences between them no longer exist. Here, of course, it should be taken into account that only those in gainful employment are able to respond to the question about job satisfaction.

⁶ Here, it should be noted that at the time of the first survey in June 1990, there was virtually no unemployment in the GDR. Although job loss could be anticipated, it was only in the follow-up surveys that the real experience of unemployment was also reflected in the levels of life satisfaction included in the questionnaires.

⁷ This becomes clear in 2004, for example. One possible explanation for this all-time low in the west and the second-lowest level of life satisfaction in the east since the "postreunification shock" may lie in a combination of two things: first, the changed global security situation in the wake of September 11, 2001 and the ensuing wars and, second, the Agenda 2010 reforms announced by the then German Chancellor Gerhard Schröder as a reaction to the high unemployment in Germany.

⁸ See J. Schupp, J. Goebel, M. Kroh, and G. G. Wagner, "Life Satisfaction in Germany at Highest Levels since Reunification," SOEP Wave Report 2013.

⁹ The question about satisfaction with the standard of living was not included in the SOEP questionnaires from 2007 to 2012.

⁴ The SOEP is a repeated representative survey of households which has been conducted annually in West Germany since 1984 and both western and eastern Germany since 1990; see G. G. Wagner, J. Göbel, P. Krause, R. Pischner, and I. Sieber, "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): 301-328.

⁵ See box for further information on data collection on general life satisfaction and revised data in the SOEP.

Box

Measurement of Life Satisfaction in the SOEP

As part of the Socio-Economic Panel (SOEP) study, the fieldwork organization TNS Infratest Sozialforschung, which collects survey data on behalf of DIW Berlin, asks respondents about a number of subjective indicators linked to the key question as to the cognitive dimension of well-being. From the beginning of the first survey wave in 1984, this was: "How satisfied are you currently with your life overall?" Responses to the question about general life satisfaction are collected on the basis of an 11-point scale from 0 ("completely dissatisfied") to 10 ("completely satisfied"). This scale is also used to measure satisfaction with various other areas of life, for example satisfaction with one's standard of living, household income, job, leisure time, health, and housing.

If we look at the time sequence of the average general life satisfaction in eastern and western Germany, it is important to consider the fact that the measurement of life satisfaction depends more on the context of the survey situation, known as survey artefacts, than the measurement of "objective information" such as level of education. The survey artefacts include, for example, the time of year the survey is conducted or how often an individual has already participated in a SOEP study. An interesting observation here is that people are more likely to indicate the maximum value ten when questioned for the first time than in the second or subse-

quent surveys.¹ If people participate in a repeat survey such as the SOEP for a very long time, they generally give lower satisfaction values on average. Although this "routine effect" only has a minimum impact from one year to the next, it has an accumulative effect when respondents participate for over 30 years as is sometimes the case with the SOEP. In order to take this into account in the descriptive analysis of life satisfaction courses in eastern and western Germany, the average levels of life satisfaction were revised in this report using a method developed by the SOEP group at DIW Berlin.² Here, all measurement artefacts are quantified in a regression analysis and subsequently assigned to each survey data point as if the respondents had answered the question for the first time in May of a given year in a paper and pen survey. The revised average general satisfaction and confidence interval are shown in Figure 1.³

1 See H.-M. Mohr, "Analysen zur Vergleichbarkeit von Zufriedenheitsmessungen," *Zeitschrift für Sozialpsychologie*, vol. 18 (1987): 160–168.

2 See Schupp et al., "Zufriedenheit in Deutschland"; and M. Kroh, M. Priem, U. Schimmack, J. Schupp, and G. G. Wagner, "Zur Korrektur der Lebenszufriedenheit um artifizielle Befragungseffekte," SOEPpaper (forthcoming, 2014).

3 *The basis of the estimated value for 2013 was a provisional weighting procedure (not including adults surveyed in the SOEP for the first time in 2013).*

Satisfaction with the living situation, housework, and leisure time have now fully converged. Initially, their development was similar to that of general life satisfaction but from 2005 at the latest, the "east-west divide" disappeared completely owing to the alignment of housing standards and leisure opportunities in both parts of the country.

Satisfaction with childcare facilities for pre-school children was higher in East Germany than in West Germany and this has still remained the case since reunification. The opposite applies to satisfaction with health: this was uniform in east and west at the time of reunification but has since dropped slightly in eastern Germany. This finding is all the more remarkable given the increased life expectancy in eastern Germany.¹⁰ Of course it also means that although elderly people with care needs now live longer than was the case in the former GDR, they are not satisfied with their health due to their advanced age.

Concerns about Crime, Xenophobia, and the Environment Allayed despite East-West Divide

Since it began in 1984, the SOEP has collected data on almost a dozen specific concerns individuals may have about private and public spheres of life.¹¹ The SOEP data concerned attitudes toward general economic development, an individual's own financial situation, keeping a job, crime, xenophobia, and world peace, given as a three-category variable (very concerned, somewhat concerned, or not concerned at all).

The pattern observed for concerns is similarly heterogeneous to that for satisfaction with the individual spheres of life (see Figure 3). In the mid-'90s, for instance concerns about crime were much more pronounced in eastern Germany than in western Germany; they then began to ease—more sharply in the east than in the west—and now show a similarly low level. There has also been

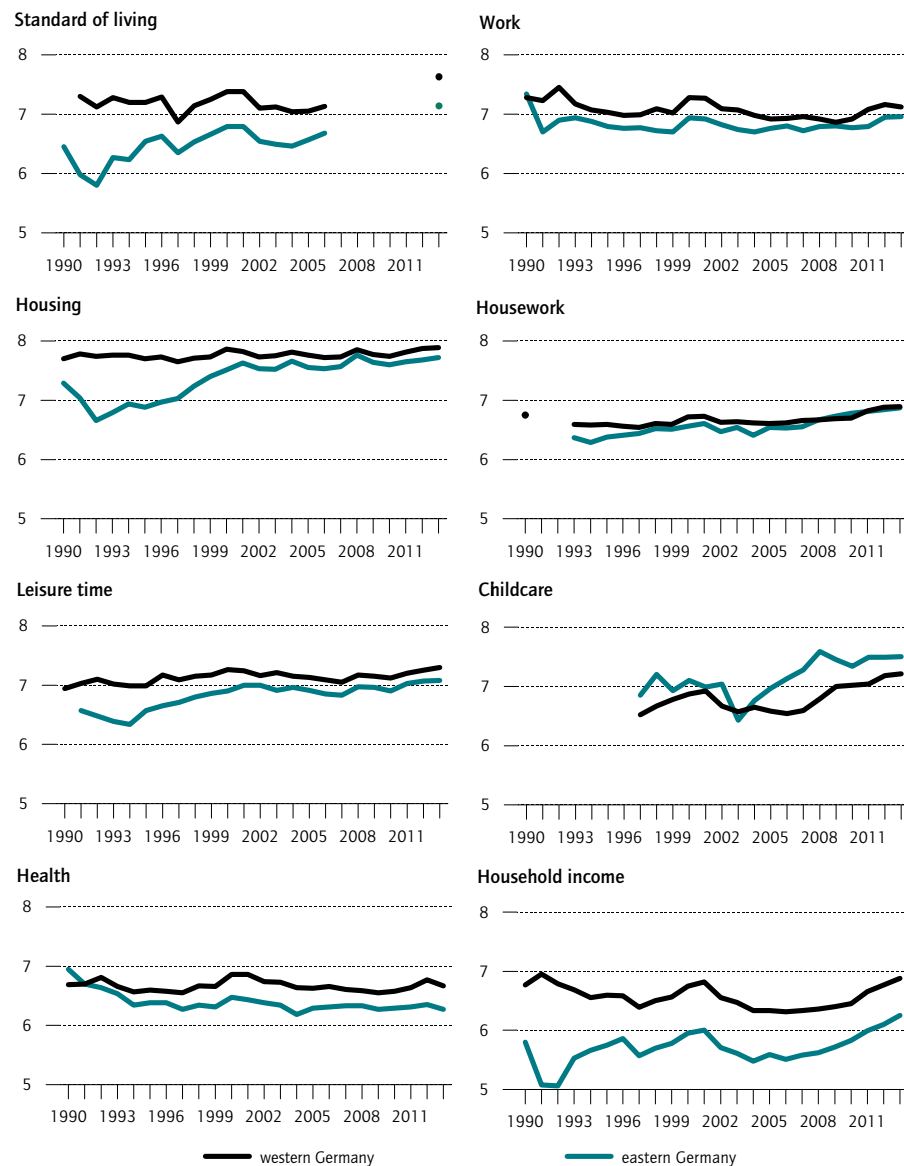
10 See T. C. Vogt, "How many years of life did the fall of the Berlin Wall add? A projection of East German life expectancy," *Gerontology* 59 (3) (2013): 276.

11 For the latest general overview of the development of concerns about public and private spheres, see J. Göbel, R. Habich, and P. Krause, "Subjektives Wohlbefinden," in Federal Statistical Office (ed): *Datenreport 2011 – Schriftenreihe der Bundeszentrale für politische Bildung*, vol. 2, (Bonn, 2011): 377–384.

Figure 2

Average Satisfaction with Various Areas of Life¹

Scale from 0 to 10



¹ Estimate corrected for repeat-survey effects. The basis of the estimated value for 2013 was a provisional weighting procedure (not including adults surveyed in the SOEP for the first time in 2013).

Source: SOEP v30; calculations by DIW Berlin.

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Patterns of satisfaction with various areas of life differ in east and west.

a decrease in concerns about xenophobia and the environment, both of which still caused great concern to over half the population in the '90s, but to only just under 20 percent in 2013. The long-term fluctuations in these three areas of concern do not point to any clear east-west divide.¹²

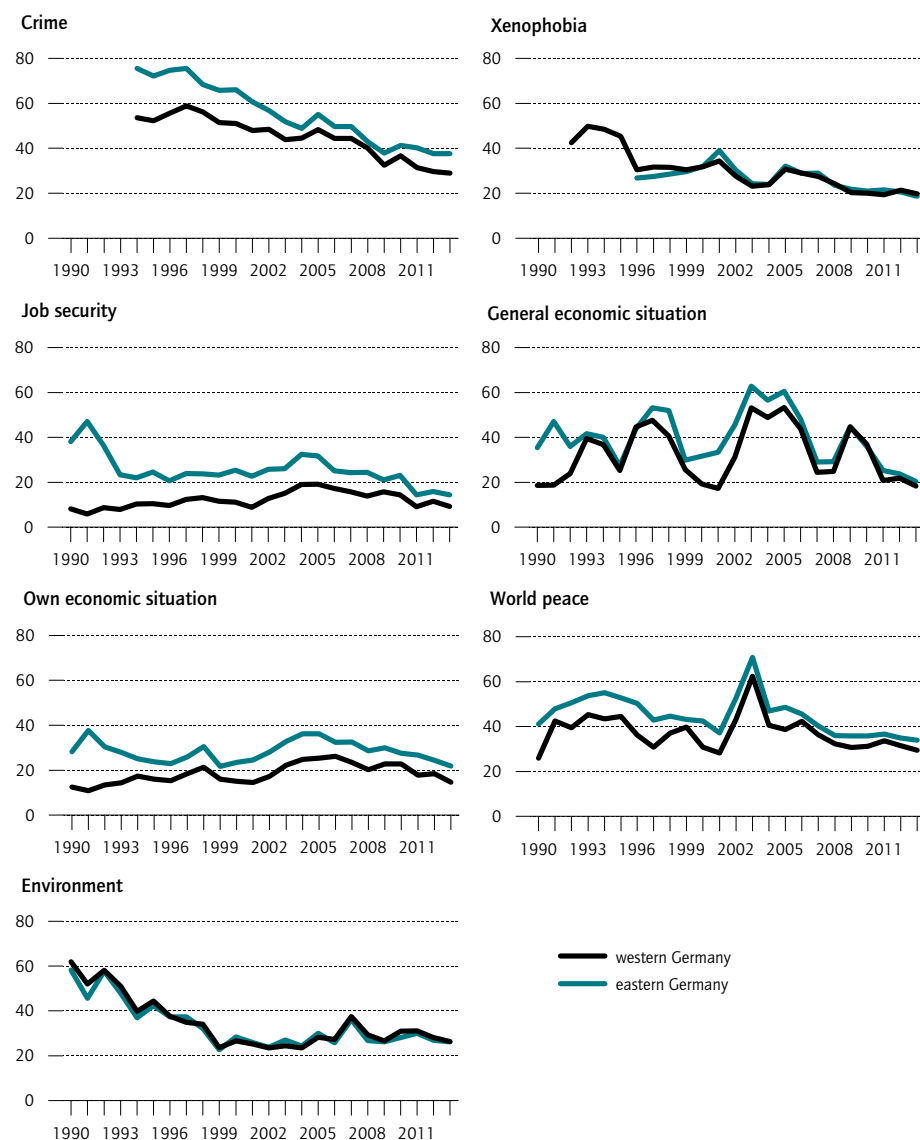
Over the past 25 years, eastern Germans have been increasingly more concerned about their own financial situation and job security than their western German counterparts. Concerns in eastern and western Germany follow a very similar pattern overall. This can be clearly seen from the pattern that emerges for concerns about world peace; a lower level of concern about this was recorded after the fall of the Wall. This trend was abruptly interrupted by the terrorist attacks in 2001; concerns about world peace across Germany rose in the two sub-

¹² See Goebel et al. "Zur Angleichung."

Figure 3

Perceived Concerns in Public and Private Spheres¹

Share of major concerns in percent



¹ The basis of the estimated value for 2013 was a provisional weighting procedure (not including adults surveyed in the SOEP for the first time in 2013).
Source: SOEP v30; calculations by DIW Berlin.

Developments of concerns in east and west are largely convergent.

sequent years. Levels of concern about world peace then began to fall once again.

Concerns about the general economic situation also followed a similar trend. Shortly after reunification, these were more pronounced in the east than in the west but with every economic downturn, there was a sharp increase in levels of concern in both parts of the country. An interesting observation here is that, although concerns among eastern Germans rose to approximate-

ly the same extent as for western Germans, eastern Germans still “carry over” these concerns to periods of economic upswings.

Still Not Completely Unified

The descriptive analyses indicate that in the '90s life satisfaction in east and west converged rather quickly to begin with, slowing down over the last 15 years. Neverthe-

Table

East-West Divide in General Life Satisfaction¹

OLS regression parameters

	1992	2002	2012
Region: east	−0.94***	−0.436***	−0.266***
Gender: female	0.0167	0.067**	0.0513
Age	−0.0336***	−0.0343***	−0.0439***
Age squared	0.00031***	0.00031***	0.00039***
Nationality: non-German	−0.163***	−0.0309	0.0915
Household income (ln)	0.647***	0.628***	0.588***
Employment status			
1. Full-time employment			
2. Parttime employment	−0.0118	0.0582	0.0428
3. Marginal employment	0.144	0.0195	0.0425
4. Unemployed	−0.783***	−0.862***	−0.809***
5. In education or training	0.0742	−0.0094	0.0177
6. Not in gainful employment	−0.0144	−0.0902**	−0.0451
Education (in years)	0.00059	0.0359***	0.0436***
Household size	−0.0036	0.0901***	0.113***
Household type			
1. Single-person household			
2. Household with a (married) couple	0.33***	0.161***	0.288***
3. Family household (children up to 16 years of age)	0.384***	0.101	0.233**
4. Single-parent household	−0.156	−0.344***	−0.182*
5. Family household (children over 16 years of age)	0.239**	0.0625	0.0761
6. Other	0.151	−0.183	−0.305*
District population size			
1. Fewer than 2,000 inhabitants			
2. 2,000 to 20,000 inhabitants	0.0271	−0.0044	−0.103*
3. 20,000 to 100,000 inhabitants	0.0415	−0.021	−0.112*
4. 100,000 to 500,000 inhabitants	−0.0898	−0.0141	−0.1
5. 500,000 inhabitants or more	−0.0692	−0.0216	−0.0343
Constants	3.42***	2.93***	3.42***
R ²	0.1301	0.1056	0.0988
N	12,803	21,870	18,446

¹ Estimate corrected for repeat-survey effects (see box).

Sources: SOEP v30; calculations by DIW Berlin.

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Despite there still being a significant difference in life satisfaction, the effect of the east-west divide has halved in the past 20 years.

less, individual indicators now no longer reveal an east-west divide. A common level has still not been achieved, however, particularly from the viewpoint of the central indicator of general life satisfaction. Multivariate regression analyses are used to examine whether this is due to structural differences, which lead to higher levels of dissatisfaction in certain regions of western Germany also (particularly as a result of unemployment), or whether this difference can be attributed to socio-demographic characteristics such as age, marital status, or household type, or whether there is an “east effect” that cannot be identified more specifically. Here, the relevant level of general life satisfaction is calculated as a dependent variable for socio-demographic covariates as well as for several different periods. The place of residence in eastern or western Germany was also taken into ac-

count, meaning the corresponding “east-west indicator” can be interpreted as the resultant gauge for a less specifically identifiable east-west divergence.

Gender, age, nationality, income, employment status, education, household size, household type, and the district population size were all included in the calculation as control variables.

For the years 1992, 2002, and 2012, the OLS regressions¹³ show significant less specifically identifiable life satisfaction values for eastern Germany which cannot be attributed to socio-demographic differences (see Table). However, a trend towards convergence can also be seen in the multivariate analysis. In 1992, shortly after reunification, this had an average negative effect of almost one point on the 11-point life satisfaction scale for respondents living in the former GDR. Ten years later, in 2002, this effect had halved. In 2012, this negative effect was only 0.27 points.

Despite this convergence trend, the significant “east effect” would seem to indicate that the convergence process is still ongoing as far as general life satisfaction is concerned. If we look at the effect of other explanatory socio-demographic characteristics included in the model, these findings confirm the research into life satisfaction: life satisfaction follows a U-shaped trajectory over the course of people’s lives,¹⁴ i.e., it is lowest in middle age. Unemployment has a strong negative¹⁵ effect and income and education a positive effect on general life satisfaction.

Initially, up until the mid-’90s, general life satisfaction in eastern Germany quickly approached the western level. In the following ten years, virtually no progress was made with regard to convergence. It is only since 2008 that a further reduction in the east-west divide, albeit slight, has been evident (see Figure 4).¹⁶

Conclusion

The descriptive analysis of the SOEP data shows that satisfaction with various areas of life has developed heterogeneously in Germany over the past 25 years; while satisfaction levels with regard to living situation, housework, leisure time, and job satisfaction have largely con-

¹³ OLS regressions with robust standard errors.

¹⁴ The linear age effect is significantly negative and the effect of age squared is significantly positive. See also D. G. Blanchflower and A. J. Oswald, “Is Well-Being U-Shaped Over the Life Cycle?,” *Social Science & Medicine* 66 (8) (2008): 1733-1749.

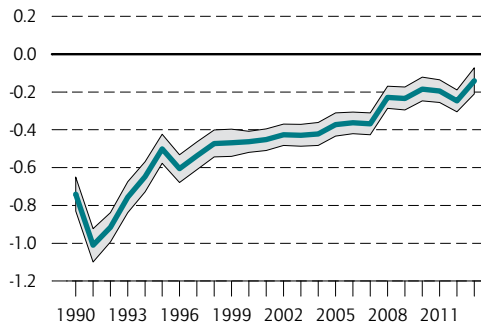
¹⁵ L. Winkelmann and R. Winkelmann, “Why Are the Unemployed So Unhappy? Evidence from Panel Data,” *Economica* 65 (1998): 1-15.

¹⁶ See also J. Geyer and V. Steiner, “Künftige Altersrenten in Deutschland: relative Stabilität im Westen, starker Rückgang im Osten,” *DIW Wochenbericht*, no. 11 (2010).

Figure 4

Convergence of General Life Satisfaction¹ between Eastern and Western Germany

OLS regression with 95-percent confidence interval



¹ Estimate corrected for repeat-survey effects. The basis of the estimated value for 2013 was a provisional weighting procedure (not including adults surveyed in the SOEP for the first time in 2013).
Source: SOEP v30; calculations by DIW Berlin.

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The highest level of convergence of life satisfaction between east and west since 1990 was in 2013.

verged in eastern and western Germany, people in the former East are still less satisfied on average with their household income, their health, and their life as a whole than those in the former West Germany.

Eastern Germans are more concerned than their fellow citizens in the west of the country about their own financial situation, crime, and world peace. Moreover, even in periods of economic upturn, they are more concerned about the general economic situation than western Germans. People in both parts of the country are equally concerned about work and xenophobia.

The most important indicator for evaluating subjective living standards is general life satisfaction. Descriptive and multivariate analyses have shown that, as a result of the changed circumstances after the fall of the Wall, life satisfaction in the east fell sharply, picking up again significantly in the '90s. At the turn of the new millennium, the convergence process slowed down and stagnated. It is only since 2008 that a slight narrowing of the east-west gap can be observed again. Given the developments to date, however, it still remains to be seen whether this will even out over the next few years.

This east-west divide in subjective well-being, albeit less pronounced, continues to prevail, and—alongside material convergence—must continue to be taken into account in the future, for example when the German government and the Länder are consulting on a new strategy for structural policy once the Solidarity Pact II expires in 2019.

New Patterns of Migration

By Herbert Brücker, Ingrid Tucci, Simone Bartsch, Martin Kroh, Parvati Trübswetter, and Jürgen Schupp

To date, there is very little sound scientific knowledge of the migration biographies, paths, and experiences of immigrants living in Germany. A panel study introduced in 2013, however, aims to bridge this gap: the new IAB-SOEP Migration Sample is an annual survey of 5,000 people with a migrant background and their family members. This study will provide information on when respondents lived in their countries of birth, in Germany, and in other countries, as well as their migration paths. Traditional migration patterns with migrants permanently moving to a new country are increasingly being replaced by new patterns: particularly since the economic and financial crisis and the EU's eastward expansion, a new trend has been emerging, with people migrating repeatedly and acquiring life experiences in a number of different countries.

The new IAB-SOEP Migration Sample enables us to determine, *inter alia*, when people left their countries of birth, whether they first moved to Germany or to another country, and whether they had lived in Germany previously. Due to the larger number of cases and the possibility of linking survey data with register data on labor market histories, this innovative migration survey opens up new analytical potential for migration and integration research. It is also the perfect addition to SOEP's dataset on people with a migrant background which has been available since the SOEP was established in 1984 (see three boxes on the following pages).

Migrant Background and Origins

In the first wave of the IAB-SOEP Migration Sample, TNS Infratest Sozialforschung surveyed 4,964 adults residing in 2,723 households. Each household has an "anchor person" who either migrated to Germany after 1995¹⁷ or was born in Germany and has a migrant background. In order to qualify to be included in the sample, this person must not have been in a position of employment liable for mandatory social insurance contributions before 1995 (see Box 1). All individuals over the age of 16 residing in the same household as the anchor person are also surveyed.

In creating the sample, certain countries of origin and relatively recent occurrences of immigration were over-represented in order to provide enough cases to analyze current developments (see Box 2). However, if corrective weighting is applied to the sample, e.g., on the basis of said countries of origin, more general statements can be made about the group as a whole—which includes those who have migrated since 1995 or those with a migrant background born in Germany who have started employment since 1995—as well as about members of their households.¹⁸ The following descriptive analyses

17 For an explanation of why the study was limited to migrants from the last twenty years see H. Brücker, M. Kroh, S. Bartsch, E. Liebau, P. Trübswetter, I. Tucci, and J. Schupp, "Overview on the IAB-SOEP Migration Sample 2013," SOEP Papers, DIW Berlin and IAB research report (2014).

18 The sample was drawn on December 31, 2012, which means that it includes only a very small number of migrants who moved to Germany after

Box 1

The 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 DIW Berlin.¹ The IAB-SOEP Migration Sample is an innovative data sample used to tap into new analytical potential for migration and integration research, particularly in order to study the labor market integration of migrants. The focus of the sample is on migrants who have moved since 1995 and the descendants of immigrants who have entered the labor market since 1995.

This new dataset has three characteristics that distinguish it from the data sources previously available in Germany for migration and integration research:

First, it is one of the biggest longitudinal surveys of households of migrants and their descendants in Germany, covering 4,964 individuals living in 2,723 households. Extending the data basis even further, the results of this survey can be combined with data from the SOEP, which has included persons with a migrant background since 1984. As in the other SOEP samples, here, too, the fieldwork organization TNS Infratest Sozialforschung was responsible for data collection; both surveys are almost identical in approach and method.²

Second, after obtaining respondents' written consent, the survey data were combined with data from the Integrated Employment Biographies (IEB) compiled by the Institute for Employment Research (IAB). Hence, the comprehensive information of a household survey is linked with precise labor market data from the Federal Employment Agency, which include, for example, exact details on wages and earnings as well as employment, unemployment, and benefit episodes. The data are available to the research community for more detailed analysis subject to strict data protection regulations.

Third, the IAB-SOEP Migration Sample builds on previous surveys of individuals with a migrant background by adding questions which factor in modern migration and integration research, meaning respondents' entire migration, education, and employment histories are

recorded. This goes beyond the data collection in the SOEP to date and takes into account that with increasing globalization, life courses have also become more diverse and that there is a growing number of people who have lived in different countries with correspondingly varied migration experiences. Other batteries of questions are, for instance, on earnings and employment status before the move, migration decisions in relationships and in the family context, or the purposes and channels of financial transfers to the migrants' native countries.

The "anchor persons" in the sample were drawn from the Integrated Employment Biographies. The only people considered anchor persons were those that had moved since 1995 and migrants' descendants, who from 1995 onwards either began professional training for the first time, took up dependent employment or were registered as job-seekers, or were recipients of unemployment benefit. In addition, all other household members aged 16 and above were surveyed. These people were generally partners or spouses and other family members of the anchor persons. Unlike the anchor persons, these household members may also have already migrated earlier or have been born in Germany and may not necessarily have a migrant background.

The focal point of this migration sample is therefore more recent immigration. In order to take into account the latest developments in migration movements and allow for separate analyses for individual groups, households with migrants from Poland, Romania, the Commonwealth of Independent States (CIS), Turkey, the former Yugoslavia, the southern European countries of Italy, Spain, and Greece, and from Arab and predominantly Muslim countries had above-average representation in the study. At the same time, however, the sample also includes individuals with a migrant background, the "second generation," whose parents migrated to Germany and who themselves were born in Germany.³

The survey data are available to the research community both separately and as part of the regular data package of the 30th wave of the SOEP. Consequently, existing information from the SOEP on persons with and without a migrant background can be used for analysis. The data from the first wave have been available to the research community since October 2014, and the data from the second wave will be published in the third quarter of 2015. The survey data can be obtained from the research data centers of the SOEP at DIW Berlin and of the IAB.

1 The IAB-SOEP Migration Sample is financed with funding from the Federal Employment Agency (BA), the Federal Ministry of Labour and Social Affairs (BMAS), and the Leibniz Association. Both research institutes would like thank the sponsors for generously supporting the project.

2 The SOEP is a representative longitudinal study of households conducted every year since 1984 in western Germany and since 1990 in eastern Germany, see G. G. Wagner, J. Göbel, P. Krause, R. Pischner, and I. Sieber, *Das Sozio-ökonomische Panel (SOEP): Multidisziplinäres Haushaltspanel und Kohortenstudie für Deutschland Eine Einführung (für neue Datennutzer) mit einem Ausblick (für erfahrene Anwender)*, *AStA Wirtschafts- und Sozialstatistisches Archiv*, vol 2, no. 4 (2008): 301–328.

3 See Brücker et al., "Overview."

Box 2

Sampling, Sample Size, and Weighting

The IAB-SOEP Migration Sample was—to the best of our knowledge for the very first time in the context of migration research—drawn from the Integrated Employment Biographies (IEB). In the multi-stage procedure used here, first the addresses of migrants spread across Germany were merged into 6,725 regional units, 250 of which were then randomly selected for the fieldwork. This random sampling procedure ensures that each person from our target population has the same probability of being included in the sample. In order to identify individuals with a migrant background during sampling, name-related data (onomastics) were used in addition to information from the IEB such as nationality.

In each of the 250 regional units for the fieldwork, 80 addresses were selected at random, with certain country groups being given a higher probability of being selected so as to guarantee sufficiently large numbers of cases for specific groups. These include, in particular, those from the new EU member states and from southern Europe.

Since participation in the survey is voluntary and not all the households approached agreed to take part, the final sample size is reduced by the number of households who declined to participate. In order to be able to take into account the above-average representation of certain groups in the sample design as well as the different levels of responsiveness in the analyses, weighting factors are applied, as is standard practice in the SOEP. This includes information from the IEB, the regional databases of the Federal Statistical Office (FSO), and microcensus data. All interviews were conducted orally and face-to-face.¹

¹ For a detailed description of sampling design, participation rates, and weighting strategy of the IAB-SOEP Migration Sample, see M. Kroh, J. Goebel, S. Kühne, and F. Preu, "The 2013 IAB/SOEP Migration Sample (M): Sampling Design and Weighting Adjustment," SOEP Papers (2014).

are based on weighted data¹⁹ which allow us to draw representative conclusions for the whole group. Accordingly, 69 percent of respondents themselves migrated to Germany, 21 percent are descendants of immigrants, and four percent are nationals of other countries (see Figure 1).²⁰ Seven percent do not have any kind of migrant

this date. The sample would have to be extended to give due consideration to these groups.

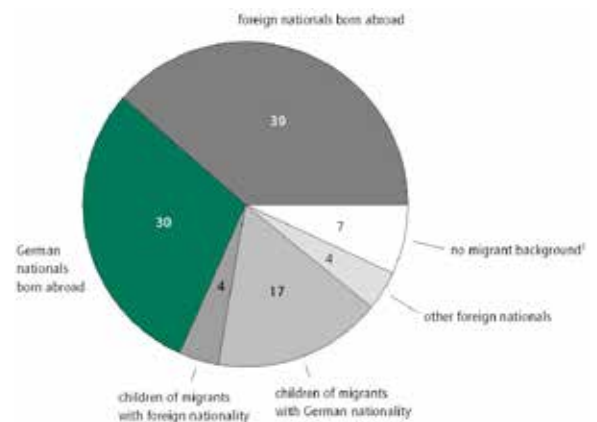
¹⁹ With the exception of estimation results.

²⁰ The present study uses the terms "migrant" and "immigrant" synonymously to denote people born outside Germany including refugees and

Figure 1

Composition of the IAB-SOEP Migration Sample by Migrant Background

Shares in percent



¹ Family members of individuals with a migrant background
Source: IAB-SOEP Migration Sample (weighted). Deviations from 100 percent are due to rounding.

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background themselves but live in the same household as migrants and/or descendants of immigrants.

Of the individuals in the weighted sample with a migrant background, 23 percent originated from the European Union, 30 percent from South-East Europe (Albania, Turkey, and the successor states of the former Yugoslavia, excluding Slovenia and Croatia), 21 percent from the former Soviet Union (excluding the Baltic States), and 12 percent from Arab and other Muslim states.²¹ On average, 74 percent of those with a migrant background were born abroad, with a particularly high share coming from the (former) Commonwealth of Independent States (CIS)²² and new EU member states (EU-13), and a particularly low share from older EU member states (EU-15) and South-East Europe (see Table 1).

late repatriates. The group "people with a migrant background" comprises both migrants and the descendants of migrants. The latter are born in Germany but have at least one parent who was born abroad.

²¹ For the purpose of the present study, these are countries where the majority of the population are of Muslim faith. Turkey and Bosnia, however, are not assigned to this category.

²² In the present study, the former CIS consists of all successor states of the Soviet Union with the exception of Estonia, Latvia, and Lithuania, even those that no longer belong to the CIS.

Table 1

Migrant Background and Citizenship of Individuals in the IAB-SOEP Migration Sample

Shares in percent

	Origin of individuals with a migrant background by country of origin	Shares in total sample of individuals with a migrant background			
		Individuals born abroad	Foreign nationals	Naturalized German citizens	German nationals with a second citizenship
	1	2	3	4	5
EU-28 ¹	23	79	69	20	15
EU-15 ²	10	62	79	5	11
EU-13 (new EU member state) ³	13	91	63	30	18
South-East Europe ⁴	30	63	68	29	6
(Former) CIS ⁵	21	98	25	57	20
Arab and other Muslim states ⁶	12	87	49	42	19
Rest of world	12	89	57	30	12
No information available	3				
Total	100	74	50	34	13

1 All countries that are members of the EU (as of January 1, 2013).

2 All countries that were already members of the EU before May 1, 2004.

3 All countries that joined the EU from May 1, 2004 onwards.

4 Albania, Turkey, and all other successor states of the former Yugoslavia, not including current EU member states (Croatia and Slovenia).

5 All current or former member states of the Commonwealth of Independent States (CIS).

6 All Arab and other countries with predominantly Muslim population.

Note: Column 1 shows that 23 percent of individuals in the sample have a migrant background with origins within the EU. Columns 2 to 5 show that, of the individuals with a migrant background from the EU, 79 percent were born abroad, 69 percent are foreign nationals, 20 percent were previously foreign nationals, and 15 percent are German nationals with dual nationality.

Source: calculations by DIW Berlin based on the IAB-SOEP Migration Sample (weighted).

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Small Proportion of German Citizens from Countries with Freedom of Movement for Workers

The IAB-SOEP Migration Sample finds that exactly one half of those with a migrant background are actually foreign nationals, with just under 34 percent having been granted German citizenship during the course of their lives, and 17 percent having been German nationals since birth. What is striking is the particularly high share of foreign nationals among migrants from the older EU member states (78 percent). The freedom of movement for workers in these countries means that there are very few incentives for migrants originating from there to apply for German citizenship. Shorter migration episodes are also more prevalent in this group since there are fewer barriers to migration. For foreign nationals from some countries, entry to Germany is restricted by legislation. The share of foreign nationals in this group is lower than among EU citizens. The percentage of foreigners among immigrants from the former Soviet Union is already below average (25 percent) due to the high share of late repatriates who were granted German citizenship on arrival (see Table 1).

A total of 13 percent of those with a migrant background have a second citizenship in addition to their German citizenship. This figure corresponds to as much as one-quarter of all German citizens with a migrant back-

ground. The share of German citizens with a migrant background who have dual citizenship is particularly high among immigrants from EU member states. This could be due to the fact that EU citizens are allowed to retain their previous citizenship when naturalized in Germany.

Family Reunification Dominates

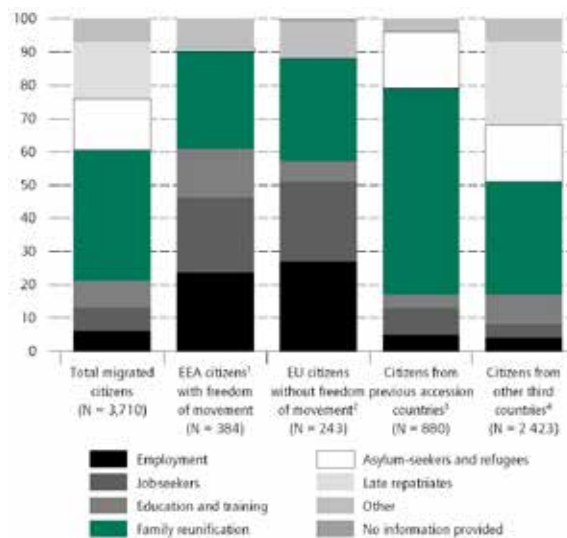
All immigrants in the IAB-SOEP Migration Sample respond to questions about the channel of entry to Germany. From a legal perspective, these channels differ depending on the reason given for taking up residence in Germany. When interpreting the figures, two factors must be taken into consideration. First, individuals who come to Germany with the purpose of reuniting their family, for example, may also intend to seek employment. The legal purpose of their stay does not provide any information on how their residence permit will be used later. Second, the figures map immigration over an extended observation period. Owing to the small number of cases, it is not yet possible to draw any conclusions on the impact of the latest amendments to immigration law, such as the introduction of what is known as the EU Blue Card.

Among the respondents in the IAB-SOEP Migration Sample who migrated to Germany themselves, approx-

Figure 2

Channels of Entry by Purpose of Residence and Country Group

Shares of channels of entry in total migration (in percent)



1 Citizens who first moved to Germany from an EEA state at a time when full freedom of movement for workers applied. The EEA includes Iceland, Liechtenstein, and Norway; In Switzerland freedom of movement provisions have been in place since 2002.

2 Citizens of an EU member state who moved at a time when full freedom of movement for workers had not yet come into effect.

3 Citizens who moved from a country with which the Federal Republic of Germany had previously concluded a recruitment agreement for guest workers.

4 Immigrants from countries not belonging to the EU or the EEA and with no recruitment agreement for guest workers at the time of migration.

Source: IAB-SOEP Migration Sample (weighted). Deviations from 100 percent are due to rounding.

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imately six percent moved to Germany with a confirmed job offer, while a further seven percent came to Germany seeking work. It is important to remember here that the majority of migrants in the sample come from countries where entry to the German labor market is impeded by considerable legal restrictions. Eight percent of immigrants moved to Germany for education and training purposes.

The main reasons respondents emigrated to Germany were to reunite their families (39 percent), as late repatriates (17 percent), or as refugees and asylum-seekers (15 percent) (see Figure 2).

These patterns are clearly linked to legal and institutional barriers to entry. Among immigrants who, at the time of migrating to Germany, were able to take advantage of the freedom of movement of workers (one of the fundamental rights they enjoy as citizens of an EU or EEA country) the share that came to Germany with a confirmed job offer or looking for work (46 percent) is far higher than in most of the other country groups. This also applies to migrants from EU member states which, at the time of their migration, were undergo-

ing a transitional period pending the introduction of full freedom of movement of workers: here, the corresponding share was as high as 51 percent. In contrast, the share of individuals among immigrants from third countries moving to Germany on existing employment contracts and seeking work is marginal (around one-tenth). In this country group, family reunification accounts for more than 60 percent, making it the primary reason for immigration.

Social Contacts Instrumental in Migration Decisions

Support networks play an important role in the migration process. Respondents in the IAB-SOEP Migration Sample were therefore asked about who provided them with support when they came to Germany. Around two-thirds of all immigrants were assisted by relatives, friends, and acquaintances when they moved to Germany, while a third made the decision to migrate to Germany without such support. Here, there is evidence of significant differences between the country groups: approximately three-quarters of immigrants from South-East Europe and the successor states of the former Soviet Union received support from social networks. This is also because large communities of migrants from these two country groups are already living in Germany. The number of migrants from Arab, Muslim, and other third countries that seek support from social contacts is much lower since the size of the migration communities living in Germany is a lot smaller.

Migration Not a One-Way Street

A comprehensive survey of migration biographies also includes questions on previous stays abroad:²³ did the respondents migrate directly to Germany or have they also already lived in other countries? Did they live in Germany before and have now returned? The responses to questions like these give us an insight into transnational migration biographies.

Among migrants and their families immigrating since 1995, the traditional pattern of migration generally continues to predominate, according to which migrants tend to permanently relocate their homes and lives to another country: 83 percent of migrants who themselves emigrated to Germany had, up until that point, never lived longer than three months in a country other than their country of birth and had remained in Germany from their arrival to the time of the survey. By way of contrast, the

23 The IAB-SOEP Migration Sample records every overseas stay of more than three months. Even respondents who were born in Germany are questioned about stays abroad which are longer than three months in duration, although these are not considered in the present report.

Box 3

Record Linkage with IEB and Integration into “Main” SOEP

The survey data on individuals who had given written consent to do so was linked with information from the IEB. For those who had been selected from the IEB as the anchor person in the household, this linkage is easy to achieve using an identification key. Other household members who had likewise given their consent had to be identified in the IEB using a rather complex process. This was possible for 96 percent of those who had agreed to the linkage. Overall, a linked dataset comprising information from the IEB and the survey data is available for 1,653 individuals or one-third of the sample. Since other participants in the survey are also asked to consent to record linkage in subsequent waves, this percentage will ultimately be even higher. The linked dataset is available to the research community for analysis subject to strict data protection provisions. At present, the linked data can only be used by external researchers during working visits to the IAB or by remote access. For data security reasons, any and all data furnished is verified with regard to access authorization prior to release. Plans to develop an anonymized dataset for research communities are underway.

migration biography of 17 percent of respondents deviated from this traditional pattern: prior to their last move they had already acquired other migration experiences. One-third of respondents had moved from their country of birth to another country as minors. Respondents with multiple experiences of migration had previously lived both in Germany and in other countries.²⁴ Of this group, 43 percent chose to migrate to Germany on leaving their country of birth for the first time. In contrast, 57 percent initially migrated to other countries, 19 percent to a member state of the EU-15, and nine percent to Russia. A third lived in a country other than their country of birth before they ultimately moved to Germany. A fifth had lived in a number of countries before finally migrating to Germany.

24 Relevant migration-related literature uses terms such as “transnationality” or “transmigration” to describe this phenomenon. In the present article, however, this is used to denote multiple migration episodes or experiences. L. Pries, “„Transmigranten“ als ein Typ von Arbeitswanderern in plurilokalen sozialen Räumen. Das Beispiel der Arbeitswanderungen zwischen Puebla/Mexiko und New York,” *Soziale Welt* 49 (1998): 135–150; I. Gogolin and L. Pries, “Stichwort: Transmigration und Bildung,” *Zeitschrift für Erziehungswissenschaft* 7 (1) (2004): 5–19.

Table 2

Support from Migration Networks for Entry into Germany by Country of Origin

Shares in percent of immigrants

	Support from ...			No Support
	Relatives	Friends & acquaintances	Both	
EU-28 ¹	Both	17	4	39
EU-15 ²	34	20	5	41
EU-13 (new EU member states) ³	42	15	4	38
South-East Europe ⁴	63	4	8	24
(Former) CIS ⁵	60	5	6	29
Arab and other Muslim states ⁶	39	5	5	51
Rest of world	36	16	4	44
Total	50	9	6	35

1 All countries that are members of the EU (as of January 1, 2013).

2 All countries that were already members of the EU before May 1, 2004.

3 All countries that joined the EU from May 1, 2004 onwards.

4 Albania, Turkey, and all other successor states of the former Yugoslavia, not including current EU member states (Croatia and Slovenia).

5 All current or former member states of the Commonwealth of Independent States (CIS).

6 All Arab and other countries with predominantly Muslim population.

The figures in the rows do not add up to 100 percent because a small proportion of respondents did not provide details.

Source: calculations by DIW Berlin based on the IAB-SOEP Migration Sample (weighted).

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45 percent of all immigrants from the older EU member states relocated several times before arriving in Germany. Among migrants from third countries, i.e., not the traditional countries of origin (South-East Europe and the former Soviet Union), this share is 26 percent. In contrast, the share of repeat migrants among Turkish immigrants and immigrants from the (former) Commonwealth of Independent States (CIS) is relatively low (8 and 12 percent, respectively). Approximately half of all migrants with multiple migration experiences had already lived in Germany for an average of four years before their last move. Half of the group which had lived in Germany before had returned to their birth country at least once. Migrants who return home for brief periods are particularly prevalent among those from former Yugoslav countries as well as from the new EU member states and Turkey.

Increasing Number of People with Diverse Migration Experiences

Whereas in the past the traditional migration pattern was permanent relocation to another country, new patterns of migration with numerous migration episodes are also gaining ground. Particularly since the onset of the financial and economic crisis in Europe, the share of immigrants who had already gained experience in other countries before ultimately moving to Germany has risen sharply, reaching 42 percent in the period

Table 3

Migration Biographies of Migrants by Country of Origin

	Immigrants without previous migration experiences ¹	Total	Immigrants with previous migration experiences			
			of which:			
			with at least one previous stay	with at least one return to native country	Stay in third countries (not including Germany) ²	
					in Germany	with at least one return to native country
in percent of all immigrants in the country group	in percent of immigrants with several migration experiences					
	1	2	3	4	5	6
EU-28 ³	73	27	58	58	42	23
EU-15 ⁴	55	45	47	50	53	33
EU-13 (new EU member states) ⁵	82	18	71	68	29	11
Turkey	92	8	77	67	23	4
Former Yugoslavia	84	16	62	70	38	12
(Former) CIS ⁶	88	12	16	23	85	23
Arab and other Muslim states ⁷	85	15	34	42	66	25
Rest of world	74	26	62	44	38	7
Total	83	17	50	48	50	18

All figures refer to the last move to Germany. Only stays longer than three months are included.

1 Immigrants with no previous migration experiences moved directly from their native countries to Germany and have never lived in another country for more than three months since.

2 Third countries are all destination countries of migration, besides the native country and Germany. The category only includes stays in third countries if the person had not previously resided in Germany.

3 All countries that are members of the EU (as of January 1, 2013).

4 All countries that were already members of the EU before May 1, 2004.

5 All countries that joined the EU from May 1, 2004 onwards

6 All current or former member states of the Commonwealth of Independent States (CIS).

7 All Arab and other countries with predominantly Muslim population.

Note: The last row in column 1 shows that, among those who moved to Germany, 83 percent had never resided in Germany or another country for longer than three months prior to their last move to Germany. The last row in column 2 shows that 17 percent of those who migrated to Germany had already lived in another country or in Germany for more than three months prior to their last move to Germany. The last row in column 3 shows that, among those who already had previous migration experiences when they last moved to Germany, 50 percent had already lived in Germany.

Source: calculations by DIW Berlin based on the IAB-SOEP Migration Sample (weighted).

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from 2008 to 2013, almost double the level for the period 2000 to 2007 (21 percent). One of the reasons behind this might be the diversion of migration flows to Germany from countries hit harder by the crisis.²⁵ This applies, in particular, to immigrants from the new EU member states who, prior to the crisis, moved mainly to Spain, Italy, Ireland, and the UK, and who are now migrating primarily to Germany. The introduction of free movement of workers in Germany, however, is not associated with an increase in the share of immigrants with multiple migration experiences.

Immigrants with several migration episodes in their biography differ from those with traditional migration biographies in that they are more likely to come to Germany with a confirmed offer of employment (17 percent) or to look for employment (19 percent). As for migrants who had no prior migration experiences before moving to Germany, the subsequent relocation of their families plays a major role here, too (with a share of around one-third). The level of professional training of immigrants

with multiple migration experiences is higher on average than that of those with traditional migration biographies: 29 percent have a university degree, while the corresponding figure for migrants with traditional migration biographies is 21 percent. Although, at around one-third, the share of those without vocational qualifications is somewhat lower than for those without prior migration experiences (46 percent), the resulting qualification structure is still polarized: those with prior migration experiences before their last move to Germany are overrepresented at the upper and lower ends of the qualification scale compared to the German population as a whole.

With regard to labor market participation, those who already had multiple migration experiences prior to the last move to Germany do not differ from those who immigrated directly to Germany. Those with traditional migration biographies, however, more frequently work part-time, which might also be attributed to the higher proportion of women in this group. Both groups had comparable knowledge of the German language at the time of the last move, although some of those with multiple migration experiences had previously lived in Germany. Having said that, 75 percent of migrants with mul-

25 S. Bertoli, H. Brücker, and J. Fernández-Huertas Moraga, "The European Crisis and Migration to Germany: Expectations and the Diversion of Migration Flows," IZA Discussion Papers 7170 (2013).

multiple migration experiences have knowledge of other foreign languages, as opposed to 50 percent in the group with no other migration experiences.

Majority of Migrants Wish to Stay in Germany

Numerous studies show that the intention to stay permanently generally has a positive impact on the integration process.²⁶ Almost three-quarters of those who have migrated to Germany since 1995 want to stay long-term. The intention to stay varies depending on the country of origin: the number of migrants who would like to stay in Germany permanently is particularly high among immigrants from the CIS (93 percent), which can be partially explained by the large-scale migration of late repatriates from this region. There is also a very high share of migrants from Arab and Muslim states as well as from the successor states of the former Yugoslavia (77 percent and 76 percent, respectively). Migrants from the EU-15 make up the lowest share (56 percent).

Migrants with Multiple Migration Experiences and Skilled Professionals Do Not Feel Tied to Germany

Of the group of immigrants with multiple migration experiences, 61 percent stated that they wished to stay in Germany, ten percent would like to leave Germany again, and 29 percent were still undecided in 2013. Conversely, in the group with no prior migration experiences before their last move to Germany, 77 percent planned to stay in Germany permanently.

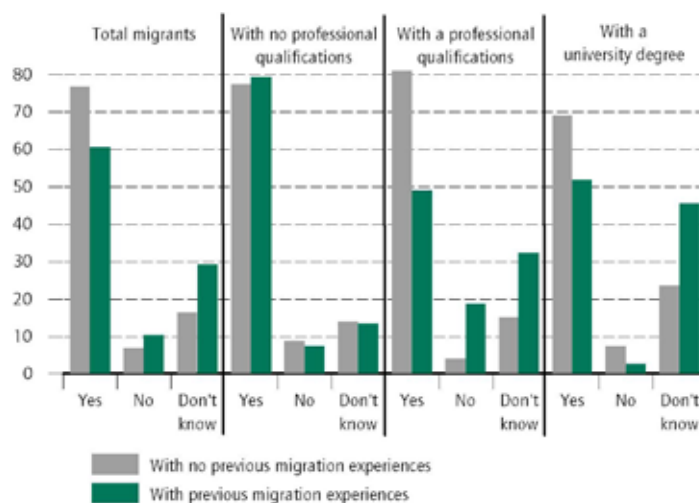
As shown in Figure 3, it is the highly qualified who are undecided: 45 percent did not know whether they would remain in Germany long-term. To what extent the intention to stay or move away are then followed through will be further explored in future as part of further survey waves of the study.

High Correlation between Life Satisfaction and Intention to Stay Long-Term

The extensive data on the situation of migrants provided by the IAB-SOEP Migration Sample makes it possible to examine migrants' intention to stay in Germany more closely. The probability of migrants planning to stay in Germany permanently is examined here using a multivariate model,²⁷ where socio-demographic characteristics (age,

Figure 3

Migrants' Intention to Stay by Migration Type and Qualification Level
Shares in percent



Source: calculations by DIW Berlin based on the IAB-SOEP Migration Sample (weighted). Only respondents aged 18 and above when they first left their home country were taken into account.

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sex, and education), employment status and household income, migration-related characteristics (duration of stay, channel of entry, and nationality), and subjective characteristics (life satisfaction and experience with discrimination) are used as explanatory factors.²⁸ The results show that, even under statistical control for these characteristics, individuals who had already lived in another country besides their native country prior to moving to Germany were far less likely to want to stay than those with no previous migration experiences before moving to Germany (see Table 4).

The analysis also shows that qualified professionals have a statistically significantly reduced intention to stay. The same applies to students and others in education and training. Conversely, German nationality is positively associated with intention to stay. Moreover, intention to stay is far more pronounced for (late) repatriates, asylum-seekers, and refugees than for immigrants who have come to Germany to reunite with their family. Finally, income and well-being also play a role, with the inclination to stay in Germany long-term negatively correlated to income. This confirms findings in migration theory that migration costs decrease at least proportionately to gains in income, thus

26 On language acquisition, see, for example, C. Dustmann, "Temporary Migration, Human Capital, and Language Fluency of Migrants," *The Scandinavian Journal of Economics* 101 (2) (1999): 297-314.

27 A logistic regression is estimated. The dependent variable is a binary variable, which has a value of one if the respondent intends to stay in Germany,

and a value of zero if he or she does not intend to stay or does not know whether he or she intends to stay in Germany.

28 For a similar model, see C. Diehl and P. Preisendörfer, "Gekommen um zu bleiben? Bedeutung und Bestimmungsfaktoren der Bleibeabsicht von Neuzuwanderern in Germany," *Soziale Welt* (2007): 5-28.

Table 4

Effect of Selected Characteristics on Migrants' Intention to Stay

	Coefficients		Standard error
Women (reference group: men)	0.130		(0.115)
Age	0.074	*	(0.035)
Age ²	-0.0007		(0.000)
Duration of stay in Germany (years)	-0.014		(0.009)
Immigrant with previous migration experiences (reference group: no previous migration experiences)	-0,586	***	(0,140)
Channel of entry (reference group: family reunification)			
Those in employment and job-seekers	-0.177		(0.136)
Late repatriates	1.188	***	(0.257)
Asylum-seekers and refugees	0.844	***	(0.203)
Education and training	-0.754	***	(0.220)
Other channel of entry	0.020		(0.223)
German nationality (reference group: no)	1.002	***	(0.157)
Highest professional qualification (reference group: no professional qualification)			
With a professional qualification	-0.100		(0.128)
With a university degree	-0.428	**	(0.148)
Household income (equivalence-weighted)	-0.0003	***	(0.000)
In employment (reference group: no)	-0.073		(0.125)
Experience with discrimination (reference group: no)	-0.233	*	(0.108)
Life satisfaction (index) ¹	0.115	***	(0.029)
Constants	-1.220		(0.838)
Observations			2,352
R ²			0.14

Logistic regression. Dependent variable is a dummy variable which is assigned the value 1 if the respondent intends to stay in Germany in any event, and 0 if the reverse is the case. The one-, five-, and ten-percent significance levels are indicated by ***, **, and *. Only respondents aged 18 and above when they first left their home country were taken into account.

1 Index values ranging from 0 (completely dissatisfied) to 10 (completely satisfied).

Note: Migrants who moved to Germany for the purpose of studying or training are less likely to want to stay in Germany than those who migrated to join their family there. The difference in the intentions to stay between the two groups is highly significant.

Source: calculations by DIW Berlin based on the IAB-SOEP Migration Sample.

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increasing mobility.²⁹ Furthermore, a positive correlation between intention to stay and life satisfaction can be seen, while there is a negative correlation with experiences of discrimination. Intention to stay therefore depends not only on personal life satisfaction but also on the host society and on how welcome migrants are made to feel in Germany.³⁰

Conclusion

The IAB-SOEP Migration Sample, which was conducted for the first time in 2013, provides key data for detailed

analysis of the structures of those among the population in Germany with a migrant background, the main focus being more recent immigration since 1995. This opens up more scope for evidence-based policy advice, including in fields such as immigration policy, labor market policy, and education policy, as well as in all other policy areas relevant to the integration of migrants and their descendants.

Around three-quarters of those in the sample with a migrant background immigrated to Germany, half of whom hold German citizenship. Also among those born outside of Germany, a considerable proportion has already acquired German nationality. Naturalization rates are particularly high among migrants from countries where there are considerable legal and administrative barriers to immigration to Germany.

One of the particular characteristics of immigrants who moved in the last 15 years or so is that only six percent came to Germany on employment contracts and another seven percent to look for work. Migration patterns are dominated by channels of entry that are unrelated to the labor market such as family reunification, on the one hand, and immigration of late repatriates, asylum-seekers, and refugees, on the other. Although the majority of these immigrants are subsequently integrated into the labor market, it was found that those channels of entry that are unrelated to the labor market are negatively correlated to gainful employment and pay level. This pattern reflects the legal and institutional frameworks for immigration: around half of immigrants from EU member states moved for employment or to look for work.

Migration networks play a key role in migration decisions, particularly for immigrants from countries with large migrant communities already living in Germany. The migration biographies of immigrants today are increasingly different to earlier migration patterns. In the past, most migrants would relocate their homes, work, and lives to another country once. This has changed over the course of time, especially since the onset of the economic and financial crisis in Europe: around two-fifths of immigrants now have previous migration experiences in other countries or in Germany. This phenomenon is also linked to the diversion of migration flows resulting from the asymmetric effects of the economic crisis in Europe.

Most immigrants want to stay in Germany long-term. A higher level of qualifications and previous migration experiences are associated with less intention to stay, however. Life satisfaction correlates positively and experiences of discrimination negatively with intention to stay. The openness of German society and personal experiences in the home, working, and living environments would appear to be other important factors which people with a migrant background take into account when deciding whether or not to stay in Germany permanently.

29 See H. Brücker and C. Defoort, "Inequality and the self-selection of international migrants: theory and new evidence," *International Journal of Manpower* 30 (7) (2009): 742–764; B. R. Chiswick, "Are Immigrants Favorably Self-Selected?," *American Economic Review* 89 (2) (1999): 181–185.

30 A recently published longitudinal study based on SOEP data also showed significant effects of experiences of discrimination on mental health: R. Schunck, K. Reiss, and O. Razum, "Pathways between perceived discrimination and health among immigrants: evidence from a large national panel survey in Germany," *Ethnicity & Health* (2014), doi:10.1080/13557858.2014.932756.

Recognized Qualifications and Command of German Language Are Worthwhile

By Herbert Brücker, Elisabeth Liebau, Agnese Romiti und Ehsan Vallizadeh

In the past, little was known about the employment histories and earnings of migrants prior to migration to Germany. Not only does the new IAB-SOEP Migration Sample bridge this gap but it also provides comprehensive information on the determinants of labor market integration for immigrants in Germany. Those who were employed before moving to Germany generally enter employment there, too, usually with high income gains. A knowledge of German and recognized professional qualifications mean higher wages and better chances of finding employment in line with the given qualification level.

The successful integration of migrants into the labor market depends on a number of factors. These include education and language skills, and the official recognition of professional qualifications. Other contributory factors are career advice and job-seeking assistance. The new IAB-SOEP Migration Sample can be used to trace the employment histories of migrants prior to and after migration to Germany. For instance, new information can be obtained on the determinants of labor market integration, as well as on the extent to which migrants can use human capital acquired before migration on the German labor market.

Employment History Before and After Migration

Almost two-thirds of migrants have acquired work experience in their home country. In fact, more than 70 percent of migrants to Germany from the new and old EU member states, as well as from the rest of the world, were gainfully employed prior to moving to Germany. In contrast, the number of migrants from South-East Europe and from Arab or other Muslim countries is rather low at 46 and 51 percent, respectively. In the case of immigrants from South-East Europe, this could be put down to the age structure: with an average age of 20 years, this group is youngest when they migrate. The average age of all migrants at the time of immigration was 25, while the average age at the time of the survey was 40.

In the year following migration to Germany, almost half of the migrants were employed. Those who had been in employment for a minimum of one year prior to migration had 11 years' work experience on average (see Table 1).

Labor participation before migration is closely connected to later employment histories in Germany: of all migrants who were employed before migration, 90 percent took up employment in Germany again and 70 percent were in gainful employment at the time of the survey. In contrast, 70 percent of those who had no work experience prior to migration were subsequently employed in

Table 1

Employment History of Migrants in Germany

	All countries of origin			Country groups					
	Total migrants	Male migrants	Female migrants	EU-15 ¹	EU-13 (new EU member states) ²	South-East Europe ³	(Former) CIS ⁴	Arab and Muslim countries ⁵	Rest of world
Work experience prior to migration to Germany—in percent									
Employed at least once prior to migration to Germany	62	67	58	71	74	46	67	51	72
Employed in the year prior to migration to Germany	48	54	43	48	56	32	59	38	56
Number of years in employment prior to migration									
Average period of employment prior to migration to Germany	7.6	8.8	6.6	7.1	7.0	4.5	13.0	4.6	5.7
If employed one year or more prior to migration to Germany: average period of employment	11.1	11.8	10.4	10.1	9.8	8.2	16.3	8.2	7.9

1 All countries that were already members of the EU before May 1, 2004.

2 All countries that joined the EU on or after May 1, 2004.

3 Albania, Turkey, and all other successor states of the former Yugoslavia, not including the current EU Member States (Croatia and Slovenia).

4 All current or former members of the Commonwealth of Independent States (CIS).

5 All Arab and other countries with predominantly Muslim population.

Source: calculations by DIW Berlin based on the IAB-SOEP Migration Sample (weighted).

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Germany, and as many as half of these were employed at the time of the survey (see Table 2).

Different Labor Market Patterns for Male and Female Migrants

The labor market participation of male and female migrants varies at all of the points of time observed. Before migration to Germany, 67 percent of men and 58 percent of women had work experience, while in the year directly following migration, 54 percent of male and 43 percent of female migrants were employed (see Table 1). Interestingly, these differences became more pronounced rather than less following migration to Germany, although labor participation did rise for both male and female migrants after migration: 91 percent of male migrants and 76 percent of female migrants had acquired work experience at the point of the survey, 72 percent of male and 54 percent of female migrants were employed at the point of the survey. The labor participation gender gap went up from 11 to 18 percentage points in comparison to the year before migration. As Table 2 shows, work experience prior to migration is, as expected, very closely correlated to the later employment history in Germany. This applies to both male and female migrants.

Gender differences can also be seen in the employment histories in Germany, with integration into the labor market clearly taking some time for both male and female migrants. In the first year after migration, as few as 49 percent of male and 34 percent of female migrants had found their first job in Germany. Ten years after migration to Germany, this figure reached 81 percent for male and 65 percent for female migrants, with the gender gap remaining approximately constant at around 15 percentage points. For migrants in full-time employment, these differences become more pronounced over time: whereas in the first year after migration 46 per-

Table 2

Correlation between Employment before and after Migration

In percent

Work experience before migration ¹	Work experience after migration ²		Currently employed ³	
	Yes	No	Yes	No
Total migrants				
Yes	91	9	69	31
No	70	30	51	49
Total	83	17	72	38
Male migrants				
Yes	94	83	75	25
No	70	17	67	34
Total	91	83	72	28
Female migrants				
Yes	87	13	64	36
No	61	39	41	59
Total	76	24	54	46

1 Employed at least once prior to migration to Germany.

2 Employed at least once in Germany.

3 Employed in the previous seven days.

Source: calculations by DIW Berlin based on the IAB-SOEP Migration Sample (weighted).

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cent of male and 28 percent of female migrants had found full-time employment, ten years later the corresponding figures were 76 percent for male and 48 percent for female migrants. The gender gap has thus increased from 19 to 28 percentage points (see Table 3).

High Income Gains From Migration

One of the most important motives for migration is the prospect of better earnings and a higher standard of living in Germany. The vast majority of migrants come from countries where incomes are far lower than in Germany. Only data on the aggregate income differences between Germany and the migrant's home country have been available to date but in the IAB-SOEP Migration Sample, respondents were also asked to provide information on their earnings before migrating to Germany. This meant that, for the first time ever, the income gains of migrants in Germany could be analyzed on an individual basis.³¹

Before migration, the average net monthly earnings were 506 euros. The net monthly income of immigrants from old EU member states was high by comparison at 1,172 euros, while migrants from South-East Europe earned far less at just 603 euros. Even lower are the net monthly incomes of migrants from Arab and other Muslim countries (585 euros), the new EU-13 member states (497 euros), and (former) CIS states (307 euros). In the "Rest of the world" category, where per capita income is very heterogeneous, the net income of migrants prior to migration averaged 514 euros (see Figure 1).

After migration, across all the country of origin categories, migrants in gainful employment in Germany showed increases in income. At the time of the survey, the last net monthly income was 1,273 euros on average, which was twice as much as before migration. With a net monthly income of around 1,800 euros, those from the old EU member states had the highest income gains of all the migrant groups: the average net income of migrants from the (former) CIS went up by a factor of almost four, and the net income of those from new EU member states as well as from South-East Europe was almost double what it had been prior to migration. Conversely, the net income of EU-15 migrants was only around one-third higher (see Table 1).

The considerable differences in salary continue to exist after migration, too: for example, the average net month-

Table 3

Time Taken to Find First Job in Germany

First job after migration	Total migrants	Male migrants	Female migrants	Gender gap
	Shares in percent			Percentage points
All Employees				
Within the first year	41	49	34	15
Within two to three years	52	60	44	16
Within five to six years	60	69	53	16
Within ten to eleven years	72	81	65	16
Full-Time Employees				
Within the first year	36	46	28	19
Within two to three years	44	56	34	22
Within five to six years	50	65	39	26
Within ten to eleven years	61	76	48	28

Only those who were younger than 65 were taken into account.

Source: calculations by DIW Berlin based on the IAB-SOEP Migration Sample (weighted).

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ly income of female migrants in the year prior to migration (413 euros) was a good one-third lower than that of male migrants (596 euros). After migration to Germany, this gender gap in income had widened further, with female migrants averaging a net monthly income of 877 euros in comparison to their male counterparts with 1,617 euros. These differences cannot be attributed solely to the higher number of women in part-time employment.

First Job Commonly Found through Social Contacts

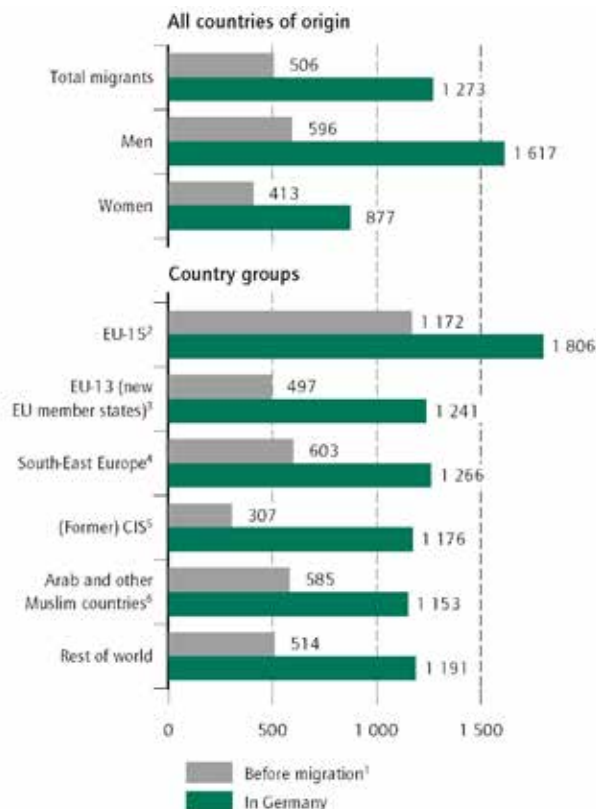
Successful labor market integration also depends on how job-seeking migrants find employment, not least owing to the greater obstacles migrants face in comparison to the local workforce: they have less information on the German labor market, while potential employers, for their part, are less able to gauge the level of migrants' qualifications and other relevant skills obtained in their home countries than is the case for the German workforce. This can result in poor job matches, meaning migrants may end up finding employment in positions that are not suited to their skillset. This ultimately means lower salaries and limited career and advancement opportunities.

To further analyze job-seeking approaches, the IAB-SOEP Migration Sample asks migrants how they found their first job in Germany. At 55 percent, the majority of migrants find their first job via social networks such as relatives, friends, and acquaintances. A different picture emerges, however, when job-seeking methods are examined with regard to different levels of formal education. Social contacts are particularly important to people

31 These differences are analyzed on the basis of nominal figures. The real differences are less pronounced, since, in the majority of countries of origin, the purchasing power of the relevant currency is far higher than in Germany. Nonetheless, since migrants spend part of their income in their homeland, both the purchasing power of incomes in their native country and Germany and nominal differences are relevant.

Figure 1

Net Monthly Earnings before and after Migration



1 To compensate for distortion resulting from outliers, here, the analysis was restricted to percentile values for the interval one to 99 percent of net monthly income distribution. Values that cannot be clearly categorized owing to currency reforms were also excluded.

2 All countries that were already members of the EU before May 1, 2004.

3 All countries that joined the EU on or after May 1, 2004.

4 Albania, Turkey, and all other successor states of the former Yugoslavia, not including the current EU member states (Croatia and Slovenia).

5 All current or former members of the Commonwealth of Independent States (CIS).

6 All Arab and other countries with predominantly Muslim population.

Source: calculations by DIW Berlin based on the IAB-SOEP Migration Sample (weighted).

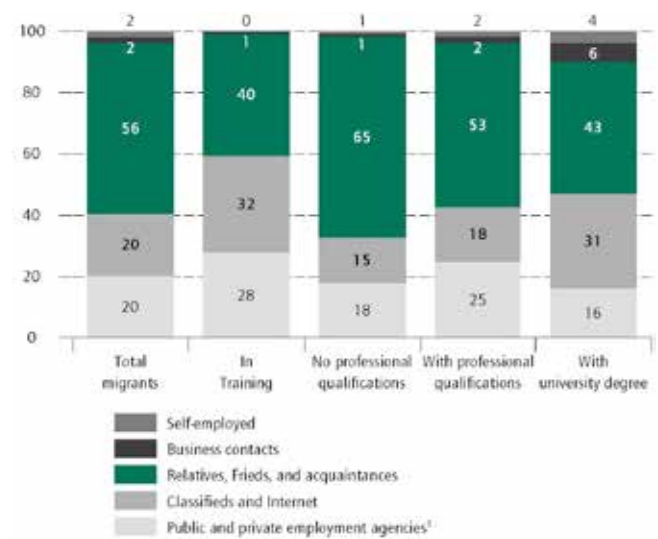
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with a lower level of education: an above-average number of people with no professional qualifications find employment through relatives, friends, and acquaintances (66 percent), while those with a higher education qualification find their first job far less frequently through social networking than other migrants and far more frequently through classifieds and the internet as well as through business contacts. Around one-fifth of migrants found their first job in Germany through the German Federal Employment Agency, an employment agency in their home country, or through an international or private employment service (see Figure 2). Migrants are far less likely to use job-seeking agencies and employment services to find employment than those with no migrant background.

Figure 2

How Migrants Found First Job in Germany

By qualification (in percent)



1 German Employment Agency, employment agency in home country, international employment service or private job agency.

Source: calculations by DIW Berlin based on the IAB-SOEP Migration Sample (weighted). Deviations from 100 percent are due to rounding.

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How migrants find employment will often affect their salary, employment opportunities, and career and advancement opportunities. Earlier empirical studies show that the above-average use of social contacts by migrants to find a job can help overcome information barriers between job-seeking migrants and potential employers—something that would be more difficult to achieve using other job-seeking channels. Other channels could, however, help migrants obtain higher starting salaries than would otherwise be the case. Yet the long-term effects may be very detrimental: very often far poorer career advancement prospects accompanied by low-end salary increases in later employment history.³² The IAB-SOEP Migration Sample is an important database which can be used to further analyze such issues in future.

Better Career Opportunities and Higher Income through German Language Skills

The success of migrants on the German labor market depends on a number of factors. To further examine the labor market integration of migrants to Germany, three indicators are used: the probability of being gainfully employed, the salary level, and the probability of finding a job that is in line with the individual's quali-

32 See C. Dustmann, A. Glitz, and U. Schönberg, "Referral-based Job Search Networks," IZA Discussion Papers 5777 (2011).

Box 1

Estimation Method

Three different regression models were used: the first, a probit model, explains the probability of being gainfully employed. The dependent variable is assigned the value 1 if the person was in gainful employment in the seven days prior to the survey, and the value 0 if the reverse is the case. In the second model, the logarithm of monthly earnings is the dependent variable, and a linear regression model is used. The third estimation model—another probit model—explains job mismatch. The dependent variable has the value 1 if the respondent is currently employed in a job where the qualification requirements are lower than the qualifications the respondent holds, and 0 for the opposite scenario.

In all regression models, gender, education, age, age squared, duration of stay in Germany, duration of stay in Germany squared, six country groups, and weekly working hours were taken into consideration to examine the effect of these variables on indicators such as access to gainful employment, earnings, and job match.

In addition to the estimated results presented here, a number of other regressions were conducted to determine whether the results are robust. Restricting the sample to the full-time employed only, for example, or excluding the self-employed or using specific occupational groups as additional control variables, has no qualitative impact on the results.

fications. The last point is particularly relevant in light of the fact that a substantial number of immigrants are employed in positions that do not match their qualifications (OECD 2007).³³ Below, multivariate regression models are used to explore all the factors observed with regard to how they impact migrants' success on the labor market (see Box 1).

To successfully enter the German labor market, one of the key skills for migrants is knowledge of the German language.³⁴ The regression analysis results show that a good or very good command of German has a positive effect on labor market integration in every dimension: as a person's language skills improve, the probability of them finding employment increases, as do their chances

of obtaining better pay. Likewise, the poorer the language skills, the greater the risk of the person being over-qualified for the job they end up in. These results are highly significant for the categories "Good command" and "Very good command" of German, and the effects are not negligible: the net monthly earnings of those with a very good command of the language are almost 22 percent higher than the earnings of those who have a poor command of the German language or none at all. For those with a good command, salaries are as much as 12 percent higher. A similar picture can be seen when it comes to employment status and job suitability: individuals with a very good command of German have an almost 15 percent higher probability of being employed than those with a poor command. The risk of job mismatch is a good 20 percent lower then.

Benefits of Recognized Qualifications

To be able to transfer human capital, i.e., to make use of qualifications obtained at home in Germany, qualifications have to be recognized *de jure* and *de facto*. This process is not only crucial in regulated jobs where the legal recognition of qualifications is mandatory for said professions to be pursued in Germany but can also be an important signal to potential employers and, consequently, enhance employment opportunities and earnings.³⁵

In Table 5, the same independent variables were used as indicators for labor market integration as in the section above. Besides probit and linear regression models, our study of the effects on employment prospects and salary also included fixed effect regression models.³⁶ Here, the survey data—provided written consent had been obtained—were linked with the Integrated Employment Biographies (IEB) database. This contains panel data on administrative factors such as salary level and the employment history of migrants since their move to Germany. These data can be used to estimate even non-observable individual-specific data, provided these do not vary over time. This approach is more likely to allow for causal effects to be identified than in regressions which only take non-observable effects into consideration as control variables (see Box 2).³⁷

35 B.R. Chiswick and P.W. Miller, "The international transferability of immigrants' human capital," *Economics of Education Review* 28 (2009): 162–169; R. M. Friedberg, "You Can't Take It with You? Immigrant Assimilation and the Portability of Human Capital," *Journal of Labor Economics* 18 (2000): 221–251.

36 For information on the statistical modelling method, see, *inter alia*, M. Giesselmann and M. Windzio, *Regressionsmodelle zur Analyse von Paneldaten*, (Wiesbaden: 2012).

37 In the analysis of the impact of recognized professional qualifications on the probability of being employed in a position that is not in line with the qualification level, we were unable to perform fixed-effect regression analysis, since the dependent variable is available for one point in time only.

33 See OECD, *International Migration Outlook* (Paris: 2007).

34 Language skills are broken down into four levels: no or poor command of the German language, average command ("Fair command"), good, and very good command. The reference category for the estimated results shown in Table 4 is the category "No or poor command."

Box

Analytic Potential of Integrated Employment Biographies (IEB)

Provided the respondents have given their written consent, the data from the IAB-SOEP Migration Sample can be linked with register data from the Integrated Employment Biographies (IEB) database subject to strict data protection regulations. The IEB contains, among other things, salary and employment data for individuals from the moment they enter the German labor market. This time series data already constitute the first wave of the IAB-SOEP Migration Sample for these individuals, although the results of the first wave of the IAB-SOEP Migration Sample are only just available.¹

This information can broaden the scope of analysis considerably: labor market success depends on observable and non-observable individual-specific factors. The observable factors were controlled for in the other regressions. If these non-observable effects also impact, for example, the acquisition of language skills or the recognition of professional qualifications, it is

possible to identify associations, but not causal effects. Here, we rely on panel data with several observations over time.

Regression analysis based on panel data enables us to factor in what are known as individual-specific fixed effects, meaning all observable and non-observable individual properties can be examined, provided they do not vary over time. The prerequisite for this, however, is that the important explanatory variables also do not vary over time. This is the case for the recognition of professional qualifications, for instance, but not for language skills and employment commensurate to qualifications. These variables are available for the year in which the survey was conducted only. Thus, only in the regressions on the recognition of professional qualifications can fixed individual-specific effects be used to identify labor market effects.

We also examined whether the different results obtained in the fixed-effect regressions and cross-sectional regressions can be accounted for by the composition of the sample. No obvious distortion was found: cross-sectional regressions carried out for the smaller sample of those who had consented to the record linkage led to very similar results, both qualitatively and quantitatively, to those for the complete sample.

1 H. Brücker, M. Kroh, S. Bartsch, E. Liebau, P. Trübshwetter, I. Tucci, and J. Schupp, "Overview on the IAB-SOEP Migration Sample 2013," SOEP Papers, DIW Berlin and IAB research report (2014).

Table 4

Labor Market Effects of Recognized Professional Qualifications

Dependent variable	(1)	(2)	(3)
	Employment status	Net monthly income	Inadequate employment ¹
Reading, written and spoken language skills			
Very good command	0.146*** (0.0199)	0.216*** (0.034)	-0.204*** (0.024)
Good command	0.0941*** (0.0267)	0.120*** (0.042)	-0.081** (0.033)
Fair command	0.0617 (0.0279)	0.071 (0.047)	-0.045 (0.037)
Observations	3263	1 966	2 166
R ²		0.562	

Notes: The one-, five-, and ten-percent significance levels are indicated by ***, **, *. Estimate specifications: in the probit regressions (1) and (3), the dependent variable is a dummy variable which is assigned the value 1 if a person was employed or in inadequate employment at the time of the survey, and the value 0 if the reverse is the case. The coefficients in (1) and (3) represent the marginal effects. In regression (2) the dependent variable is the logarithmized net monthly earnings. The reference group is those with a "very poor command" of the German language.

1 Inadequate employment is assigned the value 1 if the qualifications required for the job are lower than the actual qualifications held.

Note: A "very good command" of the German language increases the probability of being employed by 14.6 percentage points in regression (1) in comparison to someone with a "very poor command" of German. The coefficients in regression (3) can be interpreted in a similar fashion. In regression (2), a "very good command" of German increases income by 21.6 percent in comparison to someone with a "very poor command" of German.

Source: calculations by DIW Berlin based on the IAB-SOEP Migration Sample.

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In the estimates shown in Table 5, the reference group comprises migrants who had not applied to have qualifications obtained outside Germany officially recognized. The estimated results show that full recognition of professional qualifications significantly increases the salary level in comparison to the reference individuals, and there is a far lower probability of job mismatch. The results are thus relevant both quantitatively and in terms of education policy. Those who have their qualifications officially recognized are approximately 32 percentage points less likely to end up in a job for which they are overqualified than those who do not seek recognition of their qualifications.

In the regression models controlling for non-observable individual-specific characteristics, these effects are even slightly more pronounced: for instance, the salaries of those who have had their qualifications fully recognized are estimated to be 28 percent higher than for those who did not seek to have their qualifications recognized. In the regressions performed for observable individual-specific effects, in contrast, the increase in salary following recognition of qualifications is around 25 percent.

The effects of the recognition of professional qualifications on employment opportunities are less pronounced, however: only in regressions which track non-observable individual-specific effects (fixed effects) were recognized professional qualifications found to enhance the probability of finding employment.

Partial recognition of professional qualifications has far less impact than full recognition. Recognized qualifications may significantly reduce the probability of migrants being employed in a job that does not match their qualifications; in both regressions, however, salary effects were not found to be significant. On the other hand, in the regressions for non-observable individual-specific effects (“fixed effects”), the probability of finding gainful employment at all is significantly higher.

Conclusion

On average, migrants working in Germany will earn twice as much as before migration. Labor force participation rates for migrants were found to increase over time, although existing data also indicate that integration into the labor market does take some time. Considerable differences between labor force participation for men and women were found, and, in the case of full-time employment, became even more pronounced over time. The biographical and socio-structural reasons for this can be examined more closely using the IAB-SOEP Migration Sample.

Most migrants find their first position in Germany via social contacts such as relatives, friends, and acquaintances. One of the principal reasons for this is the considerable information barriers which are most easily overcome through social networks. Breaking down information barriers such as these—for example, by using more efficient services for finding employment in Germany or abroad—could help migrants achieve a better job match and result in a more productive use of labor.

The findings in the present report provide solid evidence of the previous assumption that a command of the German language and recognized professional qualifications are key factors in achieving successful market integration. A good and very good command of German are closely linked to higher labor market participation, employment commensurate with qualifications, and higher salaries. Recognized professional qualifications, for their part, have no major effect on labor market participation. They do, however, impact whether a person will find a job in line with their qualifications and pay level. This would seem to indicate that labor market policy measures to promote language skills among immigrants can have a positive effect on the labor market and, in the long-term, can help integrate migrants into the labor market more quickly. Similarly, the recognition of professional qualifications fosters labor market integration and boosts salaries.

Table 5

Labor Market Effects of German Language Skills

Dependent variable	(1)	(2)	(3)
	Employment status	Net monthly income	Inadequate employment ¹
Reading, written and spoken language skills			
Very good command	0.146*** (0.0199)	0.216*** (0.034)	−0.204*** (0.024)
Good command	0.0941*** (0.0267)	0.120*** (0.042)	−0.081** (0.033)
Fair command	0.0617 (0.0279)	0.071 (0.047)	−0.045 (0.037)
Observations	3263	1966	2166
R ²		0.562	

Notes: The one-, five-, and ten-percent significance levels are indicated by ***, **, *. Estimate specifications: in the probit regressions (1) and (3), the dependent variable is a dummy variable which is assigned the value 1 if a person was employed or in inadequate employment at the time of the survey, and the value 0 if the reverse is the case. The coefficients in (1) and (3) represent the marginal effects. In regression (2) the dependent variable is the logarithmized net monthly earnings. The reference group is those with a “very poor command” of the German language.

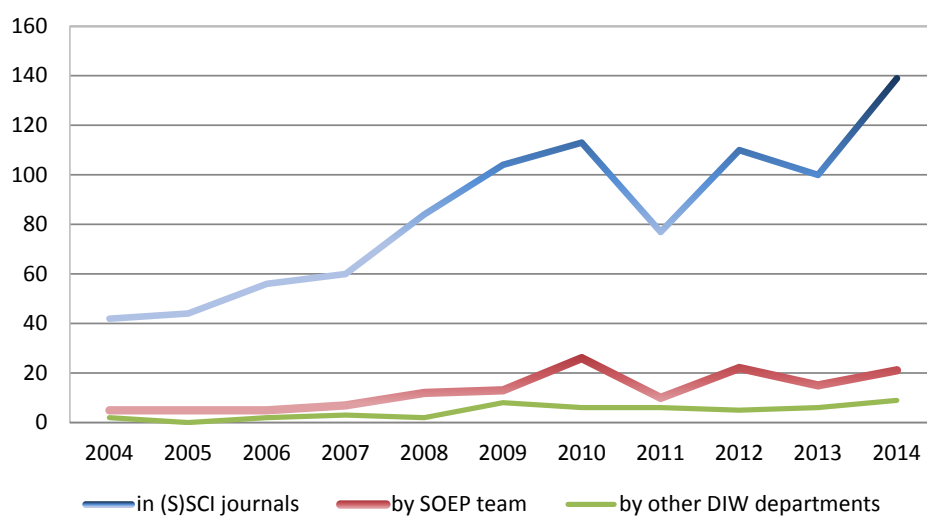
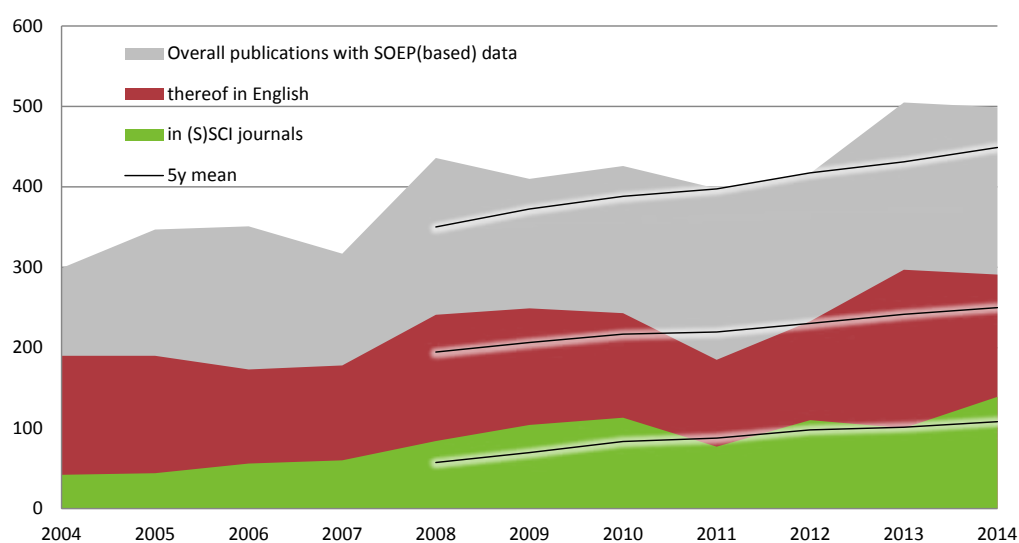
1 Inadequate employment is assigned the value 1 if the qualifications required for the job are lower than the actual qualifications held.

Note: A “very good command” of the German language increases the probability of being employed by 14.6 percentage points in regression (1) in comparison to someone with a “very poor command” of German. The coefficients in regression (3) can be interpreted in a similar fashion. In regression (2), a “very good command” of German increases income by 21.6 percent in comparison to someone with a “very poor command” of German.

Source: calculations by DIW Berlin based on the IAB-SOEP Migration Sample.

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At a Glance: Number of SOEP-based (S)SCI papers over the last decade



(S)SCI-Publications 2014

by SOEP Staff

- B**ertram, Lars, Anke Böckenhoff, Ilja Demuth, Sandra Düzel, Rahel Eckardt, Thomas Siedler, Gert G. Wagner, Shu-Chen Li, Ulman Lindenberger, Graham Pawelec and Elisabeth Steinhagen-Thiessen. 2014. Cohort Profile: The Berlin Aging Study II (BASE-II). *International Journal of Epidemiology* 43, No. 3, 703-712.
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Part 6

Highlights 2014

11th International SOEP User Conference (SOEP 2014)



Photos: Stephan Röhl



Felix Büchel Award for outstanding research and Joachim R. Frick Memorial Prize for best presentations awarded at the Conference

The 11th International SOEP User Conference (SOEP2014) took place from June 30 to July 1, 2014, in Berlin at the Hertie School of Governance and at the German Institute for Economic Research (DIW Berlin).

The SOEP User Conference attracted more than 120 participants from 10 countries. In fourteen parallel sessions over the course of two days, researchers presented around 60 papers and 20 posters.

The 11th SOEP User Conference focused on two broad areas, socio-economic inequalities and migration, reflecting the growing interest of the social sciences in understanding the inter-temporal patterns and driving forces behind these phenomena. The potential of longitudinal data in this research context remains vastly underexplored. The conference provided a forum to discuss the diverse potentials of panel data and to promote the possibilities of these data to the research community.

Keynotes by Patricia McManus and Jacques Silber

Two impressive keynote lectures were presented at the conference. The first was given by US sociologist Patricia McManus, Associate Professor of Sociology at Indiana University. Her lecture was entitled “The Next Generation: Family Background and Prospects for Immigrant Incorporation in Germany, Great Britain, and the United States.” As Prof. McManus summarized, “The main finding is that in all three of these countries, immigrants experience some form of disadvantage. Immigrant children were living in households that were disadvantaged in terms of the life risks they were exposed to in terms of education, or employment, or income, or pervasively health.”

The second keynote was given by economist Jacques Silber, Professor Emeritus at Bar-Ilan University. His keynote was entitled “Inequality, Globalization, and La-

bor Markets.” He noted that “As far as OECD countries are concerned, the most recent evidence shows clearly that in the past thirty years, wage inequality increased, trade integration spread, technology advanced rapidly and product and labor market institutions and regulations weakened,” and that what seems “to have had the greatest impact on wage inequality in OECD countries is not globalization but technological change and the weakening of product and labor market institutions.”

Presentations

The common element of all conference presentations was their empirical foundation: the German Socio-Economic Panel data. The presentations demonstrated that SOEP data are being used to investigate increasingly complex research questions covering a wide range of topics that include labor markets, intergenerational mobility, education, well-being, and life-course analysis.

Several of the presentations at the conference dealt with research on the determinants of life satisfaction using the longitudinal dimension of the SOEP data to validate causal claims with quasi-experimental or fixed effects designs.

Another benefit of longitudinal data for the field of life-course analysis was explored at the conference: the possibility to jointly model characteristics from different phases of the life course—in other words, to explain a certain economic outcome by a characteristic that stems from a different life-course episode.

Input for presenters

Experts in SOEP data management attended all of the conference sessions, giving feedback to presenters, commenting on their research designs, clarifying data issues, and pointing out how unused potentials and capacities of the data could be utilized. As always, the conference provided a useful channel of communication between the SOEP team and SOEP users. Just as presenters benefited from the input of experts from the SOEP, the SOEP team benefits from exchange with the researchers who use the data: Their input provides a



crucial basis for developing the SOEP questionnaires and our data infrastructure in general.

Conference presenters also profited from discussions with a number of top researchers who were enlisted as chairs of the parallel sessions, among them David Brady, Martina Dieckhoff, and Jennifer Hunt. In the discussions, these experts shared their experiences from international top-level research, highlighting gaps in the scientific discourse and encouraging the community to address these using appropriate longitudinal designs.

Closing ceremony and laureates

Professor Georg Weizsäcker, Professor for Microeconomics Theory and its Applications at Humboldt University, and Professor Bruce Headey, University of Melbourne, presented the winners of the Joachim R. Frick Memorial Prize and the Felix Büchel Award for outstanding achievements in research with the use of SOEP data. The awards are made possible by the generous contributions of Vereinigung der Freunde e.V. (VdF). Jennifer Hunt (Rutgers University) and Thomas Klein (University of Heidelberg) were selected as the recipients of this year's Felix Büchel Award. Professor Hunt, currently on leave from Rutgers University and serving as Deputy Assistant Secretary for Microeconomic Analysis in the U.S. Treasury, was one of the first foreign users of SOEP. Her publications in top journals, including *The Quarterly Journal of Economics*, *Economica*, *The Journal of Labor Economics*, and *Brookings Papers on Economic Activity* have focused on some of the apparent successes of German labor market policies.

The eminent co-recipient of the Award is Professor Thomas Klein, Professor of Macrosociology and Methods of Empirical Research at the University of Heidelberg and the Director of the Max Weber Institute for Sociology. Professor Klein has been involved with SOEP since its very beginning in the early 1980. Altogether, Professor Klein has over 50 SOEP-based publications, and of course many top-level non-SOEP publications. He is a very eminent recipient of the Felix Büchel Award.

The complete awards speech by Bruce Headey can be found on our [Webseite](#).

Winners of the Joachim R. Frick Memorial Prizes for best paper and poster presented at SOEP2014: Christoph Wunder and Wouter Zwysen

The first Joachim R. Frick Memorial Prize winner was Christoph Wunder for his paper “How does the stock market affect subjective expectations of the future? Evidence from linking financial data to survey responses.” In his work, Christoph Wunder examines the formation of economic expectations, and in particular, the role of stock market information as determinants of these expectations.

The paper provides a deeper understanding of the determinants of economic expectations and economic decision-making. In Weizsäcker's words, “the excellent presentation clearly demonstrated that economic expectations respond to short-term stock-market developments, as returns and variability over a 90-day horizon have the highest explanatory power.”

The second Joachim R. Frick Memorial Prize winner was Wouter Zwysen for his paper “Family background matters for early careers—but not equally.” His research deals with the relationship between family background, economic context, and individual economic (labor) outcomes. His study examined the labor market success of individuals over time using the longitudinal features of the SOEP data.

An upcoming volume of the *Journal of Applied Social Science Research* (Schmollers Jahrbuch) will be devoted to the proceedings of the SOEP 2014 conference. Internationally acclaimed scholars such as Leen Vandecasteele (University of Tübingen), Thorsten Schneider (University of Leipzig), and Bruce Headey have already submitted and cleared their contributions for this volume.

The 2014 Best Publication Prize

The SOEP staff was especially well represented among this year's winners of the VDF (Society of Friends of DIW Berlin) prize, which is awarded internally at DIW Berlin for the best publications in the previous year. David **Richter** received the prize for the best scientific



article in 2013 for his paper "Need for Conclusive Evidence that Positive and Negative Reciprocity Are Unrelated" (<http://dx.doi.org/10.1073/pnas.1221451110>) with co-authors Boris Egloff and Stefan C. Schmukle. VDF best publication prizes also went to Florian Szücs and Tomaso Duso from the Department of Firms and Markets (with coauthor Klaus Gugler, Vienna University of Economics and Business).

Daniel **Schnitzlein** received the VDF prize for the second-best DIW Wochenbericht for his article "Wenig Chancengleichheit in Deutschland: Familienhintergrund prägt eigenen ökonomischen Erfolg" ("Equality of opportunity low in Germany: Family background shapes individual economic success", DIW Wochenbericht 4/2013). The prize for the best DIW Wochenbericht went to a paper using SOEP and FiD data, "Zentrale Resultate der Gesamtevaluation familienbezogener Leistungen" ("Key results of the overall evaluation of family-related benefits"), written by C. Katharina **Spieß** and Katharina **Wrohlich** with co-authors Holger Bonin (ZEW), Anita Fichtl (ifo), Helmut Rainer (ifo), and Holger Stichnoth (ZEW).



Graduations



Anita **Kottwitz** successfully completed her dissertation in October 2014 (summa cum laude) at the International Max Planck Research School "The Life Course: Evolutionary and Autogenetic Dynamics (LIFE)" on the topic of "Social Inequalities of Maternal and Child Health" ("Soziale Ungleichheiten der mütterlichen und kindlichen Gesundheit"). Her first dissertation supervisor was Karsten Hank from the University of Cologne, Gert G. Wagner was second supervisor. Anita was also co-advised by Silke Anger (formerly SOEP, now IAB).



Michael **Weinhardt** (DIW Graduate Center, now University of Bielefeld) successfully completed his dissertation (summa cum laude) in October. His advisor was SOEP Director Jürgen Schupp. The topic of his dissertation is "The influence of values on choice of occupation and intergenerational transmission of social inequality—Microanalyses for Germany". Michael completed his doctoral studies in the DIW Berlin Graduate Center of Economic and Social Research and is currently working on the European Social Survey at the University of Bielefeld.

SOEP People

Our new video series, SOEP People, spotlights 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 and lives, telling us what drives their research interests, what first led them to work on these subjects, and how their research affects their lives.

You can also find the interviews with “SOEP people” in our quarterly published SOEP newsletter under the heading “Five questions to...”

www.diw.de/soeppeople



SOEP People—Five Questions to ...



John Haisken-DeNew

John Haisken-DeNew is Professor of Economics and Associate Dean (Research) of the Faculty of Business and Economics at the University of Melbourne. He previously held a position as Professor of Economics and Chair in “Economic Policy: Competition Theory and Policy” at the Ruhr University in Bochum, Germany. Originally from Hamilton, Ontario, Canada, he came to Germany in 1988 first as a research assistant, then as a doctoral student. In 1996, he joined the SOEP group at DIW Berlin after completing his doctorate degree in economics at the University of Munich (LMU) under Klaus F. Zimmermann. He remained until 2002. His research interests range from applied labor economics to migration, welfare, and life satisfaction. We met John in an Australian café in Berlin during the SOEP 2014 conference.

1. When did you first discover the SOEP data?

That was in 1992 when I was living in Munich. It was around the time of the Yugoslavian war and migration was a huge issue. There was talk in the press and the pubs about all the horrible effects that foreigners would have on the wages of Germans. It turned out to be the subject of my dissertation to test whether this was true. Here I was, a foreigner doing research on the effects of foreigners in Germany. And I had this fantastic SOEP data on foreigners who had come to Germany in the last 20 years and on the effect they would have on Germany. And the effects, of course, were very tiny. I thought that was a big finding.

2. You've been working with SOEP data for more than 20 years now. What is it that makes these data so special?

So much of what we see in an economics Bachelor's, Master's, or PhD is very hypothetical, very fictitious. We're talking about goods A and B being bought by persons 1 and 2. That's not very tangible. But if you look at the SOEP data, people are born; people get married and divorced; people become unemployed. People die. These are real lives. Doing research with SOEP data means doing research with real people. That's what makes it special for me.

3. Looking over your publications, life satisfaction stands out as one of your main research areas. Does that research have a personal dimension – has it affected how you define happiness?

For me, every single project that I've ever worked on has had some very personal dimension to it that has made it meaningful for me—meaningful in the way that I can understand the world. The data has helped me understand the way things work. And it certainly has been instrumental in finding out what the important things in life are. I

think back to my hometown of Hamilton, Ontario, which is very much like many other industrial cities in the western world – Bochum, Germany, or Geelong on the outskirts of Melbourne, Australia. These are towns that had a very strong industrial structure 50 years ago but do not any more. People have become unemployed. The research on life satisfaction lets me know what kind of a loss these people are suffering. And the SOEP dataset has allowed me to quantify these effects: The effect of unemployment is dramatically negative and very powerful, and something people and policy makers need to know about.

4. You moved to Australia in 2011 – What's your connection to the SOEP now?

I'm still a user of the SOEP and have some projects that I am doing together with former grad students. I also write software called PanelWhiz that makes it easy to extract data from several data sets—the SOEP data and also the Australian household panel. So I keep in contact with the SOEP that way and I support the SOEP in what they're doing. And I make it easier for young people to get access to the SOEP data.

5. What's the one piece of advice you'd give to young researchers today?

Don't waste time researching stuff you personally don't care about. Only do the research on the stuff you care about. Life is short enough. Use your time wisely. If you're lucky, someone sees your research. If you're lucky, someone cites you, you can have an influence on policy and you can change – potentially – laws. If you care about that and that's who you are, that's got to be one of the most satisfying feelings.

The whole interview can be seen in a film in the **DIW Mediathek**.

SOEP People—Five Questions to ...



Jule Specht

At the age of just 28, psychologist Jule Specht is an Assistant Professor at the Freie Universität Berlin and a Research Fellow at the Socio-Economic Panel (SOEP) at DIW Berlin. Jule Specht completed her undergraduate and doctoral studies in Münster/Germany. Since writing her diploma thesis, she has been studying the development of the personality across the life course using data from the SOEP. In January, Jule Specht was awarded the renowned Berliner Wissenschaftspreis (Berlin Science Prize) 2014 for Young Scholars. She is being honored not only for her outstanding research, but also for her publications in popular science media. We visited Jule Specht in her office at the Freie Universität Berlin.

1. You're a professor of psychological diagnostics and differential psychology. But you started off with very different plans...

I actually wanted to become a journalist. But I was always hearing that if you want to become a journalist, you should study anything but journalism. I decided to study psychology because psychology deals with important social questions. It also gave me a chance to pursue my interest in statistics. Going into research was definitely the right decision for me, and I still find research and teaching very exciting. What you find out is often just a small detail compared to the knowledge that existed before and what is still to come. But it gives you a thrill when you realize you're on track to finding a solution.

2. What was your most exciting research finding so far?

Using the SOEP data, I found that significant personality changes take place in old age. In the past, researchers often assumed that personality changes a great deal in early adulthood, that these changes slow down in middle age, and that the personality remains stable from then on. Very few personality psychologists studied what happens in old age—partly because there is not a lot of data available on the subject. Now, using the SOEP data, it's possible to look at old age in a very differentiated way.

3. You've been working with SOEP data since your diploma thesis. What makes the SOEP data interesting to you?

The SOEP surveys a large number of people over a long period of time. It also collects information on important psychological constructs such as the personality, people's worries and concerns, and their life satisfaction. This combination makes the SOEP a remarkable dataset for being able to answer questions from psychology.

4. You haven't given up journalism completely. You write for a general readership, both on your blog and in your column in the popular psychology magazine "Psychologie heute."

How did that come about?

I had a kind of breakthrough moment. I was on a train and the person sitting next to me asked me what I do. I began telling him enthusiastically about my dissertation and about how people change—but only just a little, since overall people remain approximately the way they are. And my seatmate just said: "Well, if personality doesn't change, then there's nothing to study." This made something clear to me. As a researcher, I have to ask myself again and again: Is what I'm researching important for normal life? And what exactly is the connection to "real" life? After that conversation on the train, I started writing my blog. I enjoy explaining to other people what new things psychology is able to explain.

5. You're still young but you've already done and achieved a lot. What are your hopes and desires for the future?

I can easily imagine staying in research for a long time. I definitely want to find out how personality changes in old age and why it changes. I can also imagine writing more popular scientific articles and books. I've tried out a few things in recent years and found out which ones I enjoy. And I want to keep doing these things.

See our interview in a video in the [DIW Mediathek](#) (in German)

2014 Highlights

February 11, 2014

Unfair salaries don't just lead to dissatisfaction—they also make people sick, according to a recent SOEP-based study by Bielefeld sociologists Reinhard Schunck, Carsten Sauer, and Peter Valet: http://www.boeckler.de/impuls_2014_01_7.pdf



March 31, 2014

Professor Jule Specht of the Freie Universität Berlin has recently published an entertaining but scientifically sound book about love in which she reports SOEP-based findings on family and life satisfaction: http://www.rowohlt.de/buch/Jule_Specht_Suche_kochenden_Betthasen.3060569.html

April 25, 2014



Educated people are more likely to get the “Sunday blues,” according to estimates based on the SOEP data: <http://www.tagesspiegel.de/weltspiegel/sonntagsblues-gebildete-fuehlen-sich-am-wochenende-eher-unwohl/9794092.html>

May 10, 2014

The SOEP and TNS Infratest once again welcomed visitors to the Long Night of the Sciences (LNDW 2014) at DIW Berlin:



July 1, 2014



The 11th SOEP User Conference took place in Berlin from June 30-July 1, 2014. Article on the SOEP User Conference in the Berliner Zeitung: “Schatztruhe SOEP”

(<http://www.berliner-zeitung.de/wirtschaft/sozio-oekonomisches-panel-eine-schatztruhe,10808230,27649442.html>)

July 3, 2014

The annual meeting of the SOEP Survey Committees was held on July 3, 2014—this year in New York City, where many of Survey Committee members are currently based.



July 11, 2014



Axel Glemser takes over as the Director (Bereichsleiter) at TNS Infratest Sozialforschung responsible for the SOEP on May 1, 2014.

He joined us for a brief interview in Berlin: http://www.diw.de/sixcms/detail.php?id=diw_01.c.468520.de

September 5, 2014

SOEP researcher Christian Krekel (photo: second from the left) received the FEEM Award of the European Economic Association for his paper “Natural Disaster, Policy Action, and Mental Well-Being: The Case of Fukushima” (with co-authors Jan Goebel, Tim Tiefenbach, and Nicolas R. Ziebarth).



September 16, 2014

The ISQOLS Conference on the Quality of Life took place in Berlin from September 15-18, 2014, with four days of presentations and discussions about the quality of life.



September 25, 2014

Markus Grabka and Christina Boll joined Minister for Family Affairs Ursula von der Leyen for a podium discussion on their presentation about the size of the gender pay gap, its causes, and possible ways of overcoming it.

September 29, 2014



SOEP senior researcher Carsten Schröder is one of the organizers of a conference on income inequalities and wealth at the Berlin Brandenburg Akademie der Wissenschaften: “Conference on Crises and the Distribution,” September 29-30, 2014.

October 2, 2014

Press conference on “25 Years after the Fall of the Berlin Wall: How have the economy, assets, and living conditions changed in East and West Germany?”



October 17, 2014

People with an immigration background in Germany earn less and have worse jobs than Germans—but they are just as satisfied with their lives overall. The SOEP-IAB Migration Study surveys around 5,000 people in Germany with an immigration background. Press Conference on the SOEP-IAB Migration Study 2013 on October 17, 2014



November 5, 2014

Article in German weekly news magazine Der Spiegel on income analysis with the SOEP: <http://www.spiegel.de/karriere/berufsleben/gehalt-so-funktionieren-analysen-mit-dem-soziooekonomischen-panel-a-997305.html>

November 15, 2014

How religious are East and West Germans? Journal article in a highly ranked sociological journal. <http://link.springer.com/article/10.1007%2Fs11577-010-0124-z>

November 26, 2014

What’s concealed behind the term “SOEP” (guest article by Jürgen Schupp on www.marktforschung.de): <http://www.marktforschung.de/hintergruende/themendossiers/sozialforschung-die-gesellschaft-im-fokus/dossier/das-sozio-oekonomische-panel-soep-eine-langezeitstudie-zu-stabilitaet-und-wandel-in-deutschland/>

December 17, 2014

According to a study by Jürgen Schupp and Adrian Hille, young people who take music lessons during childhood and adolescence get better grades. http://www.diw.de/de/diw_01.c.100319.de/presse/pressemitteilungen/pressemitteilungen.html?id=diw_01.c.492478.de