SOEP

The German
Socio-Economic
Panel Study

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

Sandra Gerstorf, Jürgen Schupp (Editors)

SOEP Wave Report

2013

DIW SOEP

Contents

Introduction

Photo: Stephan Röhl

Jürgen Schupp
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We are happy to be able to give you another glimpse into our work with this, the fourth Wave Report of the SOEP longitudinal study. In the 2013 survey year, we conducted the 30th wave of the SOEP survey and distributed the SOEP data from a total of 29 waves to our over 500 scientific users in Germany and abroad.

For us, this original SOEP study with all its subsamples and refresher samples—which aim at providing a representative picture of all private households in Germany from both a cross-sectional and longitudinal perspective—is still the core of our work. In 2013 the number of immigrants and their children in this SOEP-Core study has increased in particular through the addition of 2,700 new households as part of the newly drawn IAB-SOEP Migration Sample.

With our SOEP Innovation Sample (**SOEP-IS**), we now have a longitudinal study constructed in parallel to the SOEP that is available to incorporate new questions and new survey and analytical methods suggested to us by the SOEP user community.

In its 30th survey wave in 2013, the SOEP's public relations activities focused on presenting the SOEP as a long-term longitudinal study dealing with subjective well-being and how life satisfaction is measured across the life course. The SOEP offers an important database for the now internationally established field of happiness research in economics, psychology, and sociology—there are only a few representative panel studies covering such a long time period with data on subjective well-being, both individually and within households.

After our very successful Colloquium on Happiness Research in September 2013, when we celebrated the SOEP's 30-year anniversary (see page 103), the topic of happiness continued to occupy us in the following weeks. In mid-November, the German public television and radio broadcaster ARD held its annual "Themenwoche," a week of special programming focusing on one topic of current interest—this year on the topic of "happiness." During that week, SOEP team members were guests on seven radio and three television broadcasts, where they presented results and findings based on the SOEP data.

During the ARD's week of special programming on happiness, a DIW Weekly Report was released containing current estimates of the level of life satisfaction in Germany. In it, a new procedure was introduced for estimating longitudinal effects based on descriptive time series on life satisfaction (see our article at page 29).

The short research papers by members of the SOEP group in this year's Wave Report once again give an impression of the current research questions that are being explored with the SOEP data. In the attached list of publications, we also present the most important SOEP-based papers published in the last year.

Berlin, June 2014

Part I: Basics about the SOEP

SOEP Mission

The German Socio-Economic Panel (SOEP) study is a research-driven infrastructure unit. It serves the international scientific community by providing nationally representative longitudinal data from a multi-disciplinary perspective covering the entire life span (from conception to memories) in the context of private households (household panel).

The data enables not only policy-oriented research ("social monitoring") but also, and in particular, cutting-edge research to improve our understanding of human behavior in general, economic decisions in particular, and mechanisms of social change embedded in the household context, the neighborhood context, and different institutional settings and policy regimes.

The SOEP group's academic excellence and cutting-edge research serve as the foundation for all of its data provision and service activities aimed at fulfilling this mission.

Goals

One of the SOEP´s key goals is to provide panel data that allow users to conduct longitudinal and cross-sectional analyses with state-of-the-art scientific methodologies to better understand mechanisms underlying human behavior and social change within the household context, the neighborhood context, and different institutional settings and policy regimes.

Outcomes

The SOEP unit provides user-friendly, high-quality panel data for multidisciplinary research in the social and behavioral sciences and economics, including sociology, demography, psychology, public health, and political science. A selection of research questions deal with the life sciences (in particular genetics) and medical science as well.

The SOEP unit is constantly implementing new areas of measurement (including biomarkers and physical measures as well as geo-referenced context data) to improve and strengthen survey methodology, thereby providing advanced assessments of the determinants of human behavior.

The SOEP unit focuses its internal research on specific fields and uses its expertise to conduct substantive and methodologically sophisticated research in economics, psychology, and selected social sciences, including basic research and applied (policy-oriented) research targeted at both the academic community and society as a whole.

The SOEP unit works closely with scholars on a national level (e.g., colleagues from a variety of research institutions in Berlin) as well as an international level, thereby bringing in expertise from other disciplines that add to the depth of the SOEP research.

The SOEP unit improves the scientific foundations for political advice beyond descriptive research (social monitoring).

The SOEP unit provides high-quality training and teaching that enables and fosters knowledge transfer to the next generation of scholars.

The SOEP unit is striving to make the research conducted with the survey data accessible and understandable to a broad audience through the German and international media.

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Thirty Years of the Socio-Economic Panel

Jürgen Schupp

Thirty years ago, in February 1984, interviewers from TNS Infratest rang the doorbells of approximately 6,000 households across the Federal Republic of Germany and invited them to participate in the study "Living in Germany", as the SOEP is known to its respondents. This year, we leafed through our files and thought back on what has happened over the last 30 years: What events have shaped the lives of people in Germany over the last three decades? What have SOEP researchers found out about the changes underway in our society? In the 30 chapters (years) of this SOEP timeline series—which makes no claim to being exhaustive—we tell part of the story of the SOEP's first 30 years, presented here with pictures from our growing SOEP photo archives as well as images of contemporary (world) historical events. The results of our research and reflections were posted as a timeline series on Facebook and on the SOEP website over the course of 30 weeks of 2013. The complete history of the SOEP, with appropriate recognition of all those individuals and institutions that have contributed substantially to the SOEP's development, still remains to be written. We hope, for the SOEP Research Infrastructure, that this project will not have to wait too long.

On September 20, 2013, the SOEP celebrated the milestone of its 30th survey wave with an interesting and entertaining colloquium on the topic of happiness. We—the two SOEP groups at DIW Berlin and at TNS Infratest in Munich—are both proud and extremely happy to see that panel studies are increasing in importance in Germany and worldwide, and that the SOEP has been among the pioneers of a design that dates back over 100 years in Germany. I would like to extend my personal thanks to all the members of the SOEP team, with whom I am pleased and privileged to work. When Paul Lazarsfeld developed the first panel survey in the 1930s to attain a better understanding of voting intentions and actual voting behavior, statistical panel analysis methodologies and complex household designs were still in their infancy. The early panel survey methodology did, however, lead to groundbreaking findings in commercial market research and in basic research in the social sciences, and later, in the 1980s, these findings played an increasing role in policy advice.

What is often forgotten in the purely scientific use of panel data is that even descriptive forms of panel data analysis may provide useful input for political and economic decision making and for scientific research. Especially in the case of representative random samples, evidence of changes in a variable over time and the separation of inter-individual and intra-individual changes can reveal important information. It is of great political and social scientific significance to know, for instance, whether same individuals and families are remaining in poverty given a constant percentage (15%) of the population below the poverty line, or whether approximately equal percentages of families are moving into and out of poverty and a small percentage (5%) of the population is remaining "trapped."

At the same time as the SOEP, a new panel study was launched in the USA by the US Census Bureau aimed at answering the question of what people do when offered government benefits. In other words, the study

was a complex attempt to measure the impact of welfare programs. This study, the "Survey of Income and Program Participation" (SIPP) started in 1983 and has since been repeated many times. Its design, like that of the SOEP, has evolved significantly, and was the subject of an impressive five-part series on the everyday activities of empirical social researchers published in 1985 by US science journalist Morton Hunt.[1] In his book, Hunt quoted one of the founders of the SIPP, William Butz, who noted with great foresight that, "There is no way to predict all the ways in which SIPP data will be used. The marketplace of ideas will take up the data and use them in ways we can't foresee." And that's just what has happened—in the SOEP as well. And for that reason, it was and remains crucial that the SOEP, as part of the Leibniz Association, not be forced into the narrow confines of issue-oriented policy advice and that it also not be subject to the directives of government research agencies. Rather, basic research of the highest standard must be the priority. This will lead in turn to the provision of high-quality policy advice based on the SOEP data.

A glance at the almost 7,000 publications in the SOEP archives by around 500 active SOEP users in Germany and abroad reveals a vast array of scientific questions that the SOEP's founders could never have imagined being able to answer with the database they were beginning to build. At the time of the DFG-funded collaborative research center SfB3, "Microanalytical Foundations of Social Policy," that gave rise to the SOEP, many of the panel econometric techniques used widely today had not even been formally developed, to say nothing of user-friendly statistical software. Furthermore, the crucial importance of sibling data in causal analysis to control for unobserved heterogeneity was almost unknown. The increasing use of quantitative panel data with qualitative methodologies is entirely new and previously unexplored terrain. When the SOEP was founded, no one considered the possibility of a "natural experiment" occurring during the course of a longitudinal study—that is, a change in the conditions affecting a randomly selected subpopulation as compared to a control group within the overall population. The fact that the Wall came down in Germany during the course of the SOEP, thus providing data on the "natural experiment" of a transformation process in two countries that were reunited after a 45-year separation, could never have been predicted 30 years ago. Thus, the time is ripe to reflect on the

scientific achievements of the panel survey and panel research over the history of this study.

The SOEP longitudinal study has grown substantially in scope and complexity within the last 30 years. That's nothing new to most SOEP users, who are well aware that more than 2,000 new variables in over 15 new files are updated with each new survey wave and data distribution. In this process, the core SOEP sample (SOEP-Core)—as a prospective longitudinal study—grows annually in both the periodic and the biographical dimension. In spite of declining response rates—an issue confronting all sophisticated randomized population surveys—the number of respondents in the SOEP has been maintained through the addition of new subsamples and has even been increasing for several years now. The number of immigrants and their children in the SOEP study has increased in 2013 particular through the addition of 2,700 new households last year as part of the newly drawn IAB-SOEP Migration Sample.

A special area of both quantitative and qualitative growth in the SOEP is in the related studies that are linked with the SOEP data. Six such studies are already listed on our updated Internet page "SOEP Related Studies" (SOEP-RS). Some of these studies have been running for some time (such as BASE II, the Berlin Aging Study II, in which the first survey with SOEP components was carried out in 2008), while some have just begun and are about to start fieldwork this year (e.g., PIAAC-L). What all these studies have in common is that they either incorporate a substantial part of the SOEP questionnaire into their own questionnaires or are conducted as subsequent surveys, following up on information provided by SOEP respondents (e.g., on their employers or childcare facilities). The SOEP Research Data Center (RDC) is responsible for preparation and documentation of the SOEP Related Studies listed on our website, thereby facilitating integrated joint analysis with the SOEP data. The unique feature of the related studies is that they all contain a set of questions dealing with a specific topic within the "SOEP Universe."

The SOEP has also been expanding for several years in another area as well. With our SOEP Innovation Sample (SOEP-IS), we now have a longitudinal study constructed in parallel to the SOEP that is available for new questions and new survey and analytical methods suggested to us by the SOEP user community. Comparability with the SOEPCore is limited slightly by the shortening of the SOEP questionnaire to leave room for the innovations. Nevertheless, the key SOEP topics are still addressed in the longitudinal SOEP-IS dataset.

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1 Hunt, Morton (1985): Profiles of Social Research. The Scientific Study of Human Interactions (New York: Russell Sage Foundation), p. 154.

What events have shaped the lives of people in Germany over the last three decades? What have SOEP researchers found out about the changes underway in our society?

To find out more, see our SOEP timeline:

https://www.diw.de/en/diw_01.c.415530.en/30_waves_soep_2013.html

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 system: DDI on Rails. The system was conceptualized specifically to incorporate further longitudinal studies that are closely or more broadly related to the SOEP.

While we remain committed to these ongoing efforts at innovation, we of course have not forgotten the original SOEP study. We want to maintain the high quality, size, and the care involved in preparation and documentation of the SOEP study far beyond the current thirtieth survey wave and make the SOEP even more convenient for analysis. The US panel study that served as our model—the Panel Study of Income Dynamics (PSID)—has provided impressive evidence of the unique analytical value that emerges from a household panel study after many years, when the microdata on multiple generations become available for analysis.

For us, the original SOEP study with all its subsamples and refresher samples—which aim at providing a representative picture of all private households in Germany from both a cross-sectional and longitudinal perspective—is the core of our work. This is reflected in the name we began using for it informally: SOEP-Core. The name has 2013 become "official" with the inclusion of SOEP-Core in our new overarching documentation system DDI on Rails. For SOEP-Core, we have developed a new data format (SOEPlong) that incorporates all survey waves in a user-friendly way and that will also be accompanied by comprehensive documentation.

We look back proudly on the last 30 years, and are also very pleased that the panel data infrastructure in Germany now includes many other longitudinal studies besides the SOEP. After numerous successful external evaluations, the SOEP has earned its place in the recently published "Roadmap for Research Infrastructures" of the Federal Ministry for Education and Research. This year, together with our Survey Committee, we initiated the process of formulating a vision for the SOEP infrastructure in the year 2020 and beyond. We would like to express our sincerest thanks to this advisory body, which emerged from the "Panel Advisory Board" of the collaborative research center that preceded the SOEP, for their critical and constructive advice on our work over the years.

We look to the future with optimism, confidence, and immense curiosity to see what survey methodologies and especially what scientific findings will emerge from our data on individuals and private households in Germany in the years to come. To our respondents, we extend our deepest thanks for the invaluable personal information they have provided to us for the purposes of scientific research. For this reason, we are particularly delighted that Federal President Joachim Gauck invited two families that have been faithful longtime participants in the SOEP study to his 2013 summer celebration in honor of volunteer work and community service at the presidential residence, Schloss Bellevue.

Overview

Age-Specific Questionnaires

Age-Specific questionnaires	Age-cohorts	Start (since)	Content	N (2013)
Youth Questionnaire 17	age 17	2000	residence, job and money, relationships, free time, sport and music, education and career plans, future, attitudes, opinions	4,447
IST-2000R Cognitive potentials	age 17	2006	3 tests on word analogies, number sequences, and matrices	2,315
Mother and child (A) questionnaire	ages 0–1	2003	pregnancy, birth information, health of mother and child, temperament, care situation	2,267
Mother and child (B) questionnaire	ages 2–3	2005	child health, temperament, activities with the child, care situation, adaptive behavior (modified Vineland Scale)	1,855
Mother and child (C) questionnaire	ages 5–6	2008	child health, personality, activities of the child, care situation, socio-emotional behavior (modified Strength and Difficulties Questionnaire)	1,242
Parent (D) questionnaire	ages 7–8	2010	care and school situation, parental role, parenting goals and practices, educational aspiration	833
Mother and child (E) questionnaire	ages 9–10	2012	child health, personality, activities of the child, care situation, socio-emotional behavior, school issues, homework, eating habits …	**444**

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Supplementary SOEP-Modules 1986-2013

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	8	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
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)
2012	29	BC	Wealth and assets (4th); social security (6th); health (6th); grip strength (4th)
2013	30	BD	Big Five (3rd), trust (3rd), loneliness, risk aversion (3rd)

Data Distribution SOEP.v29

Jan Goebel

The 2013 SOEP data release was version 29, which means that 29 waves of SOEP data are now available. The range of data we provide has also expanded to include FID Version 4.0 and the first version of SOEP-IS. And, to offer our users integrated documentation, we have developed a new documentation system.
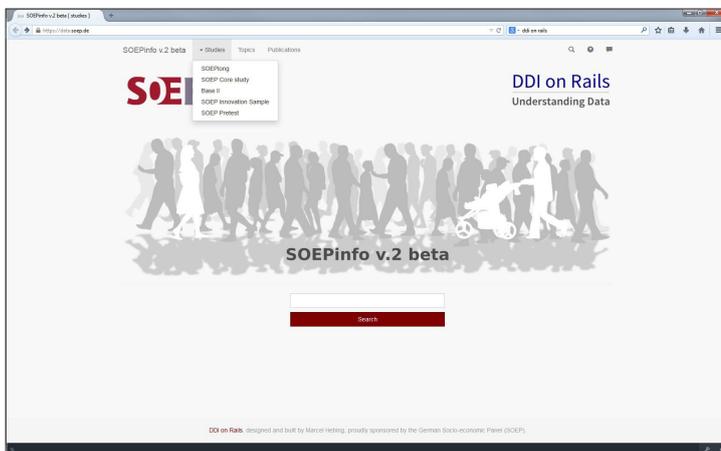
A new documentation system: data.soep.de

In late August, the SOEP team launched the first internal user test for its new metadata portal, SOEPinfo v.2. The system, which is based on the custom-developed open-source software "DDI on Rails," will contain documentation on all SOEP studies and also the new data format SOEPlong.

Our new information system SOEPinfo v.2 is designed as a modern web interface. It includes not only SOEPlong but also the documentation on SOEP-Core and the Related Study BASE II. The SOEP-IS, most of the SOEP pretests, and the documentation on the FiD data will also be made available soon. With this system, users will be able to trace related survey concepts and variables not only over years but also across various studies.

SOEPinfo v.2 enables a user-friendly linkage between the actual survey instrument and the dataset provided. In contrast to SOEP-Core, the SOEP-IS data are only provided in "long" format. Extremely high demands are placed on the documentation to guarantee simple and intuitive use of the data. Furthermore, all questions in SOEP-IS that were taken from SOEP-Core will be linked with the corresponding questions in SOEP-Core.

Integration of SOEPlit

The SOEPlit database, which contains all known publications based on SOEP data that have been reported to us, has been incorporated into this new documentation system. It can be found under the menu item "publications."

When you enter a word into the search function, all text fields are searched and a list of all publications that meet the search criterion is displayed. Each item in the list is accompanied by a link to the full bibliographic information and—if the paper is available online for free—a link to the PDF document of the publication.

Handy photo:
The modern web interface is suitable for mobile devices

Desktop photo: Our new web based documentation system available at data.soep.de

We plan to include further filter options as well as a direct link via "Topics" to the question concepts used in the SOEP survey.

Since SOEPinfo v.2 is still a beta version, the old SOEPinfo is still available, with all its standard functions (variable search, browsing by topics, item correspondence, and script generator) for SOEP-Core.

What's new in the SOEP 1984–2012 data release (v29)

The data provided are from the years 1984 to 2012, or in the logic of our alphabetical wave names, waves A to Z followed by waves BA, BB and BC. The new data distribution "SOEP v29" provides, for the most recent survey year 2012, the usual wave-specific data files **BCPBRUTTO, BCP, BCPKAL, BCPGEN, BCPAGE17, BCHBRUTTO, BCH, BCHGEN, BCKIND,** and **BBPLUECKE** as well as the updated files with a longitudinal component (PFAD files, biography files, spell data, and weighting factors). Publications using these data should cite the DOI 10.5684/soep.v29.

New subsample K

In 2012, we added a new refresher sample with 1,526 new households (**Sample K**). In total, 12,322 households were interviewed as part of the 2012 fieldwork. As with previous general population samples, the refresher sample K was realized by using a multi-stage stratified sampling design. Refresher sample K resulted in a very similar response rate of 34.7 % compared to our last refresher sample J. Thus, the general downward trend in participation was successfully stopped through a range of measures including centralized face-to-face interviewer training, better pay for interviewers, and more attractive incentives for respondents.

In the current refresher samples, fieldwork is conducted exclusively by CAPI, as it was with the previous refresher **H** (2006), **I** (2009), and **J** (2011). Similarly to our other refresher samples, data collection is focused on three main questionnaires: the household, the individual, and the youth questionnaire. Thus, no supplementary questionnaires were used with respondents in wave 1. The reason for focusing on the key questionnaires is to avoid "overburdening" respondents with a lengthy wave 1 interview.

New datasets/variables

In 2012, the SOEP replicated its **wealth module** for the fourth time after 1988, 2002, and 2007.

Two new variables are implemented in **$PGEN:** The variable **SNDJOB$$** represents the imputed current gross labor income from a second job, generated for all SOEP respondents who are employed in each respective wave. Information about gross income from the second job was first asked in 1995 (wave L). The respective imputation flag is the variable **IMPSND$$.**

For the first time, respondents were asked their **place of birth.** This information including the coordinates of the respective municipality is available at our guest workstations at the Research Data Center SOEP.

A new dataset **HCONSUM** with generated data from the consumption module used in the SOEP in the year 2010.

Improvements and Bug Fixes

BIOAGE03: The codes for personality were changed from 1-11 to 0-10 and are now consistent with the codes for personality in BIOAGE06. In addition, to improve the measurement quality of the Vineland Scale, five items were replaced.

BIOAGE06: In 2008, for personality, the value zero was mistakenly coded -2. This mistake was corrected. This resulted in up to 65 additional valid cases for some traits in the survey year 2008.

BIOAGE10: A new questionnaire was introduced for 9-10-year-olds in 2012. The data can be found in this data set and in the new **BIOAGEL** "long" data set.

$FAMSTD: In generating current marital status, current and previous year were switched for some cases in 2011 in v28.

In 2012, the questionnaire provides one-time-only information on the size of the local establishment in addition to the size of the entire company (**BETR$$**). The enriched questionnaire revealed that in previous interviews, some individuals mistakenly provided information on the local establishment size instead of the entire company size, especially if their entire company had 2,000 or more employees. Due to the importance of longitudinal consistency, these persons were identified, and their 2012 original value of the entire company size **BETR12** was replaced by their value of the local

establishment size. These modifications also affected the variable **ALLBET12**.

The variable **RUEBSTD** ("overtime hours during last month" in 2001) had cases with incorrect non-response missings (-1), since respondents without overtime mistakenly were assigned to this category. In the corrected version, the value for these respondents is correctly coded as zero overtime hours.

With the variable **vh4601** and the equivalent variables in the following years, the label "contributions over 2,500 euros" was used, but actually the questionnaire asked for "contributions over 500 euros". The label was corrected.

The variables **ZERWZEIT** and **BAERWZEIT** ("length of time with firm" in 2009 and 2010) had to be corrected for respondents in sample I who did not have their wave 2009 interview and wave 2010 interview in the respective year but at the beginning of the following year (2010 and 2011). Due to the longitudinal consistency check, these individuals mistakenly received an implausible value (-3) for $ERWZEIT. In the corrected version, the non-missing values of these respondents are considered to be valid and not set to missing.

LOC1989: In generating the data, persons are now included who never participated. As a result, the -2 means "does not apply, born before 1989" as planned for this variable. Respondents who have never participated and who were unable to gather information from other sources were set to -1 ("no answer").

The variables **EXPFT$$**, **EXPPT$$, and EXPUE$$** (experience in full-time employment, part-time employment, and unemployment) have been improved. The variables reflect now the total length of full-time/part-time/unemployment in the respondent's career up to the point of the interview in a given year (instead of only up to December of the previous year). Since monthly employment activities are asked retrospectively in the following year, the variables cannot be updated for the most current wave.

The variables **ATATZEIT**, **AVEBZEIT**, **AUEBSTD** and **AERWZEIT** were mixed up in the data distribution v28 and are now corrected in v29:

- The correct values of **ATATZEIT** were found in the variable **AERWZEIT**.
- The correct values of **AVEBZEIT** were found in the variable **ATATZEIT**.
- The correct values of **AUEBSTD** were found in the variable **AVEBZEIT**.

- The correct values of **AERWZEIT** were found in the variable **AERWZEIT** of the data distribution v27.

Downloading the SOEP data

We're delighted to provide a secure possibility for downloading the SOEP data. We ensure the highest standards of data protection in transferring the SOEP data to you through use of the program cryptshare (www.cryptshare.com), which offers completely encrypted transfers as well as a personalized link and password.

Because we no longer have the production costs and postal charges for the DVD, we are now able to provide the SOEP data **free of charge** for the very first time. Non-European users could also use this service to get the most up-to-date version of SOEP, however, the CNEF will still be available from Cornell University in the USA only.

First remote access to SOEP data: SOEP at the University of Bielefeld

Some of the SOEP data are not included in the normal data release (scientific use files): data on the geographic location of households, neighborhood indicators, and plain text answers. Up to now, these data were only available via SOEPremote (a remote execution system via email) or at a (free) guest workstation at the SOEP Research Date Center (SOEP RDC). We hope that this pilot project carried out jointly with the SFB 882 "From heterogeneities to inequalities" and the Data Service Center for Business and Organizational Data (DSC-BO) at the University of Bielefeld will make the data access conditions more user-friendly in the future.

Analogously to the project "RDC within an RDC" at the Research Data Center of the Institute of Employment Research at the Federal Employment Agency, a secure data connection is established between SOEP RDC and DSC-Bielefeld. Users at the Data Service Center in Bielefeld can work with the SOEP data at a special terminal exactly as if they were at the SOEP RDC in Berlin. In the initial test phase, only regional information will be available at the level of the county in which respondents live. Once the first phase has been successfully completed, a wider range of data will be made available.

Figure 1

SOEP-IS: Samples and fieldwork

Number of households (number of individuals)

Sample\Survey Year	1998–2008	2009	2010	2011	2012	2013
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
Sample I (started in 2009 with 1,495 households and 3,052 individuals)		1,495 (3,052) in the SOEP	1,175 (2,450) in the SOEP	1,040 (2,113) in SOEP-IS	928 (1,826) in SOEP-IS	864 (1,723) 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
Supplementary Sample 2013 (started in 2013 with 1,166 households and approx. 2,500 individuals)						1,166 (approx. 2,500) 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 (approx. 6,500)

SOEP-IS data release

The generation of user-friendly variables for the first distribution of the SOEP Innovation Sample is finished, and the data on the core questions in the SOEP-IS are available. Documentation on the instruments used in the sample can be found at: http://panel.gsoep.de/soep-docs/surveypapers/diw_ssp0110.pdf

For the first time ever, the data are only being provided in "long format:" a compressed form of the SOEP data. Rather than being provided as wave-specific individual files, all available years are pooled in long format.

The 2012 release contains the three samples (Sample E, Sample I, Sup. Sample 2012) and the information from the years 1998 to 2012 as well as the variables on the innovation modules in the 2011 survey year.

Variables on the innovation modules in the 2012 survey year are included in the 2013 release. Variables on the innovation modules in the 2013 survey year will be included in the 2014 release.

The data will be provided to all users who have signed a standard SOEP data distribution contract. The data can be downloaded by means of a personalized link. Publications using these data should cite the DOI (10.5684/soep.is.2012 or 10.5684/soep.is.2012i for the sample provided to the international research community)

FiD data, version 4 available

As of February 2013, the data from "Familien in Deutschland" (Families in Germany, FiD) became available in version 4.0. The data from the SOEP-related study "Familien in Deutschland" (FiD, Families in Germany) are available for the first four waves, spanning 2010–2013. Each year, more than 4,000 household interviews are carried out with single-parent families, families with more than two children, low-income families, and families with small children. The survey also includes more than 7,000 personal interviews as well as more than 3,000 interviews with parents about their children up to age 10.

Part II: A Selection of 2013 Publications by the SOEP Team

Life Satisfaction in Germany at Highest Levels since Reunification

Jürgen Schupp, Jan Goebel, Martin Kroh, and Gert G. Wagner

Today, German citizens are happier on average than at any other point in time since reunification. Although more than 20 years have passed, the level of happiness in eastern Germany is still significantly lower than that in western Germany. This is demonstrated by the most recent long-term Socio-Economic Panel (SOEP) study data gathered by DIW Berlin in cooperation with TNS Infratest Sozialforschung. The level of happiness measured in Germany in 2013 matched that of West Germany in 1984 (when the SOEP was initiated). For many years following reunification, life satisfaction was lower than it is at present. The lowest level in the period under observation was measured in 2004 and 2005, a phase of high unemployment.

It can be said with high statistical certainty that people in eastern Germany are less happy overall than those in western Germany. However, further regional differentiations should generally be treated with caution: for example, the methodology does not allow researchers to conclude that Schleswig-Holstein's population is the happiest or Brandenburg's the unhappiest in Germany, on the basis of SOEP data. Measured regional differences in life satisfaction are too small to justify results like these. Rather, the SOEP surveys show that on average, it is possible to live quite well in all of the 16 Länder, and the majority of people living in Germany are quite happy with their lives overall.

Happiness research has generally enjoyed growing popularity for some years now. For example, the Deutsche Post (German postal service) reprinted its Happiness Atlas in 2013, the United Nations published the "World Happiness Report 2013," and the OECD updated its Better Life Index for Germany. Many of the figures for Germany regarding economic and social circumstances, including the Happiness Atlas, are based in full or in part on the long-term Socio-Economic Panel (SOEP) study data gathered by DIW Berlin in cooperation with TNS Infratest Sozialforschung.[1] Consequently, in the present paper, we will explain the methodological concept of social science "happiness research," which is based mainly on the information given by respondents on "life satisfaction," as well as the prerequisites and limitations of this research, and to warn against overinterpreting the findings.

It is essential to grasp the fundamental difference between the German terms *Glück* and *Zufriedenheit* in order to properly understand the results from this field of research and interpret them fairly. In Germany, people like to refer to research into *Glück*. While English speakers differentiate between at least two concepts—luck and happiness—the term *Glück* is much more complex and often confusing in German usage. This is all the more true because many of the research findings are not based on analyses of *Glück* (the affective dimension of well-being), but on the analysis of *Zufriedenheit* (the cognitive dimension of well-being), called "satisfaction" or "happiness" in English. "Satisfaction research" turned into "happiness research" on this circuitous route, and

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Table 1

Felt Happy in the Past Four Weeks
In percent[1]

	Very rarely	Rarely	Sometimes	Often	Very often
2007	3	11	35	43	8
2008	3	10	36	43	8
2009	3	11	35	43	8
2010	3	10	35	44	8
2011	3	10	33	45	9
2012	2	8	32	47	10
2013	3	9	35	45	8

1 Adults (17 years of age and older).

Source: SOEP v29; preliminary results for 2013; calculations by DIW Berlin.

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Only slightly more than half of all people experience momentary happiness on a regular basis.

then, in the eyes of the German public, into "*Glück* research" because the latter term is apparently more appealing than "satisfaction research."

Glück due to coincidence—"luck" in English—for example, luck in lotteries, is not usually the subject of research.[2] Instead, the little research there is on actual *Glück* generally focuses on the concept of the English word "happiness,"[3] i.e., a state of subjective or affective well-being, and on more momentary well-being, i.e., the emotional component of feeling happy. This *momentary* happiness is typically surveyed in a set of questions ascertaining the affective evaluations of activities and certain life situations of the previous day or a longer reference period (for example, four weeks). There is little representative empirical work on this for Germany—as is the case for other countries. In other words, actual "happiness research" is sparse in Germany.

It was not until 2007 that the SOEP began to survey momentary happiness, which is more strongly characterized by emotions, with a brief group of questions on the frequency of anxiety, anger, sadness, and happiness in the past four weeks[4] (see Table 1). Calculations based on the SOEP show that the development of this "happiness indicator" in the narrower sense is very stable over time and that since 2007, the majority of the people living in Germany has reported feeling happy often or very often during the past four weeks. Nonetheless, compared with life satisfaction, few deeper analyses of this topic are available to date.[5] The few analyses on affective happiness reveal, for instance, that the transition to unemployment results not only in declining life satisfaction, but also declining levels of happiness. Unlike the very slow adaptation of life satisfaction over the course of a period of unemployment, unemployed people reattain the "level of happiness" they experienced prior to unemployment more rapidly.

When the term "happiness" is used in connection with research, it in fact usually refers to satisfaction, and Germany can call on decades of experience in researching this. As a rule, the data used are from the long-term SOEP survey: in this long-term study, the interviewers ask questions every year about people's "overall happiness," i.e., satisfaction with life in general. Since the beginning of the first survey wave in 1984, the relevant core question has been: "How satisfied are you with your life, all things considered?" Responses are given on a scale ranging from zero for "completely dissatisfied" to ten for "completely satisfied." Roughly 450 individual stud-

2 Nonetheless, few studies have been conducted on the question of whether luck in lotteries also results in more short- and long-term feelings of happiness. A study published some time ago by Jonathan Gardner and Andrew J. Oswald ("Money and Mental Wellbeing: A Longitudinal Study of Medium-Sized Lottery Wins," IZA Discussion Paper, no. 2233 (Bonn: 2006)) shows that by no means have clear, causal, positive relationships between luck in lotteries and subjective well-being been established to date. However, it is recognized that seeking "luck in lotteries" is distributed very unevenly across our social structure. For example, Jens Beckert and Mark Lutter ("Why the Poor Play the Lottery: Sociological Approaches to Explaining Class-based Lottery Play," Sociology 47, no. 6 (2013): 1152-1170) showed that in Germany, it is mostly individuals with low incomes and low levels of education who try their "luck" in lotteries, while people with a higher level of education and higher incomes do so less often.

3 Besides the social-science-oriented contributions from the field of psychology (for example, Ed Diener, "New Findings and Future Directions for Subjective Well-Being Research," American Pychologist 67, no. 8 (2012): 590–597), the number of contributions especially in sociology (for example, R. Veenhoven, "Sociological Theories of Subjective Well-Being," in The Science of Subjective Well-Being, eds. M. Eid and R. J. Larsen (New York and London: 2008), 44–61, and in particular in economics (for example, Bruno S. Frey and Alois Stutzer, "What Can Economists Learn from Happiness Research?" Journal of Economic Literature 40, no. 2 (2002): 402–435) has increased. There is also an abundance of contributions in law and public policy (Eric A. Posner and Cass R. Sunstein, eds., Law & Happiness (Chicago and London: 2010)). Finally, the number of contributions from the life sciences on the topic of happiness is growing (for example, Björn Grinde, The Biology of Happiness (Dordrecht: 2012)).

4 In 2012, determination of situational happiness in the context of measuring time budgets began for the first time in the framework of the SOEP Innovation Panel (see David Richter and Jürgen Schupp, "SOEP Innovation Panel (SOEP-IS)—Description, Structure and Documentation," SOEPpaper no. 463 (Berlin: 2012)). The project is being carried out by Richard Lucas in cooperation with SOEP and uses the survey methodology developed by Kahneman and colleagues. Daniel Kahneman, Alan B. Krueger, David A. Schkade, Norbert Schwarz, and Arthur A. Stone, "A Survey Method for Characterizing Daily Life Experience: The Day Reconstruction Method," Science 306, no. 5702 (2004): 1776–1780.

5 See Ulrich Schimmack, Jürgen Schupp, and Gert G. Wagner, "The Influence of Environment and Personality on the Affective and Cognitive Component of Subjective Well-being," Social Indicators Research 89, no. 1 (2008): 41–60; Ute Kunzmann, David Richter, and Stefan C. Schmukle, "Stability and Change in Affective Experience across the Adult Life-Span: Analyses with a National Sample from Germany," Emotion 13, 110.6 (2013): 1086-1095, DOI 10. 1037/ a0033572), and Christian von Scheve, Frederike Esche, and Jürgen Schupp, "The Emotional Timeline of Unemployment: Anticipation, Reaction, and Adaptation," SOEPpaper, no. 593 (2013) as well as Katja Rackow, Jürgen Schupp, and Christian von Scheve, "Angst und Ärger: Zur Relevanz emotionaler Dimensionen sozialer Ungleichheit," Zeitschrift für Soziologie 41, no. 5 (2012): 392–409.

ies have been conducted using SOEP data on life satisfaction, presenting findings on "well-being" or "happiness" from the most varied perspectives.[6]

In the following sections, we will focus on two areas of research on satisfaction: firstly, on the development of the level of satisfaction in Germany over the past 30 years, and secondly, on the oft-cited regional differences. So far, the public has virtually never considered the methodological problems that play a role in both areas.

Development of Average Life Satisfaction in Germany

Survey research shows that measuring life satisfaction depends more on the context of the interview situation than measuring "objective" information such as educational level does. For trend analyses, it is especially important that individuals indicate the extreme value of ten somewhat more frequently in their first interview than in their second and third ones.[7] There is a decrease in the average satisfaction levels indicated by people participating in a repeated survey such as the SOEP over a very long period of time. This habituation effect is only minimal from one year to the next, but adds up appreciably during the course of a long-term study such as the SOEP, in which some respondents have been participating for 30 years. In regression analyses, which have become standard practice for analyzing life satisfaction, the number of times a respondent has participated in SOEP is taken into account as a "control variable," thus eliminating the habituation effect from the results.

Because of the strong public interest in purely descriptive analyses of life satisfaction, which has increased in recent years, the SOEP group at DIW Berlin developed a method for correcting the effect of repeated survey participation in the results (see Box 1 for the proposed correction method). Each respondent is assigned a corrected value adjusted entirely for the effect of repeated survey participation—as well as additional survey artifacts, for example, the season. This corrected value is therefore comparable to that of a first-time response, adjusted for other measurement variations due purely to survey methodology, which makes SOEP results comparable to the results of purely cross-sectional surveys with a single survey method. Values are standardized to correspond to a survey conducted in May by an interviewer with "paper and pencil" (which was the predominant survey method in 1984).

Figure 1 shows the trend of general life satisfaction in Germany since the first SOEP in 1984 through 2013[8] on the basis of the values for life satisfaction, corrected for the effects of the interview situation.[9]

When life satisfaction is observed in the context of contemporary history, account must be taken that 80 percent of SOEP interviews are conducted between the beginning of February and end of April every year and that an event coming into societal focus after the end of April cannot develop its full impact until the following year's survey, provided it can maintain its effect on life satisfaction for such a long period of time. One example of such an event is the terrorist attacks of September 11, 2001 and the ensuing war in Afghanistan. Although we can observe that the highest value for average life satisfaction in the period 1995 to 2005 was attained in 2001, since 97 percent of all interviews had been conducted by September 2001, the full extent of the long-term effects of the event on life satisfaction could not be seen until the following year. Possible explanations for an absolute low point of SOEP life satisfaction in 2004 include the changed global security situation in combination with the Agenda 2010[10] policy announced by Chancellor Gerhard Schröder as of late 2002/early 2003 as a response to high unemployment in Germany.

General life satisfaction has been on the rise again since 2007 at the latest. There have been two setbacks in the measured increases, most likely due to historical events occurring during the main survey period from February to April. One of these was the financial and economic crisis, which saw its peak in Germany in January 2009 with the assurance of State guarantees, and the other was the maximum credible accident in the nuclear reactor in Fukushima, Japan in March 2011, which also triggered a major societal response in Germany.[11] Life satisfaction in Germany has recovered very well in re-

6   www.diw.de/documents/dokumentenarchiv/17/diw_01.c.431063.de/soepcompwellbeing_nov2013.pdf.

7   See, as early as 1992, Detlef Landua "An attempt to classify satisfaction changes: Methodological and content aspects of a longitudinal problem." Social Indicators Research 26(1992):221-241.

8   Estimation of the value for 2013 was on the basis of preliminary SOEP data delivered in September as well as preliminary weighting procedures (without taking into account the adults surveyed for SOEP for the first time in 2013).

9   Besides taking into account the artificial differences in reported life satisfaction mentioned in the text and resulting from the type of survey, a trend analysis of life satisfaction requires consideration of the possibility of purely coincidental statistical errors resulting from working with a sample. For this reason, confidence bands quantifying the margin of uncertainty due to the sample are reported.

10   The Agenda policy of the German SPD/Green coalition government under Gerhard Schröder involved the most far-reaching social and labor market policy reforms of the postwar period. The reforms were implemented during 2004 and at the beginning of 2005.

11   Jan Goebel, Christian Krekel, Tim Tiefenbach, and Nicolas R. Ziebarth, "Natural Disaster, Policy Action, and Mental Well-Being: The Case of Fukushima," SOEPpaper no. 599 (2013).

Kasten 1

A Measurement Artifact and Its Solution

When people are surveyed about their life satisfaction, their responses are subject to numerous minimal influences due to the specifics of the interview situation. For example, it is important which questions preceded the ones they are answering in the questionnaire[1] and whether people are participating in written or face-to-face surveys.[2] And besides the season or the day of the week, the number of times a person has participated in a repeated survey may play a role.[3] If these factors are not distributed randomly across all respondents, but display systematic patterns, then time series may deliver skewed results.[4] This is to be expected if, for example, the proportion of respondents questioned face to face increases over time compared to those questioned in writing or if—by definition—the number of times respondents have participated in a panel survey over time rises because of repeated surveys.

In order to adjust the descriptive results concerning life satisfaction on the basis of SOEP for these or similar methodological artifacts, we therefore propose a flexible

correction method (which may be improved in the future, as necessary).[5]

A regression model quantifying the individual effects adjusts the respondents' answers for the effect of the survey method (in writing, face to face, computer-assisted), the presence of an interviewer, a possible change of the interviewer from one survey year to the next, the duration of the interview, the week of the year in which the interview took place, the day of the week, and the number of survey years per respondent. Thus, a uniform interview situation for all observations is simulated, corresponding to a first-time, personal, face-to-face survey of 30 to 60 minutes' duration on a Wednesday in the 17th week of the year (in May).

The figure shows—in two ways—the effect of this correction method. The uncorrected and corrected time series are presented in the upper part, with the vertical axis (for the average of life satisfaction indicated) beginning at zero (for the lowest possible value for life satisfaction). It can be seen that the effect of this correction is visible, albeit minimal. All the same, this amounts to a change in the uncorrected value from 7.1 to 7.4 for 2013. This also corresponds to the value calculated by Infratest dimap in its current large cross-sectional sample (see the section "Regional Rankings Not Very Robust" in this article).

In the lower part of the figure, the correction effect is easier to see, or rather exaggerated, as the section of the vertical axis shown ranges from 6.6 to 7.6.

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1 See Norbert Schwarz, Fritz Strack, and Hans-Peter Mai, "Assimilation and Contrast Effects in Part-Whole Question Sequences: A Conversational Logic Analysis," Public Opinion Quarterly 55 (1991): 3–23.

2 Martin Kroh, "An Experimental Evaluation of Popular Well-Being Measures," DIW Discussion Paper, no. 546 (Berlin: 2006), and Adrian Chadi, "Third Person Effects in Interview Responses on Life Satisfaction," Schmollers Jahrbuch (Journal of Applied Social Science Studies) 133, no. 2 (2013): 323–334.

3 See, for example, Stefano Bartolini, Ennio Bilancini, and Francesco Sarracino, "Predicting the Trend of Well-Being in Germany: How Much Do Comparisons, Adaptation and Sociability Matter?" Social Indicators Research 114, no. 2 (2013): 169–191.

4 See Mark Wooden and Ning Li, "Panel Conditioning and Subjective Well-being," Social Indicators Research 117, no. 1 (2014): 235-255.

5 See Martin Kroh, Maximilian Priem, Ulrich Schimmack, Jürgen Schupp, and Gert G. Wagner, "Zur Korrektur der Lebenszufriedenheit um artifizielle Befragungseffekte," SOEPpaper (Berlin) (forthcoming).
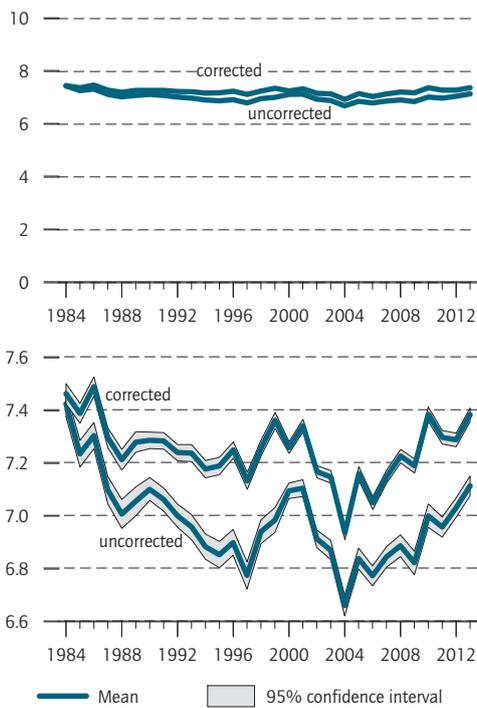
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cent years despite the general recession in the euro area and various attempts on the part of the European neighbors to show solidarity and bail out economically weaker countries. This recovery can plausibly be ascribed to the fact that although Germany was a major political actor in the crisis at the European level, its economic performance has proven to be extraordinarily robust in comparison with the rest of Europe. Many people in Germany have found new jobs since the low point in 2004, and the number of people out of work has been cut in half. According to our interpretation of the temporal trend of life satisfaction, no general sense of crisis spread throughout German society.

The effect of increasing monetary prosperity on subjective well-being has been the focus of research for decades, this being a particularly important historical development. As early as the 1970s, Richard Easterlin[12] found that from a certain level of societal prosperity on, additional income growth results in virtually no increase in well-being. The main reasons for this are that increasing income also leads to increasing demands and expectations, which gave rise to the term "hedon-

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12 Richard A. Easterlin, "Does Economic Growth Improve the Human Lot?" in: "Nations and Households in Economic Growth: Essays in Honor of Moses Abramovitz," eds. Paul A. David and Melvin W. Reder (New York: 1974): 89–125.

Mean Life Satisfaction With and Without Correcting for Survey Artifacts

Source: SOEP v29; preliminary results for 2013; calculations by DIW Berlin.

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Mean Life Satisfaction[1] in Germany

1 Estimate corrected for effects of repeated surveying. For West Germany only up until 1990.

Source: SOEP v29; preliminary results for 2013; calculations by DIW Berlin.

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Historical events affect life satisfaction.

Income[1] and Life Satisfaction[2]
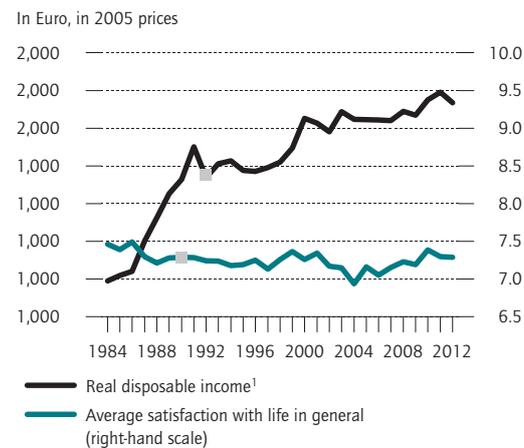
1 Annual income surveyed in the following year, including the rental value of owner-occupied housing, needs-weighted with a modified OECD equivalence scale.
2 Estimate corrected for effects of repeated surveying. Scale from 0 to 10. Figures for unified Germany beginning with the gray square.

Source: SOEP v29; preliminary estimate for 2013.

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ic treadmill."[13] The validity of this "Easterlin paradox" was demonstrated for the process of German unification, for example.[14]
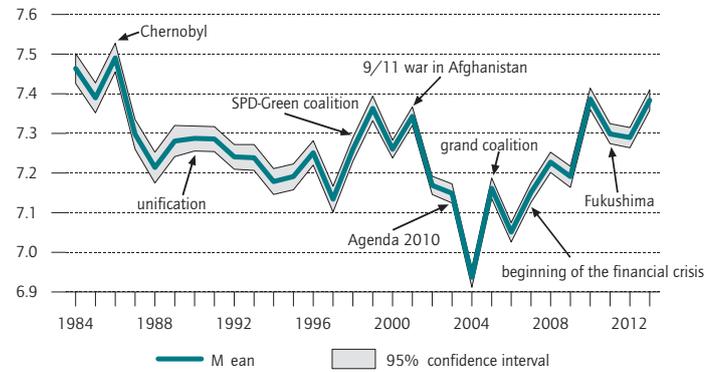
Figure 2 also illustrates that for the historical period since 1984, for which we have income data as well as satisfaction indicators from the SOEP, the paradox is also

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13 Mathias Binswanger, *Die Tretmühlen des Glücks: Wir haben immer mehr und werden nicht glücklicher. Was können wir tun? (Stuttgart:* 2006).

14 Richard A. Easterlin and Anke C. Plagnol, "Life Satisfaction and economic conditions in East and West Germany pre- and post-unification," Journal of Economic Behavior & Organization 68 (2008): 433–444.

Box 2

Considering Statistical Significance

Figure

95 % Confidence Intervals for Subsamples of Different Sizes Taken from the Infratest-dimap Glückstrend 2013

3,000-case subsample

20,000-case subsample

Source: Infratest dimap Glückstrend 2013; calculations by DIW Berlin.

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Samples are subject to random error because they do not include all the units of a population. Consequently, different samples yield different results. And the smaller a sample, the larger the random error and the margin of uncertainty (confidence interval).
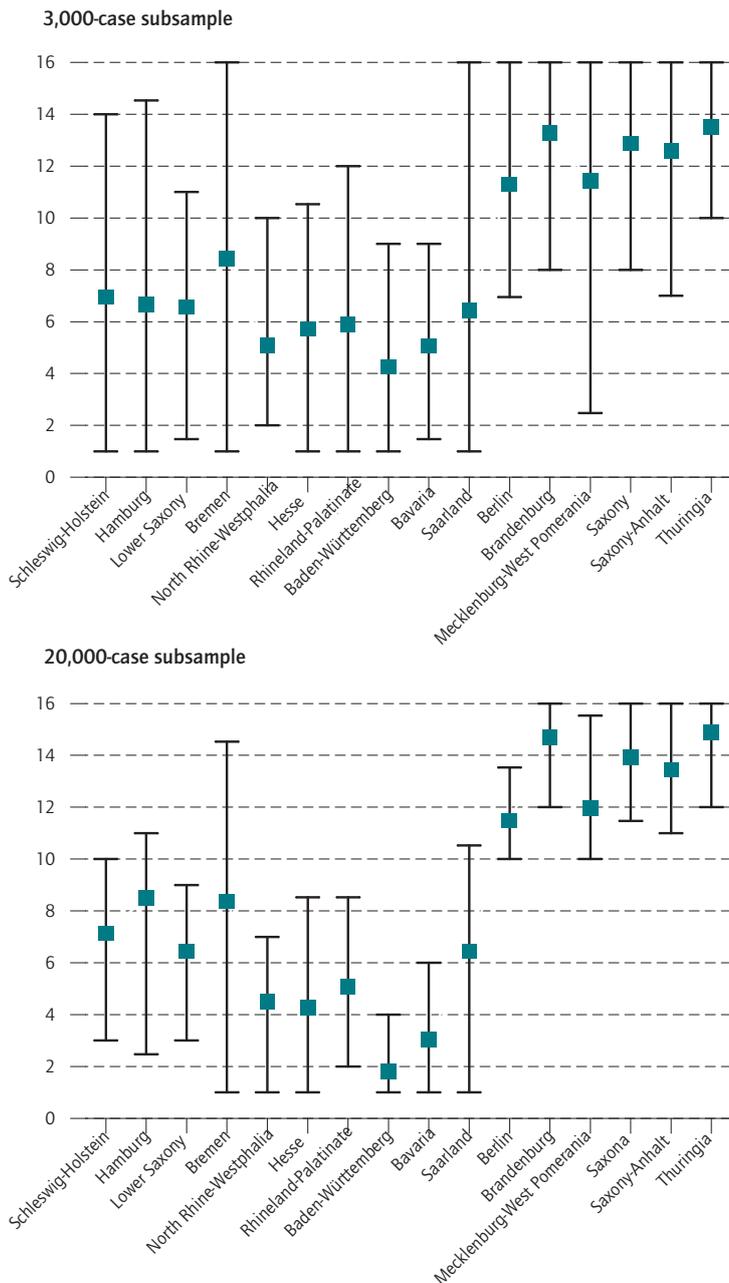
The statistical margin of uncertainty can be determined by using a mathematical model that describes random samples. This article reports results that show the band encompassing the true value of the indicator "life satisfaction" in reality (in the population) with a confidence level of 95 percent (i.e., not including the true value 5 percent of the time because of random error).

A special calculation on the basis of an unusually large sample gathered in collaboration with WDR, Infratest dimap, and SOEP/DIW Berlin in the summer/autumn of 2013 on life satisfaction of people living in Germany may illustrate the problem of random error intuitively.[1] This sample includes more than twice as many cases as SOEP, namely 50,359 individuals aged 14 or older. This survey arrives at a satisfaction index for the whole of Germany of 7.5, and if limited to respondents who have reached the age surveyed by SOEP (17 or over), a value of 7.4. This corresponds to the corrected SOEP value of 7.4 (see Box 1).

100 subsamples of 3,000 cases each (corresponding to the Allensbach survey used for the most recent edition of the *Happiness Atlas*) as well as 100 subsamples of 20,000 cases each (corresponding to SOEP) were drawn from the ARD sample, and it was determined which Land is ranked first and last in each of the 100 samples. Table 2 shows the results.

Even the small subsamples of 3,000 cases each permit differentiation between satisfaction levels in eastern and western Germany with a high degree of certainty. Mecklenburg-Western Pomerania is the only *Land* in eastern Germany to rank first (!) among the *Länder.* But the subsamples with 3,000 cases each do not allow us to award first and last place of all the *Länder* with certainty. Each of the western German *Länder* ranks highest at least twice in the 3,000-case

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1 It was sampled by Infratest dimap specifically for ARD's week devoted to the topic of luck/happiness and evaluates respondents' life satisfaction on an 11-point scale ranging from zero to ten, as does SOEP.

subsamples; five rank highest ten times or more. And it is purely by chance that Hamburg comes in last at least once.[2]

For eastern Germany, last place cannot be ascertained using the 3,000-case subsamples. Each of the five eastern German *Länder* ranks last with a probability of eight to 15 percent in the various subsamples.

Even the 20,000-case subsamples do not allow us to determine last place for eastern Germany with absolute certainty, since the differences between the averages of the individual Länder are too small. Each of the eastern German *Länder* ranks last at least three times; it is also purely coincidental that Bremen also comes in last twice because of the minute subsample it represents.

Of the western German *Länder,* all except Schleswig-Holstein rank highest for life satisfaction at least once in the 100 subsamples comprising 20,000 cases each. For the Länder Hesse, Baden-Württemberg, Bavaria, and Saarland, the probabilities are at least eight percent. Therefore, statistically speaking, there is no justification for unequivocally awarding the highest rank. The overall result is also illustrated in the figure showing the confidence intervals (on the basis of the 100 subsamples).

In light of the findings presented here, it must be said that the *Happiness Atlas[3]* does not permit us to determine first or last place in the race for happiness, neither on the level of the *Länder* nor for the selected subregions. Because of the small differences between regions, the fact that Schleswig-Holstein landed in first place in 2013 may be a fluke. This is also emphasized by the fact that Schleswig-Holstein ranked only fifth in the *Happiness Atlas* 2012 (the difference in average life satisfaction measured in 2012 and 2013 was 0.22 points on a scale ranging from zero to ten). Nonetheless, it should be mentioned that the authors of the *Happiness Atlas* set high standards in providing information about the topic of "happiness" with their numerous detailed analyses.

Table 2

How Often Would the *Land* in Question Rank First or Last For Happiness?
In percent

	Sample of 3,000		Sample of 20,000	
	First	Last	First	Last
Schleswig-Holstein	9	0	0	0
Hamburg	15	1	1	0
Lower Saxony	3	0	1	0
Bremen	15	18	9	2
North Rhine-Westphalia	2	0	4	0
Hesse	6	0	8	0
Rhineland-Palatinate	10	0	2	0
Baden-Württemberg	11	0	51	0
Bavaria	3	0	13	0
Saarland	24	7	11	0
Berlin	0	5	0	0
Brandenburg	0	17	0	34
Mecklenburg-Western Pomerania	2	15	0	3
Saxony	0	8	0	13
Saxony-Anhalt	0	13	0	9
Thuringia	0	16	0	39

Source: Infratest dimap Glückstrend 2013; calculations by DIW Berlin.

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Even a large sample of 20,000 is subject to appreciable sampling error with regard to the minute differences in life satisfaction between *Länder.*

confirmed for the whole of Germany. For this reason, no increase in the average level of the adult population's life satisfaction parallel to the rise in real income has been evident, either in West Germany or, since 1990, in unified Germany. In other words, it is not the level of income which is responsible for increasing life satisfaction in society in general, but people consider their income position relative to that of others to be most important.[15]

Regional Rankings Not Very Robust

In addition to numerous excellent detailed analyses, since 2011 the *Happiness Atlas[16]* has included rankings of happiness in Germany broken down by *Land*, with

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2   And the small Länder Bremen and Saarland even do so fairly often, 18 percent and seven percent of the time, respectively, because of the very large random error. The *Happiness Atlas* quite rightly does not indicate them separately.

3   See Heinz-Herbert Noll and Stefan Weick, "Zur substanziellen Bedeutung kleiner (regionaler) Unterschiede – Anmerkungen zum 'Glücksatlas 2012'", ISI49 (Informationsdienst Soziale Indikatoren, no. 49) (2013): 5–7.

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15   Andrew Clark, Paul Frijtjers, and Michael A. Shields, "Relative Income, Happiness, and Utility: An Explanation for the Easterlin Paradox and Other Puzzles," Journal of Economic Literature 46, no. 1 (2008): 95–144. A SOEP-based pilot study has been conducted regarding the procedures for comparisons in Germany: See Simone Schneider and Jürgen Schupp, "Individual Differences in Social Comparison and its Consequences for Life Satisfaction. Introducing a Short Scale of the Iowa-Netherlands Comparison Orientation Measure," Social Indicators Research115, no. 2 (2014):767-789.

16   See B. Raffelhüschen, R. Köcher, Glücksatlas (Munich: 2013).

Table 3

Means of the Infratest-dimap Satisfaction Survey
By *Land*

	All respondents			Over 16 years of age		
	Mean	95% confidence interval		Mean	95% confidence interval	
Schleswig-Holstein	7,47	7,38	7,56	7,45	7,36	7,54
Hamburg	7,40	7,29	7,51	7,38	7,27	7,49
Lower Saxony	7,51	7,46	7,56	7,48	7,43	7,54
Bremen	7,37	7,17	7,58	7,38	7,17	7,59
North Rhine-Westphalia	7,55	7,52	7,59	7,52	7,48	7,55
Hesse	7,56	7,50	7,62	7,53	7,47	7,60
Rhineland-Palatinate	7,53	7,46	7,60	7,50	7,42	7,57
Baden-Württemberg	7,62	7,58	7,66	7,59	7,54	7,63
Bavaria	7,59	7,55	7,63	7,56	7,52	7,60
Saarland	7,48	7,33	7,62	7,45	7,30	7,60
Berlin	7,21	7,13	7,28	7,19	7,11	7,26
Brandenburg	7,03	6,94	7,12	7,01	6,91	7,10
Mecklenburg-Western Pomerania	7,17	7,06	7,28	7,14	7,02	7,25
Saxony	7,09	7,02	7,16	7,07	7,00	7,14
Saxony-Anhalt	7,11	7,02	7,21	7,08	6,99	7,18
Thuringia	7,02	6,93	7,12	7,00	6,90	7,10
Total	7,46	7,45	7,48	7,43	7,42	7,45

Source: Infratest dimap Glückstrend 2013; calculations by DIW Berlin.

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Even with a sample size of 50,000, it is impossible to clearly assign first and last places in the ranking of life satisfaction by *Land*.

further subdivisions: Bavaria is divided into the regions South Bavaria and Franconia; Lower Saxony into Lower Saxony/Hanover and Lower Saxony/North Sea; and North Rhine-Westphalia (NRW) into NRW/Düsseldorf, NRW/Cologne, and Westphalia. The very small *Länder* Saarland and Bremen are included in Rhineland-Palatinate and Lower Saxony, respectively. Overall, this results in 19 regions.[17]

The *Happiness Atlas* is based primarily on SOEP life satisfaction data. In this respect, its title is at least slightly misleading for non-experts. And although SOEP uses a relatively large sample size (over 20,000 adult respondents at present), even this number of cases is suited for detailed regional analysis only to a limited extent, a criticism of the *Happiness Atlas* 2012 leveled shortly after its publication.[18] This is stated clearly in its 2013 edition, used as a basis for reporting on the Internet and in

the media, with the following words: "This makes clear that no statistically significant differences can be discerned between most western German regions."[19] This is not surprising, since the sample sizes for the individual regions are small and subject to major random error.

For example, SOEP surveyed only a small number of households in Berlin (517), Brandenburg (522), Hamburg (200), and Mecklenburg-Western Pomerania (317) in the survey year 2011. And even for Bavaria, Baden-Württemberg, and NRW, which were subdivided for the *Happiness Atlas*, the numbers of cases are only 3,252, 2,537, and 4,248, respectively. When regional levels of satisfaction are estimated, the degree of uncertainty due to the low numbers of cases per region means that only larger regional differences can be interpreted as "statistically significant." In fact, the average differences in life satisfaction measured in western Germany are very small overall, and on an 11-point scale for satisfaction, they are mostly less than one point. Only the difference between western and eastern Germany is large enough (and the total number of cases in eastern and western Germany sufficiently large) to be able to be considered appreciable and significant. In this respect, the detailed ranking in the *Happiness Atlas* is fraught with clear uncertainty (see Box 2).[20]

The differences between the western German *Länder* regarding the average measured by SOEP in 2012 are so minor—ranging from 7.4 in Hamburg to 7.1 in NRW—that their interpretation in the media seems questionable. The same applies to the eastern German *Länder*. Here, average satisfaction ranged from 6.8 in Saxony to 6.6 in Brandenburg in 2012. Therefore, none of the changes in rankings from 2012 to 2013 were meaningful. This finding does not exclude the possibility that statistically significant differences between extreme cases can be ascertained at the smaller regional level, but no such analyses have been conducted to date.

It should be noted that the differences in the rankings of the various *Länder* on the basis of SOEP and the *ARD-Glückstrend* are minimal in order to avoid any potential further confusion on the part of the public. But these differences are not significant, either (see Table 3). In the *ARD-Glückstrend*, it is not the northern *Länder* at the top of the point estimations (as in SOEP), but the southern ones (Baden-Württemberg followed by Bavar-

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17 See also www.t-online.de/lifestyle/id_66353112/gluecksatlas-013-hier-ist-deutschland-am-gluecklichsten.html.

18 See Heinz-Herbert Noll and Stefan Weick, „Zur substanziellen Bedeutung kleiner (regionaler) Unterschiede – Anmerkungen zum ‚Glücksatlas 2012'," ISI49 (Informationsdienst Soziale Indikatoren, no. 49) (2013): 5–7 (http://www.gesis.org/publikationen/zeitschriften/isi/).

19 Raffelhüschen and Köcher, Glücksatlas: 34.

20 This is all the more true since the findings for the most recent edition of the *Happiness Atlas* are not based on SOEP, but on surveys of approximately 3,000 respondents conducted by the Allensbach Institute. With this sample size, statements on Länder can be made with certainty only if the differences in the indicator studied are very large (see Box 2).

ia with values of 7.59 and 7.56, respectively). If, however, the sampling error of the estimation due to the small numbers of cases is taken into account, the confidence intervals of the estimations for Baden-Württemberg and Schleswig-Holstein overlap, and it is not possible to speak about actual differences between the two *Länder* with an acceptable degree of certainty.

Conclusion

In recent years, research on satisfaction has generated enormous advances in knowledge about the mechanisms of how individuals "produce" subjective well-being. Provided they remain primarily in the hands of researchers, the growing databases, which also include longitudinal and intercultural data, promise to provide important insights. The fact that happiness research findings can also be beneficial for a business location is also evidenced by numerous studies on work satisfaction. According to these, business profits and an economy's productivity increase with workers' rising intrinsic motivation as well as higher satisfaction and greater happiness.[21] Another well-documented example is the finding that happier people are also healthier and satisfied people are less susceptible to disease.[22] Not least, satisfaction research plays a part in ensuring that economic theories are not oversimplified or guided by the notion that human actions are always deliberate and rational. Happiness research explicitly calls attention to people's emotional side. For example, global satisfaction research has already shown that unemployment makes people profoundly less satisfied, and with a long-term effect. It is very obvious that people suffer more than a loss of income when they lose their jobs. Satisfaction research documents that their sense of self-worth is also impacted negatively. For this reason, in addition to social policy, labor market and economic policy are also called on to open up opportunities for people to have satisfying work. In this regard, the findings from satisfaction research support the politicians who are striving to reduce unemployment. But neither politics nor satisfaction research can provide people in Germany with a general "formula for success" for happiness or satisfaction.

Yet satisfaction research is limited not only by the methodological issues outlined above. Its political significance should not be overestimated, either. A warning is certainly in order against using surveys on life sat-

isfaction as authoritative for determining policy decisions and linking the changes in subjective well-being directly with results of political measures.[23] In 2013, the Green Party faction in the German parliament put forward a proposal in the final report of the study commission (Enquete-Kommission) that individual life satisfaction be measured by the government as an independent indicator of prosperity, but did not prevail. It was rejected for good reason. It would be very easy for the parliamentary and extraparliamentary opposition to encourage people to indicate low life satisfaction if they were randomly selected as respondents in the government's official "happiness survey." That would make it impossible to fulfill the standard quality criteria for validity of social indicators.

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21   Ed Diener, Richard Lucas, Ulrich Schimmack, and John Helliwell, Well-Being For Public Policy (New York: Oxford University Press, 2009): 165ff.

22   Paul Dolan, Tessa Peasgood, and Mathew White, "Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective well-being," Journal of Economic Psychology 29, no. 1 (2008): 94–122.

23   See also the recommendation by the majority of members in the final report of the committee of inquiry "Wachstum, Wohlstand, Lebensqualität – Wege zu nachhaltigem Wirtschaften und gesellschaftlichem Fortschritt in der Sozialen Marktwirtschaft," Paper no. 17/133000 of the German Bundestag, dated May 3, 2013: 235.

Poor, Unemployed, and Politically Inactive?

Martin Kroh and Christian Könnecke

Low income earners and job seekers are less interested and active in politics than people above the at-risk-of-poverty threshold and the working population. Compared to other European democracies, Germany has slightly above-average levels of inequality of political participation. Data from the Socio-Economic Panel (SOEP) study suggest that this inequality has followed an upward trend over the last three decades. The data also indicate, however, that the unemployed do not reduce their political participation only as a result of losing their job, nor do those affected by poverty do so due to loss of income. Rather, the lower levels of political participation existed prior to these events and can be attributed to the social backgrounds of those affected.

"Democracy's unresolved dilemma" is how the well-known American political scientist Arendt Lijphart described unequal political participation in many western democracies in the mid-1990s.[1] This interpretation dates back to a long series of empirical findings since the 1920s,[2] which show that political participation rises with increased education, income, and occupational status, and is also rooted in the democratic idea that the success of democracies can be judged by the equal participation of all social groups.[3]

Analyses of political participation in different income groups in the German Federal Government's Report on Poverty and Wealth show that not only do democracy researchers agree that egalitarian participation in the political process is an important indicator of how well a political system is working, but this view also prevails among policy makers and the general public.[4] In today's journalistic and political debates, it is occasionally argued that the development of income and wealth inequality in recent years may have increased the differences in participation opportunities in various areas of life—possibly also in political participation.

Political Participation Unequal Across Social Groups

In the following, the degree of inequality of political participation is understood to be the political participation rate in one social group in relation to the participation rate in another social group. For example, if 30 percent

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1 A. Lijphart, "Unequal Participation: Democracy's Unresolved Dilemma," American Political Science Review 91 (1997): 1–14.

2 For earlier studies, see M. Jahoda, P. F. Lazarsfeld, and H. Zeisel, Die Arbeitslosen von Marienthal. Ein soziographischer Versuch (Leipzig: 1933); and H. F. Gosnell, Getting Out the Vote: An Experiment in the Stimulation of Voting (Chicago: 1927).

3 See C. Pateman, Participation and Democratic Theory (Cambridge: 1970).

4 Life Situations in Germany. The German Federal Government's 4th Report on Poverty and Wealth, Federal Ministry of Labour and Social Affairs.

Box 1

Data and Methods

Measuring Poverty and Unemployment

In accordance with one common definition of relative income poverty, this study defines poverty as having a disposable income of less than 60 percent of German annual median income. This is referred to as the at-risk-of-poverty threshold, and in 2010, it was approximately 1,000 euros for a single person.[1] Disposable income is calculated as the sum of all incomes and transfers in a household, taking into account the size and composition of that household (new OECD scale).

In the following, the employed are defined as those people who had done at least one hour of paid work in the week prior to the survey date, including people on maternity leave and parental leave and those who were absent due to vacation, illness, or similar. The unemployed are defined as those people who specified that they were registered as unemployed at the employment agency (SOEP) or were not employed or actively looking for work in the week prior to the survey (ESS). Respondents not available to work, such as those in school education or pensioners, were excluded from the comparison of unemployed and employed persons.

Indicators of Political Participation in the SOEP and ESS

The political interest of the respondents ("in more general terms: how interested are you in politics?") is surveyed in both the SOEP and the ESS on a four-point scale from "not at all interested" to "very interested." For the analyses, both the upper and lower categories are summarized so that respondents who reported to be interested or very interested in politics could be compared to those who described their political interest as low or who said they were not at all interested.

Involvement in political organizations is recorded in the SOEP by asking respondents whether they are actively involved in civic initiatives, political parties, or local politics in their leisure time. The ESS had a slightly different basis and the two indicators of political engagement were combined into one. Here, people were considered politically active if they said they had

been actively involved in the work of either a political party or another political organization in the last twelve months.

Analyzed Samples from SOEP

In the Socio-Economic Panel (SOEP) Study, all respondents over the age of 16 have been reporting their political interest annually since 1985 and whether they had actively participated in political parties, local politics or civic initiatives approximately every second year since 1984. The trend analysis on income poverty takes into account over 50,000 people (over 450,000 observations) who have answered a question about their political engagement at least once, or those who have answered a question about political engagement at least once and were registered as either employed or unemployed at the time of the survey.

The sibling study includes more than 2,000 SOEP households with at least two siblings who each answered questions about political engagement or life satisfaction at least once. In the comparison of siblings above and below the at-risk-of-poverty threshold, only siblings who lived in different households during at least one survey and therefore had different incomes were considered. The comparison of unemployed and employed siblings also excluded people from the analysis who were not available for work if they were still in education, for example.

Estimates of the effects of unemployment and income poverty on political interest and political participation are the results of multivariate regression models, which also take into account statistics concerning gender, age, east/west differences, immigration background, survey year and, in the case of the sibling analyses, the order of birth. Models 1 and 2 are linear panel fixed effects models,[2] Model 3 is a linear family fixed effects model and Model 4 is a linear between family effects model.

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1 See M. M. Grabka, J. Goebel, and J. Schupp, "Has Income Inequality Spiked in Germany?," DIW Economic Bulletin, no. 43 (2012).

2 See M. Giesselmann and M. Windzio, Regressionsmodelle zur Analyse von Paneldaten (Wiesbaden: 2012).

of the employed are interested in politics, but only 20 percent of the unemployed, then the employed are 30 percent / 20 percent = 1.5 or 50 percent more interested in politics than the unemployed. Values greater than one therefore indicate that the employed and/or people above the at-risk-of-poverty threshold have a higher participation rate than the unemployed and/or people below the at-risk-of-poverty threshold. Conversely, values of less than one mean a higher participation rate among the unemployed and/or those affected by poverty.

These figures were calculated based on data from the Socio-Economic Panel (SOEP) Study[5], collected by the fieldwork organization TNS Infratest Sozialforschung on behalf of DIW Berlin and the European Social Survey (ESS).[6] The SOEP is a survey of households in Germany conducted annually since 1984 and currently polls approximately 24,000 adults per survey wave. The ESS was a repeated cross-sectional survey conducted biennially between 2002 and 2010 in a total of 34 European countries. The number of respondents in the ESS varied between approximately 1,000 and 3,000 adults per country and survey wave.

Contrary to the SOEP, the ESS does not use a precise definition of income poverty, which is why we restricted the comparison to employed and unemployed people in this case (see Box 1). Since the data bases of the SOEP and ESS are samples, the reported estimates may contain statistical uncertainties. All ratios between participation rates are therefore reported with an upper and lower estimate value based on a 95-percent margin of error.

Participation in Political Parties and Organizations Particularly Unequal

One of the features of democracies is that they provide citizens with a variety of opportunities for their interests to be incorporated in the political process. As well as participating in elections, they can, among other things, work for political parties, take part in civic initiatives, sign petitions, boycott certain products for political reasons, participate in demonstrations, donate money to political organizations, take part in civil disobedience, or run for public office. Although many people are not currently actively involved in the political process, they signal their fundamental willingness for political engagement through their interest in the political process or in political discussions with family and friends.

5 G.G. Wagner, J.R. Frick, and J. Schupp, "The German Socio-Economic Panel Study (SOEP) - Scope, Evolution and Enhancements, " Schmollers Jahrbuch (Journal of Applied Social Science Studies) 127, no. 1 (2007): 139-169.

6 www.europeansocialsurvey.org.

Figure 1

Political Participation by Employed and Unemployed in 34 European Countries
Ratio between participation rates (unemployed = 1)
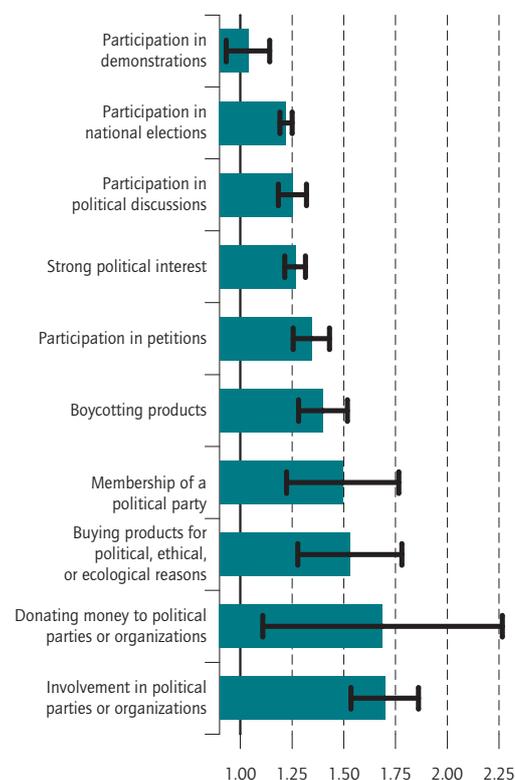
Example: The European average for the proportion of political party members among the employed is 1.5 times higher than among those seeking employment.

Sources: European Social Survey 2002-2010, calculations by DIW Berlin.

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The employed are more politically engaged than the unemployed.

Whether this willingness translates into political activity also depends on external factors, such as mobilization by political issues or the accessibility of opportunities to participate.

The degree of inequality of political participation in Europe varies according to the form of engagement being considered (see Figure 1). While the average election turnout of employed people in Europe is only about 22 percent higher than that of the unemployed, the participation gap when it comes to participation in political parties or other political organizations is 70 percent. Apart from the relatively egalitarian participation in elections, only demonstrations are used equally by the employed and the unemployed as a means of articulating

their interests. Unconventional forms of participation,[7] such as signing petitions or the political boycotting of products, are ranked in the middle among the unequal forms of participation.

The unemployed are not inherently less politically active than the employed, but are characterized by a somewhat different participation profile. The political engagement of the unemployed is characterized less by involvement in political parties and political organizations, and more by participation in demonstrations.

Germany in Upper Mid-Range in Unequal Political Participation

The level of unequal political participation was examined separately in 34 European countries in terms of political interest, a key indicator of basic willingness to engage politically, and also in terms of participation in political parties and political organizations, an important indicator of conventional political activity (see Figure 2). The countries are listed according to the disparity between the unemployed and employed. The figure shows that participation rates between the unemployed and the employed between 2002 and 2010 did not differ in all countries. In 11 of the countries studied[8] the confidence bands of the estimate include the value of one, which means that, due to the sampling error of the data basis, it cannot be assumed with complete certainty that the percentage of unemployed people interested in politics is lower than that of employed people in the respective countries. The same applies to participation in political parties and political organizations in 17 countries, including the Netherlands, Italy, and Turkey.

In terms of unequal levels of political interest, Germany is mid-table among European countries, and in terms of unequal political participation, it is in the upper mid-table range. Germany has relatively high inequality of political participation compared to its direct neighbors, such as France, Austria, Denmark, and the Netherlands.[9] For example, the participation rate of employed people involved in political parties or political organizations in Germany is 91 percent more than that of the

unemployed. This difference is only more pronounced in some central and eastern European countries, such as Slovakia and Poland.

Political Interest Gap Widening Slightly

Data from the Socio-Economic Panel (SOEP) Study allow a comparison of the degree of political inequality in Germany with regard to political interest and participation in political organizations since the mid-1980s. In contrast to the ESS, detailed income information in the SOEP allows us to examine the effect of poverty on political participation as well as analyzing unemployment.

Basically, it can be determined for both forms of political engagement that the participation rates of unemployed people and those below the poverty threshold—also allowing for the statistical margin of error—are lower than those of the comparison group in almost all years (see Figure 3). However, there is no clear trend in the development of the degree of unequal political participation, although since the mid-1990s the participation gap for political interest has tended to increase. Since 2000, significantly unequal participation rates have also been observed for involvement in political parties and other political organizations. From 2007/2008 to 2012 (most recent available data), there was a slight decrease in unequal participation for political interest and political participation. The extent to which this is due to declining numbers of registered unemployed and the now no longer significant increase in income inequality in Germany[10] can only be speculated upon here. Since the values shown are relative to participation rates, it cannot be directly concluded that the political engagement of the unemployed and those on low incomes would have decreased further over time. The degree of unequal political participation measured here would still have grown if, for example, political interest among employed people had increased more than among the unemployed. Indeed, it is noticeable that the percentage of employed people who said they were interested or very interested in politics fluctuated over time between 31 percent in 1995 and 43 percent in the year after reunification, but when politically exceptional events, such as reunification, are excluded, interest remains relatively stable.

In contrast, since the mid-2000s, there has been a clear decline in the proportion of unemployed people who are interested in politics from 30 percent in 2006 to approximately 19 percent in 2009, although this figure has in-

7 To distinguish between conventional and non-conventional participation and its determinants, see S. H. Barnes, M. Kaase et al. Political Action. Mass Participation in Five Western Democracies, (Beverly Hills, London: 1979).

8 Iceland, Romania, Luxembourg, Latvia, Lithuania, Russia, Cyprus, Italy, Finland, the Netherlands, and France.

9 See also J. Alber and U. Kohler, "The Inequality of Electoral Participation in Europe and America and the Politically Integrative Functions of the Welfare State," in J. Jens Alber and N. Gilbert, eds., "United in Diversity? Comparing Social Models in Europe and America," International Policy Exchange Series 1 (Oxford, New York: 2010): 62–90.

10 See M. M. Grabka, J. Goebel, and J. Schupp, "Has Income Inequality Spiked in Germany?," DIW Economic Bulletin, no. 43 (2012).

Figure 2

Political Interest and Participation Among Employed and Unemployed in Europe

Ratio between participation rates (unemployed = 1)
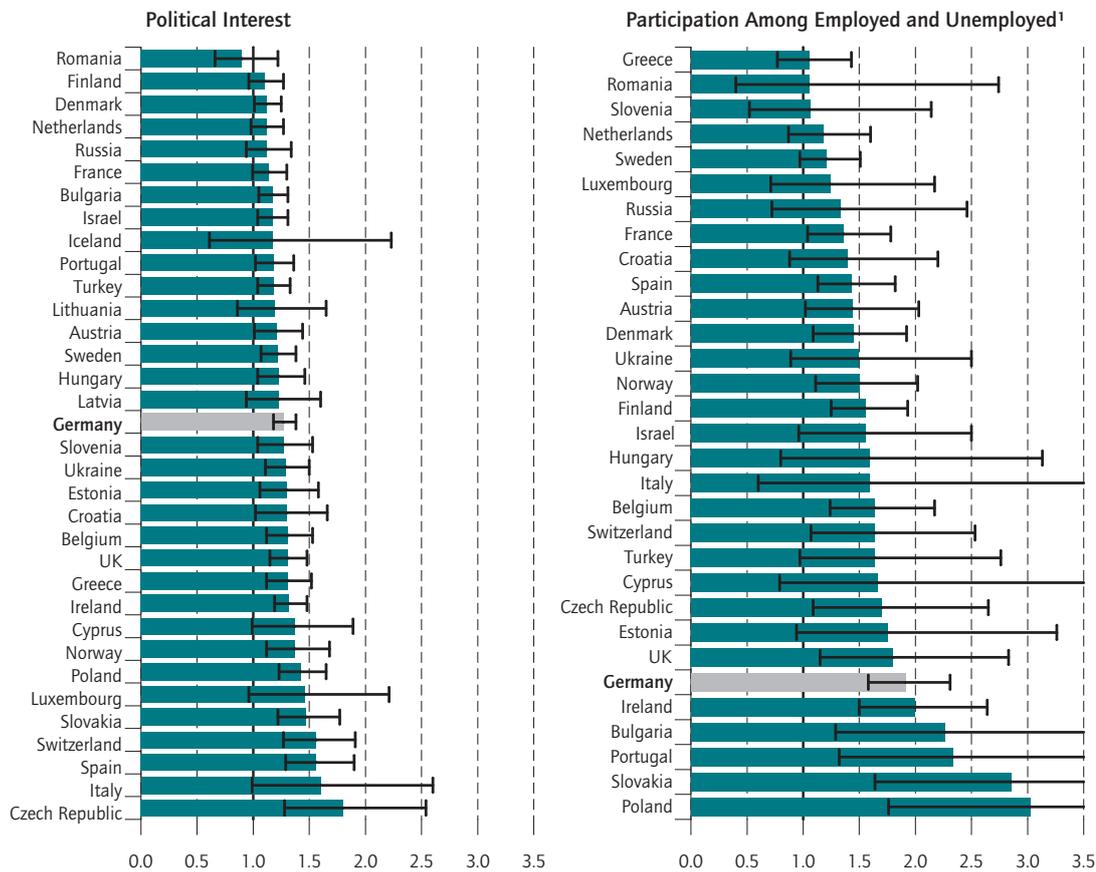
1 Due to low numbers of cases, the values for Iceland, Latvia and Lithuania are not shown separately.
Sources: European Social Survey 2002-2010, calculations by DIW Berlin.

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Political participation among the employed is much higher than among the unemployed in some European countries.

creased slightly in recent years. Active participation in political parties, civic initiatives, or local politics has decreased more significantly among the unemployed and those on low incomes, particularly since 1998, than in the corresponding reference groups. While the proportion of politically engaged persons among the employed and those above the at-risk-of-poverty threshold has fluctuated between an average of ten and eleven percent over the entire period (with peaks of 15 and 13 percent in 1998), in 2007, it decreased for both the unemployed and those on low incomes to four percent, which was the lowest level seen in the period studied, and subsequently, for the unemployed, also remained below the longstanding mean.

Possible Causes of Unequal Political Participation

In recent decades, there have been a variety of explanatory approaches for reduced political engagement among people experiencing job loss and a drop in income (see Box 2). These range from the social and psychological ramifications of loss of employment and income to the lack of access to the political sphere for those individuals with more limited economic resources.

However, the idea that unemployment and poverty inevitably lead to a decline in political engagement is not directly plausible. It could be argued, for example, that, due to their circumstances and their perceived sense of dissatisfaction and injustice, socially disadvantaged in-

Box 2

Theories on the Correlation of Poverty and Unemployment with Political Participation

Among the most prominent theories to explain low levels of political activity among socially disadvantaged persons are the deprivation and resource approaches. While the former focuses on social-psychological mechanisms leading to withdrawal from the public sphere, the resource approach concentrates more on the socioeconomic conditions that encourage or hamper political action. Another approach attributes withdrawal from political engagement to poor and unemployed people having negative experiences in dealing with welfare institutions.

Deprivation

Subjective deprivation is generally defined as the perception of unjustified social disadvantage.[1] This perception can be caused by substantive problems, but also by the stigmatization of certain social groups so that opportunities for social participation are curtailed. The deprivation approach has a long tradition in unemployment research. One of the pioneering social scientific studies on the subject[2] describes the social processes that can lead to growing isolation.[3] Essentially, these negative consequences are attributed to psychological

processes that are expressed in reduced self-esteem and feelings of helplessness.

The Marienthal study describes, as an example, how resignation and apathy spread throughout the Austrian village, which had been hit hard in the 1920s by mass unemployment because of the Great Depression, and the social life of many of those affected became increasingly limited to their close family. In general, the deprivation approach emphasizes the role of feelings of shame which can be the cause of this withdrawal from social networks and ultimately from public life. The loss of work or descent into poverty causes those affected to perceive an asymmetry in their social relationships and to have the feeling of no longer being able to keep up for financial reasons, for example.[4] In addition, financial distress can lead to a shifting and narrowing of time perspectives. Those affected focus strongly on their individual circumstances: their immediate problems, and efforts to resolve them quickly, such as actively looking for a job, have the highest priority in their daily lives.[5] The perceived benefits of political engagement, which rarely materialize in the short term, are pushed into the background in the face of practical challenges.

Resources

In contrast, the resource approach assumes that unequal participation in political processes is a direct result of the different socioeconomic positions of individuals as this essentially determines the availability and scope of resources required for

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1 See W.G. Runciman, Relative Deprivation and Social Justice (Aldershot: 1993).

2 See M. Jahoda, P. F. Lazarsfeld, and H. Zeisel, Die Arbeitslosen von Marienthal. Ein soziographischer Versuch (Leipzig: 1933).

3 It is worth noting here that this is a strand of deprivation research that tries to explain the empirical link repeatedly found between unemployment or poverty and low levels of participation in political life. In contrast, a differing viewpoint was particularly popular in the 1970s which assumed that the inherent feelings of dissatisfaction and frustration caused by deprivation would lead those affected to try and change their circumstances through political activities. See also T. Gurr, Why Men Rebel? (Princeton: 1970).

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4 M. Kronauer, Exklusion. Die Gefährdung des Sozialen im hoch entwickelten Kapitalismus (Frankfurt, New York: 2010), 173.

5 S. J. Rosenstone, "Economic Adversity and Voter Turnout," American Journal of Political Science 26, no. 1 (1982): 25–46.

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dividuals may be especially motivated to become politically active. After all, electoral participation, involvement in political parties, and other ways of influencing politics provide people with potential opportunities to contribute to social change, help shape social policy and, in the best-case scenario, even to improve their own circumstances in the process.

Job Loss and Decline into Poverty: Life-Changing Events, But Not For Political Engagement

If the often-held view that inequality of participation in political activities is due to income poverty and unemployment causing a decline in political engagement and interest is true, it would need to be empirically proven, over time, that individuals who lose their jobs or whose income drops below the at-risk-of-poverty threshold subsequently reduce their political engagement and show less interest in politics than previously.

political engagement.[6] The socioeconomic position is, in turn, largely dependent on educational level, occupational status, and disposable income. The ability to pay membership fees for political parties, associations, or other organizations, and also support political players with donations is obviously severely limited for people on very low incomes.[7]

The resource approach assigns educational level an even more important role than financial opportunities. Here the assumption is that the achievement of a higher level of education fosters the development of civic skills enabling people to function in political contexts.[8] These include not only the development of an understanding of sometimes very complex political processes, but also communications and organizational capacities which facilitate the articulation of political interests through direct contact with decision-makers, for example. Further, it is not only formal educational institutions, such as schools and universities, that allow for the acquisition of such skills; the various requirements and profiles of different activities and tasks at work also enable, to varying degrees, the further development of civic skills. People who frequently have to carry out organizational or communication activities at work, for example, can also apply these competences in the context of political engagement.

In addition, the workplace is occasionally also the location of political discussion (works councils' activities or trade union membership, for example), which can lead to integration into political recruitment networks. The links assumed by the resource approach therefore imply that the loss of employment and/or decline into poverty is accompanied by a reduction in relevant resources which, in turn, means that people are not (able to be) as politically active.

Political Learning

A less prominent approach, also worth expanding on here, focuses on people's experiences of interacting with welfare institutions. According to this political learning perspective[9], the specific organization of government social programs and the way in which the granting authorities interact with those claiming social benefits may contribute to a negative perception of state institutions in general. Thus, social benefits linked to regular means testing, which requires more stringent monitoring of the person affected and significant sanctions if the legal requirements are not fulfilled, may result in the interaction with the government authorities being perceived as biased and repressive. Those affected project these experiences via what is known as a spillover effect onto the functioning of the entire political system and no longer perceive the democratic process as accessible and open to influence since they no longer trust government institutions to listen to their interests and respond appropriately.

6   S. Verba, K. Lehman Schlozman, and H. E. Brady, Voice and Equality: Civic Voluntarism in American Politics (Cambridge, London: Harvard University Press, 2002); S. Verba and N. H. Nie, Participation in America: Political Democracy and Social Equality (New York: Harper & Row, 1972).

7   E. Priller and J. Schupp, "Social and Economic Characteristics of financial and Blood Doners in Germany." DIW Economic Bulletin, no. 6 (2001).

8   H. A. Brady, S. Verba, and K. Lehman Schlozman, "Beyond SES: A Resource Model of Political Participation," American Political Science Review 89, no. 2 (1995): 271–294.

9   J. Soss, "Lessons of Welfare: Policy Design, Political Learning, and Political Action," American Political Science Review 93, no. 2 (1999): 363–380.

As part of the longitudinal Socio-Economic Panel (SOEP) Study, the same individuals were surveyed annually over a long period of time—in some cases up to three decades. Therefore, data is available on the political engagement of a large number of respondents, both before and after becoming unemployed and/or poor. Figure 4 shows the development over time of respondents' political interest and involvement in political parties and in other political organizations during the four years preceding job loss (t-4, t-3, t-2, and t-1), during unemployment (t0), and in the four years following reentry into the labor market (t+1, t+2, t+3, and t+4). The analyses of the onset of poverty were carried out using a similar
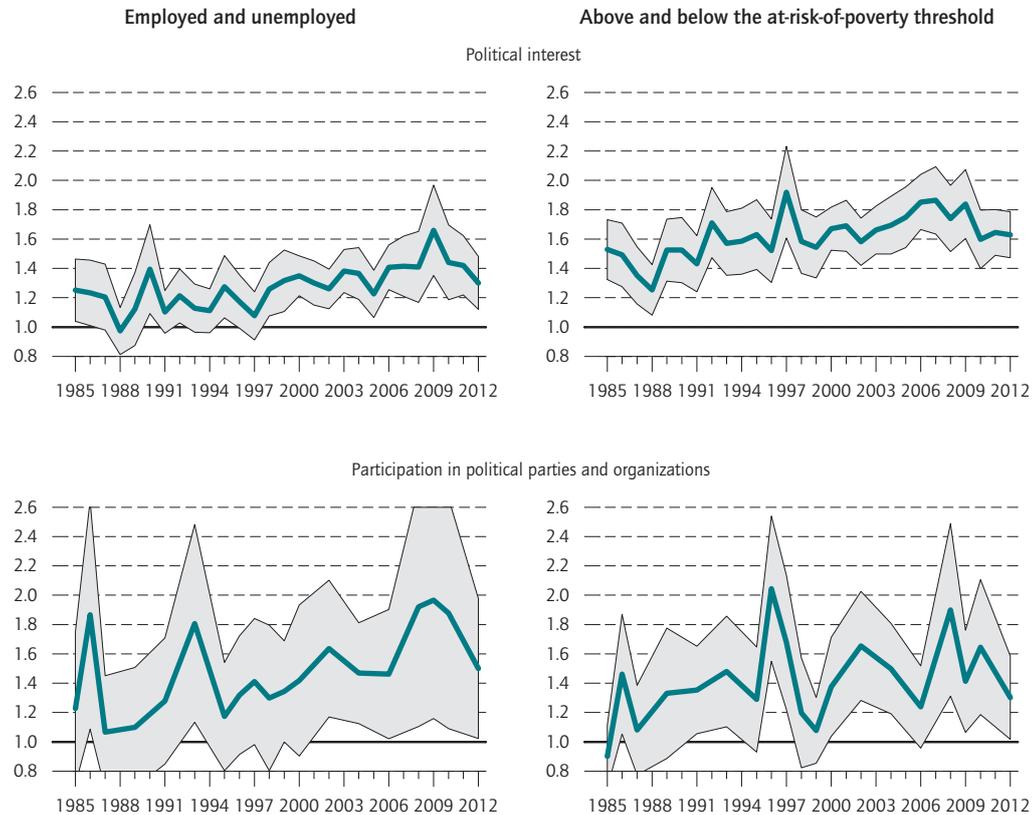
methodology.[11] The duration of unemployment and/or poverty for the data on which the figures are based is one year. This means that at t+1, the respondents had

11   The analysis does not include people whose household income was only marginally above the poverty line before slipping below the threshold value. The basis for this is the consideration that people who at t–1 have a household income that is only, for example, ten euros above the statistically calculated at-risk-of-poverty threshold will barely notice a dip below this threshold in the following year as their financial situation was already precarious beforehand. Accordingly, the analysis only takes into account those respondents whose income at t–1 was at least ten percent above the critical threshold and was at least ten percent below that value in the following year so that a tangible deterioration in financial opportunities can be assumed.

Figure 3

Political Interest and Participation in Germany

Ratio between participation rates (unemployed = 1)

Employed and unemployed · Above and below the at-risk-of-poverty threshold

Political interest

Participation in political parties and organizations

Sources: Socio-Economic Panel (v29), calculations by DIW Berlin.

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Inequality of political interest increased slightly between 1990 and 2008.

already returned to gainful employment or their household income was above the at-risk-of-poverty threshold.

The graphs show that job loss and/or a dip below the at-risk-of-poverty threshold did not result in a significant negative change in either political interest or involvement in political parties or organizations. In the years surveyed, the proportion of individuals with a strong political interest remained constant at around the 27-percent mark, and the proportion active in political parties, local politics, and civic initiatives hovered around nine percent.[12]

The findings clearly demonstrate that those affected already exhibited only limited political interest and a low level of political participation before they became unemployed or poor. The notion that withdrawal from political engagement is a consequence of this situation, as is frequently surmised by explanatory theories addressing the issue of unequal political participation, is not substantiated by this empirical evaluation. In fact, unemployment more frequently appears to be accompanied by a slight increase in political interest. The estimated proportion of people reporting strong political interest increased from approximately 26 to 30 percent, although this change falls within the statistical margin of error for this sample.[13]

12 The analysis only includes people who were registered as unemployed and/or whose income was below the at-risk-of-poverty threshold at a given point in time. If all SOEP respondents over the age of 16 are taken as a basis, the proportion of people with a strong interest in politics is approximately 35 percent, and the proportion of people who are active in political parties, local politics, or civic initiatives is roughly ten percent.

13 If the analyses are repeated for those who are unemployed or poor for longer than one year (two to three years), the results are very similar and are therefore not presented in separate figures. Thus, no long-term reduction in

Figure 4

Political Interest and Activity During Periods of Unemployment or Poverty

Unemployment   Income poverty

Political interest[1]

Political participation[2]
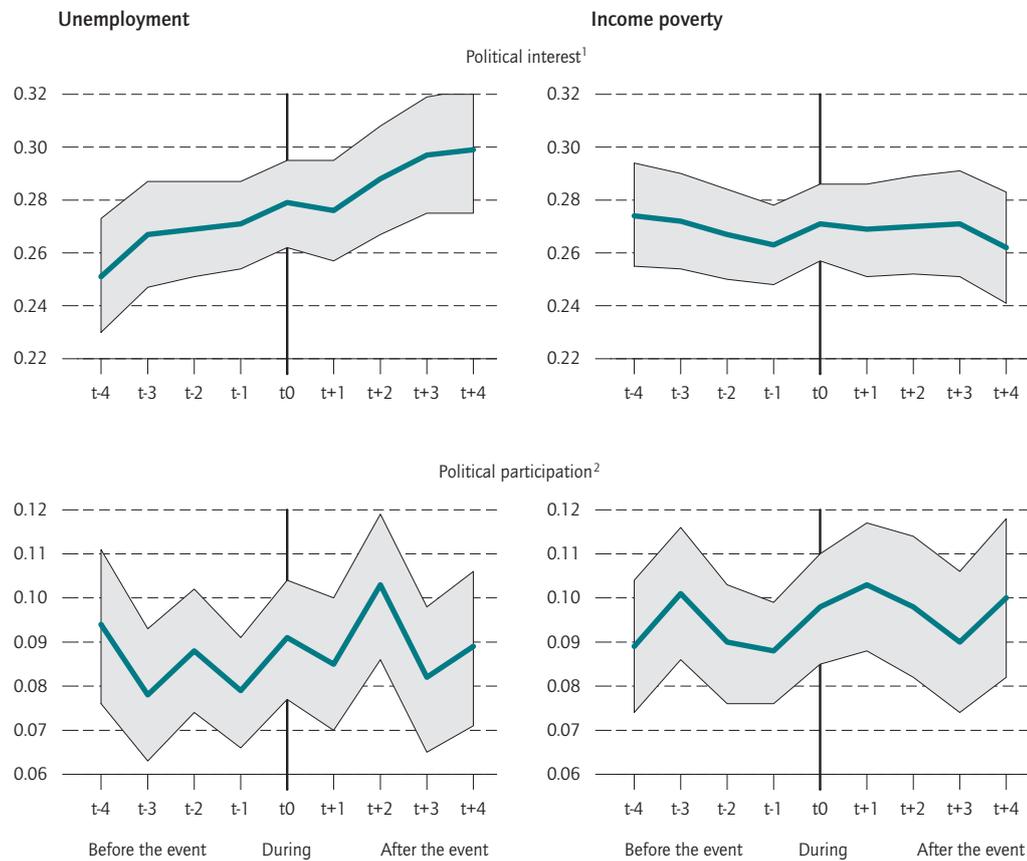
1 Strong political interest
2 People who are active in political parties, local politics, and civic initiatives.
Sources: Socio-Economic Panel (v29), calculations by DIW Berlin.

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Political engagement does not decline with unemployment or poverty.

In order to illustrate that unemployment and/or poverty can have a definite impact on other areas of the lives of those affected, we compared the development of life satisfaction before, during, and after the period of unemployment and poverty (see Figure 5).[14] This analysis shows the proportion of respondents who reported high life satisfaction (values of eight or more on an 11-point scale from zero to ten). In contrast to political interest and participation in political parties and organizations, a clear and statistically significant effect of loss of em-

ployment and/or a decline in income to below the at-risk-of-poverty threshold is evident. If over 40 percent of those affected reported high life satisfaction before becoming unemployed or poor, this figure dropped to 25 percent during unemployment and approximately 37 percent during poverty.

Even for those who returned to employment the following year, life satisfaction did not increase to quite the same level as before unemployment. Similarly, the life satisfaction of people who were affected by poverty for a one-year period subsequently remained permanently lower than before their experience of poverty.

The analyses indicate that many of those affected perceive unemployment and poverty as life-changing experiences that, to some extent, also extend beyond the

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political engagement or decline in political interest is observed, even during longer periods of unemployment or poverty.

14 L. Winkelmann, and R. Winkelmann, "Why are the unemployed so unhappy? Evidence from panel data," Economica 65, no. 257 (1998): 1–15; and also a recent study by C. von Scheve, F. Esche, and J. Schupp, "The Emotional Timeline of Unemployment: Anticipation, Reaction, and Adaption," SOEPpaper, no. 593 (2013).

Figure 5

Life Satisfaction During Periods of Unemployment or Poverty
Proportions of high life satisfaction

Unemployment

Income poverty
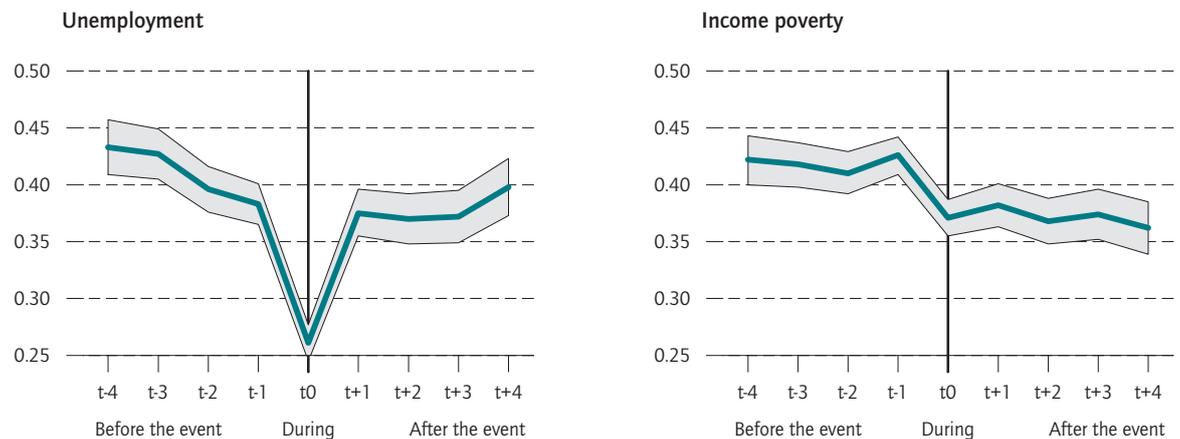
Sources: Socio-Economic Panel Study (v29), calculations by DIW Berlin.

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Unemployment and poverty have a significant impact on life satisfaction.

events themselves. However, the findings also show that there is no lasting impact on political participation. If there is no evidence that loss of employment and income results in a significant decline in the level of individual participation, this begs the question as to why unemployed people and those below the at-risk-of-poverty threshold are less politically interested and active, even before experiencing job loss and/or a decline in income, than those in employment and not affected by income poverty.

Social Background and Unequal Political Participation

An alternative way of interpreting the correlation between unemployment and poverty on the one hand and below average political participation on the other is to look at the possibility of common causes. Insofar as, for example, social background influences both the likelihood of unemployment and of social participation, a statistical correlation of this kind may result between the two phenomena without it being causal.

A hitherto little-used but particularly robust method of empirically estimating the significance of social background for the correlation between unemployment and poverty on the one hand and political participation on the other is the use of a sibling study design: the analysis examines a sample of over 2,000 families based on

the SOEP, although the study only draws on the 4,500 siblings in these families (at least two siblings per family). If the unemployed and/or low-income respondents are less politically active than their own siblings who are in employment and/or not affected by poverty, this would suggest a correlation between individual experiences of unemployment and poverty and the level of political participation. However, if there are no statistically significant differences between employed and unemployed siblings with regard to their political participation despite evidence of such a correlation among the general population, this would indicate that social background leads to disadvantages in terms of the risk of unemployment and poverty and also results in political inactivity.

The table presents four statistical analyses each for political interest and participation and, for comparison purposes, also for life satisfaction. The first analysis (Model 1) of 50,000 SOEP respondents compares the level of individual political engagement and life satisfaction during the years in which the respondents were unemployed and/or poor with the level during the years in which they were employed and/or had household incomes above the at-risk-of-poverty threshold. The analysis does not indicate any effect of unemployment on political activity. Also, poverty neither results in declining political interest nor in a reduction in active partici-

pation.[15] Periods of unemployment even lead to a slight increase in political interest (the proportion of people with a strong interest in politics increases by an estimated one percentage point).

Model 2 repeats the analysis based on a reduced sample of approximately 4,500 siblings. There is no change in the findings due to the smaller sample size. The siblings' responses to unemployment and poverty were very similar to that of the overall sample, which also included only children and had a significantly higher average age.

Model 3 does not compare individuals' phases of employment and unemployment or their income periods above and below the at-risk-of-poverty threshold, but rather compares the employed (or those not on low incomes) with the unemployed (or low-income) siblings in one family in terms of their political engagement and life satisfaction. Here, too, unemployment and poverty appear to have no negative effect on political engagement, i.e., unemployed and/or low-income people are no less interested in politics and no less politically active than their employed siblings and/or siblings with incomes above the at-risk-of-poverty threshold.

However, all three models show significant negative effects of unemployment and poverty on the life satisfaction of those affected: people are less satisfied with their lives when they lose their jobs or have lower incomes, and they are less satisfied than their employed, higher-income siblings. The different models predict a decline in the proportion of those reporting high satisfaction of approximately 15 percentage points during unemployment and roughly six percentage points in the case of poverty.

Lastly, Model 4 reports the statistical correlation between the mean number of politically engaged siblings in families with the mean number of unemployed and/or income-poor siblings per family. This is the only analysis that reveals strong negative effects of unemployment and poverty on political interest, i.e., the level of political interest of the siblings is higher, on average, in families where siblings are less frequently unemployed or poor, and vice versa. If a family comprised only of unemployed siblings is compared with a family comprised

Table 1

Effects of Unemployment and Poverty on Political Engagement and Life Satisfaction

Parameters of model estimates

	Model 1	Model 2	Model 3	Model 4
	Population	Siblings		
	Temporary deviation from individual mean value		Individual deviation from family mean value	Difference between families
Political interest				
Unemployment	0.01***	0.02***	0.02**	−0.11***
Poverty	0.00	0.00	0.00	−0.09***
Political activity				
Unemployment	0.01	0.01	0.00	−0.02
Poverty	0.00	0.00	0.01	0.01
Life satisfaction				
Unemployment	−0.11***	−0.14***	−0.17***	−0.31***
Poverty	−0.05***	−0.06***	−0.07***	−0.11***

*** , ** indicate significance at the 1- or 5-percent level.
Sources: Socio-Economic Panel (v29), calculations by DIW Berlin.

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In terms of political engagement, barely any difference is observed between unemployed and employed siblings.

only of employed siblings, then statistically, the proportion of siblings with a strong political interest is 11 percentage points lower in the former case than in the latter (see Model 4). The simultaneous absence of unemployment- and poverty-related differences between siblings in one family (see Model 3) can be interpreted as an indication of the strong social background effects on unemployment and/or poverty, on one hand, and on political interest, on the other.[16]

Conclusion

The analyses demonstrate—as have a long series of previous empirical studies[17]—that political participation in democracies is not distributed equally but is often particularly low among people in precarious economic circumstances. The analyses also indicate that there has

15 The finding that job loss and a drop in income do not result in a long-term change in individual political engagement is based on German data from the last three decades. However, there remains a possibility that, in certain situations, unemployed people or those affected by poverty may significantly reduce or increase their political participation as a result of these circumstances. Recent examples of a precarious social situation having a mobilizing effect are the protests by young people in the French suburbs or the protests against youth unemployment in Mediterranean countries hit by the financial crisis.

16 The analysis of the reported probability of voter turnout, conducted as part of the SOEP in the run-up to the German parliamentary elections in 2005 and 2009, produces a very similar pattern of findings to the examination of political interest: no appreciable effects of unemployment and poverty are observed in Models 1 to 3 but there are significantly lower voting intentions in families that are frequently affected by poverty and unemployment (Model 4).

17 See L. R. Jacobs and T. Skocpol, eds., Inequality and American democracy. What we know and what we need to learn (New York: Russell Sage Foundation, 2005); and on Germany, P. Böhnke, "Ungleiche Verteilung politischer und zivilgesellschaftlicher Partizipation," in Aus Politik und Zeitgeschichte, supplement to the weekly newspaper Das Parlament, no. 1/2, (2011): 18–25.

been no evidence of a narrowing of the political participation gap in Germany in the last 30 years and that the degree of inequality is actually higher than in many comparable European democracies.

A prerequisite for effective political measures to promote political participation of the unemployed and those on low incomes is an understanding of the exact causes of the statistical correlation. The findings of this report indicate that, on average, a lower level of political participation had already been observed before unemployment and/or loss of income, and that political interest is determined, in the long term, by social background. With this in mind, measures to create equal opportunities at an early stage could make an effective contribution to reducing inequality in political participation. Above all, this includes reducing background-related differences in educational attainment, but also better education about democracy in schools.

The empirical finding of this study that the statistical correlation between unemployment and/or poverty and political engagement is probably not due, in the long term, to the experience of unemployment itself, but rather to an individual's social background, does not, however, allow us to conclude the reverse, namely that the problem of unequal political participation is less relevant in terms of democratic theory. On the contrary, given that life opportunities, including individual political participation, are not only influenced by individual experiences and behavior, but are also largely formed by social background, it is the government's responsibility to counteract these background effects as early as possible, for example in schools, to reduce the inequality of conditions for democratic participation and involvement.

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Reduction in Income Inequality Faltering

Markus M. Grabka and Jan Goebel

Inequality of disposable incomes in Germany has decreased slightly since its peak in 2005. However, this trend did not continue in 2011. The most important reasons for this were the inequality in market incomes, including capital incomes, which had increased again. Besides this finding, the updated analyses of personal income distribution based on the Socio-Economic Panel (SOEP) study show that the risk of poverty did not rise further after a long period of upward movement. Income mobility over time is equally important in terms of social policy, i.e., the upward or downward movement of individual groups of people in the income hierarchy. Here, the most recent analyses confirm the trend of significantly decreasing income mobility since German reunification. For example, the odds of exiting the risk of poverty within a period of four years has dropped by ten percentage points to 46 percent in recent years.

This study updates previous research by DIW Berlin on income inequality in Germany up to 2011 and includes analyses of individual income mobility over time.[1] Data from the long-term Socio-Economic Panel (SOEP) study gathered by DIW Berlin in collaboration with the fieldwork organization TNS Infratest Sozialforschung form the empirical basis.[2] Since the data is collected annually, it is possible to analyze consistent time series on the development of personal income distribution and to calculate individual upward or downward movements within that distribution.[3]

2005–2011: Increasing Incomes …

Average equivalized[4] and inflation-adjusted market incomes of individuals in households remained virtually constant from 1991 to 1998 (see Figure 1 and Box 1). They initially increased significantly during the economic boom in the late 1990s, but then decreased steadily through 2005. It is likely that this development was driven primarily by the high unemployment at that time (see Box 2).

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1 See most recently: M. M. Grabka, J. Goebel, and J. Schupp. "Has Income Inequality Spiked in Germany?," DIW Economic Bulletin, No. 12 (2012).

2 The SOEP is a representative, annually repeated panel survey of households which has been conducted in western Germany since 1984 and in eastern Germany as well since 1990; see G.G. Wagner, J.R. Frick, and J. Schupp, "The German Socio-Economic Panel Study (SOEP) - Scope, Evolution and Enhancements, " Schmollers Jahrbuch (Journal of Applied Social Science Studies) 127, no. 1 (2007): 139-169.

3 In accordance with the German Federal Government's Report on Poverty and Wealth (Federal Ministry of Labour and Social Affairs 2013: Life Situations in Germany) and the reports of the German Council of Economic Experts (most recently Annual Report 2012/2013: Stable Architecture for Europe – Need for Action in Germany), this report indicates the income year. The SOEP surveys annual incomes retrospectively for the previous calendar year, but weights them according to the population structure at the time of data collection. In other words, the data presented here for 2011 were collected in the survey wave 2012.

4 On needs weighting of household incomes see also the term "Äquivalenzeinkommen" in the German-language DIW Glossary, www.diw.de/de/diw_01.c.411605.de/presse_glossar/diw_glossar/aequivalenzeinkommen.html.

The significant decline in unemployment observed since then was accompanied by a trend reversal in income development. Since 2005, market incomes of households have increased markedly, but they have not yet significantly exceeded the 1999 level. The median of market incomes[5] in 2011 was still lower than in 1991. One of the reasons for this development is the demographic transformation of recent years. For example, the share of people of retirement age has been increasing for years in Germany, and as a result, the share of people with no or only low market incomes is also increasing.[6] Besides demographic effects, changes in wages and capital incomes also affect market incomes. Increases in negotiated wages were lower than the general inflation rate from 2006 to 2011.[7]

The development is somewhat more positive when it comes to disposable household incomes (see Figure 2).[8] Equivalized and inflation-adjusted net household incomes increased markedly in the second half of the 1990s and from 2008 to 2010. Although the data for 2011 do show a slight decline, it is within the confidence band and thus does not represent a statistically significant change. As measured by the arithmetic mean, households had higher real incomes at their disposal in 2011 than ten years previously. In terms of the median, however, no significant change can be determined over the course of this period.[9]

The discrepancy in the development of the arithmetic mean and the median suggest that disposable household incomes have developed differently in various parts of the income hierarchy. If the population is divided into deciles[10] and the mean income per decile is indexed to the year 2000, it is evident that the highest income earners (top decile) in particular achieved above-average increases in real income (see Figure 3), which came to approximately 13 percent 2011. The eighth and ninth deciles also achieved slight increases in income of three to four percent. Incomes in the fifth to seventh deciles stagnated, while decreases in income of up to five percent, compared with the year 2000, were evident for the first through fourth deciles. The expansion of the low-wage labor market[11] and the weak development of retirement incomes, among other factors, appear to be relevant for income losses in the lowest income groups. Increases in the incomes of those in the highest decile, however, were caused by escalating incomes from capital investments and from self-employment.[12]

... With Diminished Income Inequality ...

The Gini coefficient is a standard measure of income inequality.[13] It can have values between 0 and 1. The higher the value, the greater the inequality. According to this measure, inequality in market incomes in Germany increased almost continuously—from 0.41 to 0.5—from reunification in 1990 to 2005 (see Figure 4). In the following years, inequality declined; however, this trend has not continued recently—there was no evidence of it in 2011. Alternative measures of distribution from the group of generalized measures of entropy, such as the Theil index and the mean log deviation (MLD)—which is particularly sensitive to changes at the lower end of the income hierarchy—confirm the picture portrayed by the Gini coefficient, even if the MLD coefficient for 2011 remains significantly lower than its historical peak in 2005. Apparently, the main reason for the decline in inequality of market incomes

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5 The median of the income distribution is the value that separates the richer half of the population from the poorer half. See also the term "Medianeinkommen" in the German-language DIW Glossary, www.diw.de/de/diw_01.c.413351.de/presse_glossar/diw_glossar/medianeinkommen.html.

6 For example, the percentage of individuals aged 65 or more years increased from 16.6 percent to 20.6 percent between 2000 and 2010, see Federal Statistical Office. Statistical Yearbook 2013. Wiesbaden, 2013.

7 R. Bispinck, "Tarifpolitischer Jahresbericht 2011: Höhere Abschlüsse – Konflikte um Tarifstandards," WSI-Mitteilungen No. 2 (2012): 131–140. See also K. Brenke and M. M. Grabka, "Schwache Lohnentwicklung im letzten Jahrzehnt," Wochenbericht des DIW Berlin, no. 45 (2011). According to the official national accounts, however, effective gross incomes per employed person were 9.5 percent higher in 2011 than in 2006. In light of consumer price increases of 8.7 percent during the same period, this amounts to a marginal increase in real wages. It cannot be ruled out that the figures for wages will also be adjusted in the course of the major revision of the national accounts data due next year.

8 Disposable household incomes consist of market incomes, statutory pensions as well as state transfer payments such as child benefits, housing assistance, and unemployment benefits, minus direct taxes and social security contributions.

9 One reason for stagnating real incomes is the weak development of pensions in the statutory pension insurance scheme. For example, pensions were not increased at all in 2010 and rose by only 0.99 percent in 2011, resulting in losses of income in real terms.

10 To obtain deciles, the population is sorted according to level of income and then divided into ten groups of the same size. The lowest (highest) decile represents the income situation of the poorest (richest) ten percent of the population. It should be noted that individuals can change their income positions over time because of income mobility and should not be assigned to the same decile every time.

11 T. Kalina and C. Weinkopf (2013): Niedriglohnbeschäftigung 2011. Weiterhin arbeitet fast ein Viertel der Beschäftigten in Deutschland für einen Niedriglohn. IAQ Report 01-2013, Universität Duisburg Essen; and K. Brenke, "Long Hours for Low Pay," DIW Economic Bulletin, no. 9 (2012).

12 For example, according to the national accounts, the percentage of incomes from capital investments and entrepreneurial activity relative to the entire national income has become relatively more important. However, these types of income are concentrated mainly in the highest decile of income recipients.

13 See also the term "Gini-Koeffizient" in the German-language DIW Glossary, www.diw.de/de/diw_01.c.413334.de/presse_glossar/diw_glossar/gini_koeffizient.html.

Market Income in Real Terms[1]
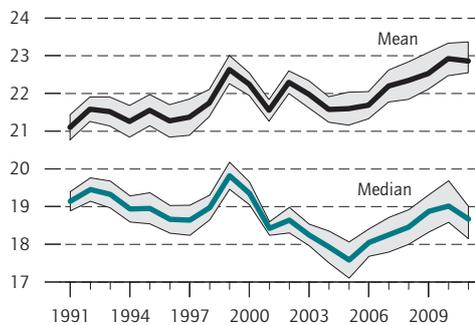
In thousands of euros per annum

1 Incomes of individuals in households at 2005 prices. Surveyed the following year, market income including a fictitious employer's contribution for civil servants, needs-weighted using the modified OECD equivalence scale. Gray area = 95-percent confidence region
Source: SOEP v29, calculations by DIW Berlin.

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Disposable Income in Real Terms[1]
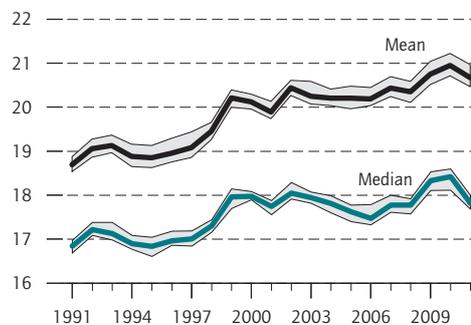
In thousands of euros per annum

1 Incomes of individuals in households at 2005 prices. Surveyed the following year, needs-weighted using the modified OECD equivalence scale. Gray area = 95-percent confidence region
Sources: SOEP v29, calculations by DIW Berlin.

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Box 1

Income Types for Households

Market income
Earned income
Capital income
+ Pensions
+ State transfer payments
- Taxes and social insurance contributions
= Disposable income

Notes: According to the commonly used international standards for measuring income, market incomes also include private transfer payments received, the rental value of owner-occupied housing, and private pensions. In the case of the earned income of civil servants (Beamte), fictitious employers' social insurance contributions are taken into account (see Box 2 for a detailed description).

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since 2005 was the marked improvement of the situation on the labor market.[14]

The slight increase in inequality of market incomes in 2011 can be ascribed to the inequality of capital incomes,

which is increasing again, as well as to rising inequality in earned incomes. Profit withdrawals and dividends have increased considerably, and stock markets have recovered markedly since 2009.[15] In 2011, the Gini coefficient of capital incomes almost reached its historical peak of 2005 again (see Figure 5).

The trend of increasing income inequality up to 2005 is also apparent in disposable household incomes (see Figure 6), as shown by the Gini coefficient, which rose from just under 0.25 in 1991 to 0.29 in 2005. The decrease from then until 2010 was statistically significant only at the 90-percent confidence level, and the decline ended again in 2011. The reasons for this are the same as those in the analysis of market incomes. The additional components of disposable income (public transfer payments, such as child benefits and means-tested unemployment benefit (unemployment benefit II, *Arbeitslosengeld II*), social security pensions as well as direct taxes and social security contributions) barely lessened the effects of the recent increase in inequality of market incomes on disposable incomes.

Even though the decline in income inequality was not very pronounced from 2006 onwards, and slowed in 2011, it does seem remarkable compared with other countries: analyses by the Organisation for Economic Co-operation and Development (OECD) reveal a trend of increasing inequality of disposable incomes—as measured by the Gini coefficient—for the majority of OECD

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14 For example, the working population increased by 2.6 million to 41.2 million from January 2005 to January 2012, Federal Statistical Office 2013: www.destatis.de/DE/ZahlenFakten/Indikatoren/Konjunkturindikatoren/Arbeitsmarkt/karb811.html.

15 For example, the value of the German share price index DAX was 3,666 points and more than doubled to 7,527 by May 2, 2011.

Figure 3

Disposable Income[1] in Selected Deciles

Changes in mean values compared to 2000 in percent
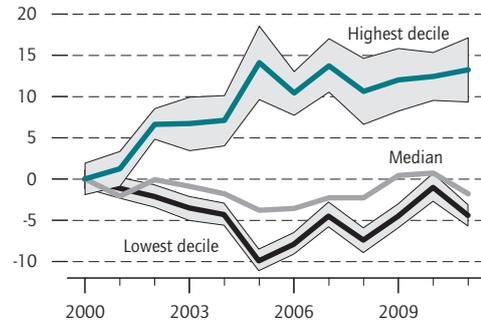
1 Incomes of individuals in households at 2005 prices. Surveyed the following year, needs-weighted using the modified OECD equivalence scale. Gray area = 95-percent confidence region

Sources: SOEP v29, calculations by DIW Berlin.

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Figure 4

Inequality of Market Incomes[1]

Coefficients[2]

1 Incomes of individuals in households at 2005 prices. Surveyed the following year, market income including a fictitious employer's contribution for civil servants, needs-weighted using the modified OECD equivalence scale. Gray area = 95-percent confidence region

2 The measures of inequality used here were the Gini coefficient, the mean log deviation (MLD), and the Theil index. Cases with zero income were excluded when calculating the MLD and the Theil coefficient.

Sources: SOEP v29, calculations by DIW Berlin.

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member states (see Figure 7). The development is most striking in the Scandinavian countries and France.

... But Increasing Income Polarization

The concept of income polarization was originally introduced to analyze the shrinking middle-income class (see Box 3). This concept allows us to determine whether the gap between different income classes has grown larger or smaller over time. Polarization increases in particular if the margins of the income distribution (the poor and the rich) grow larger while the middle section dominating the income distribution loses significance.

In the following, two alternative measures of polarization are used, one based on the work of Duclos, Esteban, and Ray, the other on Foster and Wolfson (see Figure 8).[16] Both indices show a progression similar to that of the indices for measuring the inequality of disposable household incomes. In the 1990s, income polarization stagnated, only to increase significantly from the turn of the millennium to 2005. Since then, both indices have remained high, even though polarization has recently been increasing again slightly.[17]
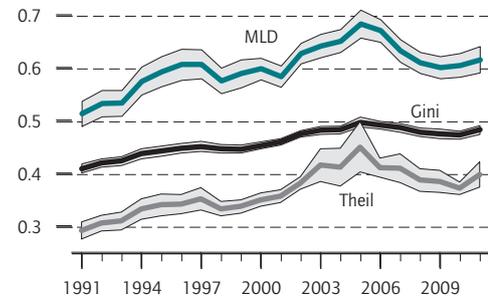
At-Risk-of-Poverty Rate Stagnating At High Level

The concept of relative income poverty defines a person as at risk of poverty[18] if he or she has less than 60 percent of the median of the total population's net household income available. According to that, the at-risk-of-poverty threshold in 2011, based on the SOEP sample, was approximately 980 euros per month for a single-person household.[19]

In recent years, the poverty risk has largely developed in parallel to the progression of income inequality and income polarization (see Figure 9). Up until the mid-1990s, the poverty risk in Germany was roughly 12 percent—with the rate higher overall in eastern Germany than in western Germany. In the years preceding the turn of the millennium, poverty risk declined slightly to 10.5 percent. Since then, it has risen—with minor fluctuations—to a peak of 15 percent in 2009. One of the causes is presumably short-time work, which was wide-

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16 J.-Y. Duclos, J. Esteban, and D. Ray, "Polarization: Concepts, Measurement, Estimation," Econometrica 72, no. 6 (2004): 1737–1772; and J. E. Foster and M. C. Wolfson, "Polarization and the decline of the middle class: Canada and the U.S.," Journal of Economic Inequality 8, no. 2 (2010): 247–273.

17 On the trend of increasing polarization in Germany see J. Goebel, M. Gornig, and H. Häußermann, "Polarisierung der Einkommen: Die Mittelschicht verliert," Wochenbericht des DIW Berlin, no. 24 (2010).

18 See also the term "Armut" in the German-language DIW Glossary, www.diw.de/de/diw_01.c.411565.de/presse_glossar/diw_glossar/armut.html.

19 Compared to social reporting by the Federal Statistical Office based on the microcensus (see www.amtliche-sozialberichterstattung.de), a higher at-risk-of-poverty threshold is given here, as the rental value of owner-occupied housing, among other things, is included in measuring income. On further methodological differences to official social reporting, see M. Grabka, J. Goebel, and J. Schupp, (2012), "Has Income Inequality Spiked in Germany?," DIW Economic Bulletin, No. 12.

Figure 5

Inequality of Capital Incomes[1]
Gini coefficient

1 Incomes of individuals in households at 2005 prices. Surveyed the following year, needs-weighted using the modified OECD equivalence scale. Gray area = 95-percent confidence region
Sources: SOEP v29, calculations by DIW Berlin.

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spread during the economic crisis at that time.[20] In the last two years of the study (2010 and 2011), the at-risk-of-poverty rate in Germany initially declined slightly, but has remained at a constantly high level since then—and is lower than the European Union average.[21]

Income Mobility Declining Since Reunification

It is not only the development of the at-risk-of-poverty rate which is relevant from a social-policy point of view. After all, the question whether people on low incomes have only short-term poverty-risk experiences or remain in the low-income range for a longer period of time is of no lesser importance. To answer such questions, mobility matrices are frequently employed to compare relative income positions at the beginning and end of a four-year period.[22,23] The relative positioning within the income hierarchy is subdivided here into seven groups.[24]

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20 For example, the number of workers on short time averaged 1.1 million in 2009, see Federal Employment Agency: Der Arbeits- und Ausbildungsmarkt in Deutschland. Mai 2012. Monatsbericht, 2012.

21 See Eurostat (2013): In 2011, 24% of the population was at risk of poverty or social exclusion. Newsrelease 171/2012.

22 Using a window of four survey waves corresponds to the procedure for determining the fourth Laeken indicator (persistent at-risk-of-poverty rate). See A.-C. Guio, The Laeken Indicators: Some Results and Methodological Issues in Acceding and Candidate Countries. Background paper prepared for the workshop "Aligning the EU Social Inclusion Process and the Millennium Development Goals," April 26-27, 2004, Vilnius, Lithuania.

23 These analyses refer to intragenerational mobility. Current findings on intergenerational mobility are to be found, for example, in D. D. Schnitzlein, "Low Level of Equal Opportunities in Germany: Family Background Shapes Individual Economic Success". DIW Economic Bulletin, no. 5(2013).

24 The first group represents people with relative income poverty (less than 60 percent of median income). The second and third groups comprise people

Figure 6

Inequality of Disposable Incomes[1]
Coefficients[2]
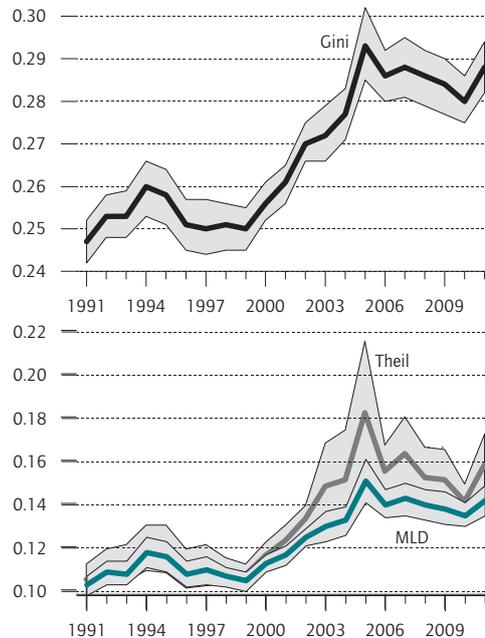
1 Incomes of individuals in households at 2005 prices. Surveyed the following year, needs-weighted using the modified OECD equivalence scale. Gray area = 95-percent confidence region
2 The measures of inequality used here were the Gini coefficient, the mean log deviation (MLD), and the Theil index. Cases with zero income were excluded when calculating the MLD and the Theil coefficient.
Sources: SOEP v29, calculations by DIW Berlin.

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It is evident that mobility at the margins of the income distribution was greater in the mid-1990s than in the 2000s. For example, 44 percent of those individuals on low incomes in 1994 (with less than 60 percent of median income) were still in the same position in 1997 (see table).[25] From 2008 to 2011, the corresponding share increased to 54 percent. Mobility also decreased at the upper end of the income hierarchy. Between 1994 and 1997, only 59 percent of people with an income of 200 percent or more of the median remained in their income class; since 2004, this figure has grown to 65 percent.

Overall, the probability of belonging to the same income group at the end of a four-year period as at the begin-

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below the median income (60 to less than 80 percent and 80 to less than 100 percent of the median, respectively). The upper half of the income hierarchy is divided into four groups (100 to less than 120 percent, 120 to less than 150 percent, 150 to less than 200 percent, and 200 percent or more of the median). Changes in relative income position within the time period observed are disregarded here, i.e., only the income positions of the first and last years are compared.

25 This corresponds to 4.8 percent of the total population.

Box 2

Definitions, Methods, and Assumptions for Measuring Income

The analyses presented in this report are based on data from the longitudinal household survey, Socio-Economic Panel (SOEP) study and primarily founded on annual incomes. In the survey year (t), all the income components affecting a surveyed household as a whole, and all the individual gross incomes of the current members of the surveyed household are added together (market income from the sum of capital income and earned income, including private transfer payments and private pensions), all of these referring to the previous calendar year (t-1). In addition, income from statutory pensions as well as social transfer payments (income support, housing assistance, child benefits, unemployment benefits, and others) are taken into account, and finally, annual net incomes are calculated employing a simulation of taxes and social security contributions—including one-off special payments such as a 13th or 14th month's salary for a given year, a Christmas bonus, and a vacation bonus. The calculation of the annual burden of income taxes and social security contributions is based on a micro-simulation model[1] which generates a tax assessment incorporating all types of income in accordance with the Income Tax Act as well as tax exemptions, income-related expenses, and extraordinary expenses. Since this model cannot simulate all the complexity of German tax law because of its numerous special provisions, income inequality measured in the SOEP is assumed to be an underestimate.

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

The income situations of households of different sizes and compositions are made comparable by converting a house-

hold's entire income into equivalent incomes (per capita incomes modified according to needs) in accordance with international standards. Household incomes are thereby converted employing a scale proposed by the Organisation for Economic Co-operation and Development (OECD) and generally accepted in Europe. The calculated equivalent income is allocated to each household member on the assumption that all household members benefit from the joint income equally. The head of household is given a needs weighting of 1; additional adults each have a weighting of 0.5, and children up to 14 years of age weightings of 0.3.[3] In other words, cost degression is assumed in larger households. That means, for example, that household income for a four-person household (parents, a 16-year-old, and a 13-year-old) is not divided by four as is the case in a per-capita calculation (=1+1+1+1), but by 2.3 (=1+0.5+0.5+0.3).

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

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

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

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

3 See B. Buhmann, L. Rainwater, G. Schmaus, and T. Smeeding, "Equivalence Scales, Well-being, Inepuality and Poverty," Review of Income and Wealth 34 (1998): 115–142.

4 J. R. Frick and M. M., Grabka, "Item non-response on income questions in Panel Surveys: Incidence, Imputation and the Impact on Inequality and Mobility," Allgemeines Statistisches Archiv 89, no. 1 (2005): 49–61.

5 J. R. Frick, M. M. Grabka, and O. Groh-Samberg, "Dealing with incomplete household panel data in inequality research," Sociological Methods and Research 41, no. 1 (2012): 89–123.

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

After taking weighting factors into account, the SOEP micro-data on which these analyses are based (version v29 on the basis of the 29th survey wave in 2012) show a representative picture of the population in households and thus permit inferences about the entire population. The weighting factors allow for differences in the sampling designs of the various SOEP samples as well as in the respondents' participation behavior. Populations living in institutions (for example in retirement homes) are generally not taken into account.

Besides updates in the context of adjusted imputation of missing values for income in the previous year, a targeted revision of weighting factors was carried out. In order to increase compatibility with official statistics, these factors are adjusted to currently available framework data from the official microcensus. Subsample J (first surveyed in 2011) of data version SOEP v29 was adjusted to the microcensus[7] in terms of the number of households receiving means-tested unemployment benefit. In addition, for all new samples since 1998, there was a change in the adjustments made to the data for households with non-German household members, which no longer involved only the head of household, but all household members. For the income years 1999 to 2010, this revision had only minor effects on measured income inequality and the at-risk-of-poverty rate (see figure). The differences in the results are not statistically significant; in other words, they are within the margin of statistical random error which would need to be taken into account in any case when interpreting the findings.

6   J. R. Frick, J. Goebel, E. Schechtman, G. G., Wagner, and S. Yitzhaki, "Using Analysis of Gini (ANOGI) for Detecting Whether Two Subsamples Represent the Same Universe. The German Socio-Economic Panel (SOEP) Study Experience," Sociological Methods and Research 34, no. 4 (2006): 427-468, doi: 10.1177/0049124105283109.

7   The microcensus is also a sample survey which is extrapolated using benchmark data from the official statistics. Since the recently published census results show that the previous forward projection of population figures provides insufficient results due to the long gap in between censuses, the extrapolation scheme will have to be revised. Above all, a lower figure will have to be used for total population. Extrapolation of SOEP data will then have to be adjusted accordingly as well.

Figure

Effects of Data Revision on At-Risk-of-Poverty Rate[1] and Income Inequality

At-risk-of-poverty rate
In percent

Income inequality
Gini coefficient
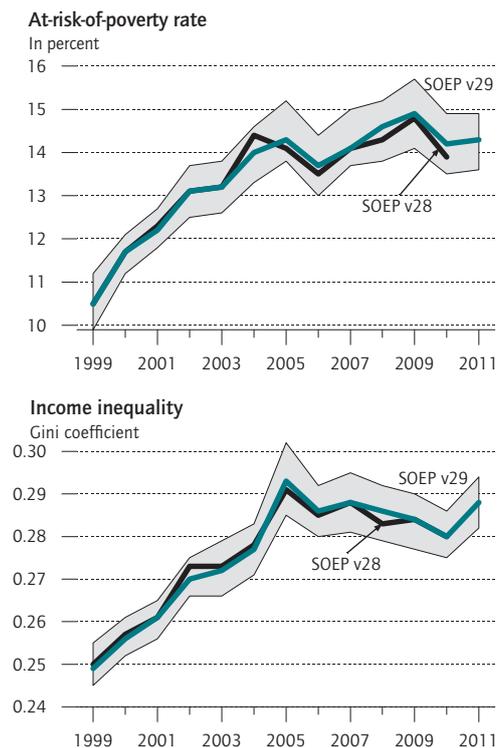
1 Individuals with less than 60 percent of median income are at risk of poverty. Incomes of individuals in households at 2005 prices. Surveyed the following year, needs-weighted using the modified OECD equivalence scale. Gray area = 95-percent confidence region
Sources: SOEP v28 and v29, calculations by DIW Berlin.

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Box 3

Income Polarization

The concept of polarization is not always clearly differentiated from that of inequality in empirical studies. Classical indices of inequality measure the distance between incomes within a society. Polarization, in contrast, focuses not only on the distance between incomes, but also on possible groupings of these incomes along the income dimension, for example on the numbers of people with low or high incomes relative to those in the middle income segment.

In other words, when measuring income polarization, two dimensions must be differentiated as a matter of principle, namely homogeneity within the groups and heterogeneity between the groups. Since publication of the paper by Esteban and Ray in 1994,[1] efforts have been made to combine the two dimensions of polarization in a single index. Fundamental to these indices is the reference system of identification and alienation. The idea behind it is relatively simple: Polarization occurs when the different (income) groups become alienated from one another and at the same time, the people within one (income) group identify with it.

Polarization and growing inequality do not necessarily occur at the same time. It is even possible for inequality to decrease despite increasing polarization. For example, the differences within the groups at the margins of the distribution may decline while the income gap between the groups increases.

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1 J.-M. Esteban and D. Ray, "On the measurement of polarization," Economica, 62, no. 4 (1994): 819–851.

Figure 7

Inequality of Disposable Incomes in Selected OECD Countries
Gini coefficients

Source: OECD.

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ning remained virtually constant for individuals at risk of poverty in the 1990s (see Figure 10). At the turn of the millennium, however, it rose sharply and has been at roughly 55 to 60 percent since then. In the case of people in the highest income group, development has been steadier, with the rate of people remaining in their group increasing most recently to 65 percent.
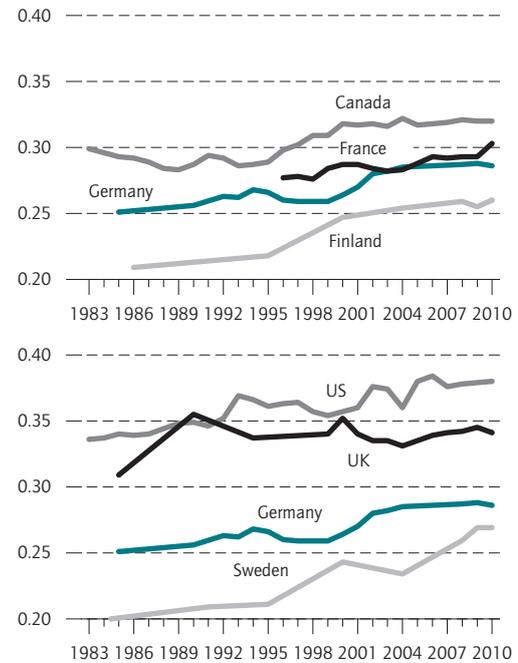
Mobility between the middle-income groups is considerably more pronounced overall, as movements are possible in both directions. The Shorrocks-Prais[26] index and

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26 This index focuses on the concentration relative to the principle diagonal and indicates the share of people changing their income group over time. See A. Shorrocks, "Income Inequality and Income Mobility," Journal of Economic Theory 19 (1978): 376-393. One disadvantage of this measure of mobility is that it measures only mobility between income groups, not mobility within the various income groups. For a general introduction to the measurement of

the Hart index[27] were used to summarize the income mobility of all groups. Both indices point to a significant decrease in income mobility in the 1990s since German reunification (see Figure 11). Since then, income mobility has remained low. It has declined considerably in eastern Germany in particular.[28] There are also marked differences in income mobility between men and women.[29] The finding of declining income mobility is confirmed both when studying a larger number of income classes and when taking other measures of mobility into account.[30] There has been very little research into its caus-

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(income) mobility, see G. S. Fields, "Does income mobility equalize longer-term incomes? New measures of an old concept," Journal of Economic Inequality 8 (2010): 409–427.

27 This index considers the correlation of the difference in logarithmized incomes. See P. E. Hart, "The Statics and Dynamics of income Distributions: A Survey," in: N. A. Klevmarken and J. A. Lybeck, eds., The Statics and Dynamics of Income. (Tieto, Clevedon): 1981 108-125.
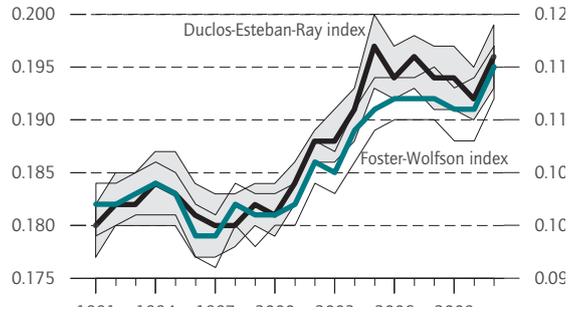
28 See R. T. Riphahn and D. D. Schnitzlein, "Wage Mobility in East and West Germany," IZA DP No. 6246, 2011.

29 See B. Aretz, "Gender differences in German wage mobility," ZEW Discussion paper, 2013-003, Mannheim, 2013.

30 This is the case, for example, when using the Shorrocks measure, see A. Shorrocks (1978), "Income Inequality and Income Mobility," as well as the average jump measure, see A. B. Atkinson, F. Bourguignon, C. Morrisson, eds.,

Indices of Polarization of Disposable Incomes[1]
Coefficients

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Figure 9

At-Risk-of-Poverty Rate[1]
In percent
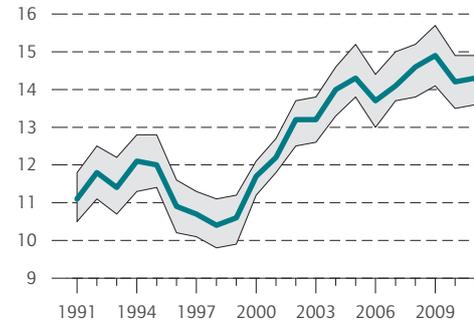
© DIW Berlin 2014

es and mechanisms to date, merely indications that increasing (wage) inequality is associated with the trend toward lower (wage) mobility.[31]

Empirical studies of earnings mobility. Chur (CH): Harwood Academic Publishers GmbH, 1992.

31 See M. Buchinsky, J. Hunt, "Wage Mobility in the United States." Review of Economics and Statistics 81 (1999): 351-368.

Conclusion

Inequality of disposable household incomes remains at a high level overall. Although the latest results from DIW Berlin based on data from the Socio-Economic Panel (SOEP) study show declining income inequality from 2006 to 2010, triggered above all by declining unemployment, the positive trend in the development of income inequality did not continue in 2011.

Figure 10

Individuals Remaining In Their Income Groups[1]
Shares in percent
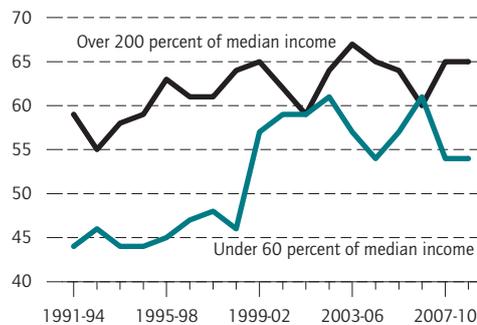
© DIW Berlin 2014

Figure 11

Income Mobility[1]
Indices

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Table 1

Income Mobility[1]
In percent of the median

Relative income position in the initial year	Relative income position in the final year							Population in percent
	0– <60	60– <80	80– <100	100– <120	120– <150	150– <200	≥ 200	
1994–1997								
0– <60	44	32	12	4	5	2	0	12.1
60– <80	15	40	30	11	2	1	0	17.8
80– <100	5	18	42	24	8	3	1	20.1
100– <120	3	6	26	35	21	7	2	16.6
120– <150	2	3	12	22	39	19	4	15.8
150– <200	2	2	7	8	27	42	12	11.0
≥ 200	1	2	2	4	7	26	59	6.6
1998–2001								
0– <60	46	31	12	6	3	2	0	10.4
60– <80	16	40	28	9	4	2	1	18.4
80– <100	5	19	39	22	11	4	1	21.2
100– <120	3	5	20	34	26	9	2	16.0
120– <150	3	5	9	17	38	23	5	16.1
150– <200	2	2	3	8	24	43	19	11.7
≥ 200	1	1	1	3	7	23	64	6.2
2004–2007								
0– <60	54	26	12	4	3	1	0	14.0
60– <80	21	46	23	5	4	1	0	16.6
80– <100	9	25	33	21	10	2	0	19.5
100– <120	3	8	27	36	20	6	1	16.3
120– <150	2	4	10	23	40	17	3	15.5
150– <200	2	1	5	8	24	41	19	11.0
≥ 200	1	1	2	2	9	20	65	7.3
2008–2011								
0– <60	54	29	8	5	1	2	0	14.5
60– <80	16	41	31	8	4	1	0	16.8
80– <100	6	19	42	21	9	2	1	18.6
100– <120	5	8	24	33	23	7	1	15.7
120– <150	3	2	7	21	42	22	3	15.2
150– <200	1	1	5	8	24	40	21	11.3
≥ 200	1	1	3	2	7	20	65	7.8

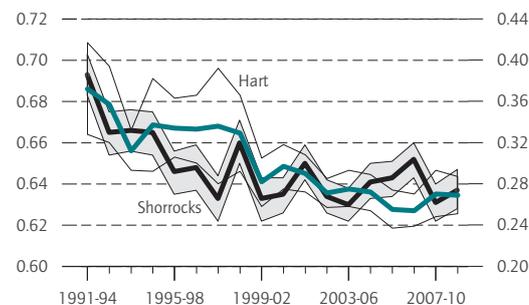1 Relative income positions based on the median of needs-weighted net household incomes of the total population. Incomes of individuals in households at 2005 prices. Surveyed the following year, needs-weighted using the modified OECD equivalence scale.
Sources: SOEP v29, calculations by DIW Berlin.

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Following a long phase of upward movement, the risk of poverty has not increased further since 2009. From a social-policy perspective, the development of income mobility is important, above and beyond simply observing the at-risk-of-poverty rate, which was approximately 14 percent in 2011, slightly lower than its peak of 15 percent in 2009. Income mobility has declined since German reunification, meaning that individual movements to higher or lower income groups are taking place less and less frequently. In particular at the margins of the income hierarchy, in the very low and very high income groups, there is a pronounced tendency to remain in the same group. The odds of exiting from poverty risk and thus of an income of less than 60 percent of median income within a four-year period have dropped to less than 50 percent in recent years. At the same time, the share of people below the at-risk-of-poverty threshold has increased; thus, more people in absolute numbers remain at risk of poverty.

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Leisure Behavior of Young People: Education-Oriented Activities Becoming Increasingly Prevalent

Adrian Hille, Annegret Arnold, and Jürgen Schupp

Young people's leisure activities are significantly different today than they were ten years ago. The obvious use of communication and entertainment electronics, such as cell phones, computers, and games consoles is only one aspect—there are also less visible changes: informal activities such as meeting with friends are being increasingly sidelined by education-oriented activities like extra-curricular music lessons or sports. These are the findings of a study conducted by DIW Berlin based on longitudinal data from the statistically representative Socio-Economic Panel (SOEP) study. It shows that education-oriented leisure activities feature in the lives of over 60 percent of all 16-year-olds. Ten years ago, this only applied to 48 percent of all young people of this age. The demand for education-oriented activities has increased across all social classes. Nevertheless, clearly identifiable social differences still remain. Young people from socially underprivileged households are therefore at a double disadvantage, since less favorable conditions at home are compounded in school and during leisure time. Policy-makers have already recognized the need to act here and are attempting to reduce persisting inequalities in leisure activities, for example, by expanding all-day schooling and promoting education-oriented leisure activities specifically for children from low-income families.

Not only does the constant use of cell phones with Internet access appear to have dramatically changed the daily lives of children and adolescents over the past few years, they also face growing demands both in school and in their leisure time. This has been subject of public debate for some time now.[1] In a country like Germany, with its ageing society and finite natural resources, there is growing hope that, above all, investment in a good education, and thus in the human capital of children and adolescents, will guarantee the future competitiveness of the German economy.[2] At the same time, an increasing "instrumentalization and economization of young people's reality"[3] has been observed and warnings against too much parental care voiced. The latest controversial concept of "helicopter parents" implies the existence of a new generation of parents who constantly hover over their children in a similar manner to a surveillance drone.[4] The alleged negative impact of this monitoring and cosseting is the subject of extensive and controversial public debate.[5] This discussion leads to the conclusion that, from the perspective of children and adolescents, there are "excessive demands during childhood"[6] since there has been increased pressure on children and schools alike.

1 "Druck auf Kinder und Schulen wird größer," Frankfurter Allgemeine Zeitung, June 30, 2013. www.faz.net/aktuell/rhein-main/interview-mit-waldorfpaedagoge-druck-auf-kinder-und-schulen-wird-groesser-12265125.html.

2 C. K. Spieß, "Investments in Education: The Early Years Offer Great Potential," DIW Economic Bulletin, no. 10 (2013): 3–14.

3 Eigenständige Jugendpolitik – Selbstbestimmt durch Freiheit, Gerechtigkeit, Demokratie und Emanzipation. Proposal by the parliamentary group Alliance 90/The Greens (Bündnis 90/Die Grünen). Bundestag printed paper 17/11376, November 7, 2012. http://dip21.bundestag.de/dip21/btd/17/113/1711376.pdf.

4 J. Kraus, Helikopter-Eltern: Schluss mit Förderwahn und Verwöhnung (Rowohlt, 2013).

5 For example, "Kampfauftrag Kind," the cover story in SPIEGEL 33, 2013; and I. Kloepfer, „Lob der Helikopter-Eltern," Frankfurter Allgemeine Sonntagszeitung, August 18,2013, 24. www.faz.net/aktuell/wirtschaft/schluss-mit-dem-eltern-bashing-lob-der-helikopter-eltern-12536105-b1.html.

6 N. Minkmar, "Die Überforderung der Kindheit," Frankfurter Allgemeine Zeitung, July 10, 2013. www.faz.net/aktuell/feuilleton/lebensprojekt-kind-die-ueberforderung-der-kindheit-12277772.html.

The economics of education is increasingly focusing on the question of how important informal learning outside of school is for children's subsequent success in school and in their careers.[7] Numerous studies also attempt to substantiate the impact of music or sport on child development.[8]

Nevertheless, the interplay between extra-curricular activities and success in school has still not been adequately explored to date.[9] Even the possibility of children experiencing adverse psychological effects as a result of intensive early learning cannot be ruled out.[10] These include, for instance, less stamina in difficult situations or problems dealing with bullying by fellow students.[11]

Are popular parenting trends—as also suggested by the media—reflected in the development of young people's leisure behavior? There are a number of youth studies on this subject.[12] However, the wide-ranging data from the Socio-Economic Panel study, comprising of an annual survey of around 30,000 people in 15,000 households conducted by the fieldwork organization TNS Infratest Sozialforschung enables us to describe changes in leisure behavior in more detail than using surveys conducted specifically on this subject (see Box 1).

The Younger the Cohort, the More Education-Oriented their Leisure Activities

In the past ten years, there has been a significant increase in demand for education-oriented leisure activities such as extra-curricular music lessons or sports (see Figure 1). While only around ten percent of 16-

and 17-year-olds in the oldest cohorts analyzed (born between 1984 and 1987, surveyed from 2001 to 2004) were involved in musical activities, the corresponding figure in the youngest cohorts (born between 1992 and 1995, surveyed from 2009 to 2012) was just under 18 percent. A particularly sharp increase in voluntary work was recorded (from 11 to 22 percent). But there was also a considerable rise in the proportion of adolescents involved in sports, dance, or drama during the observation period.

The increased demand for music, sports, dance, and voluntary work is not consistent with the widely held view that young people have considerably less leisure time as a result of the introduction of all-day schooling and the reduction in the number of years spent at Gymnasium (academic-track) schools in almost all German Länder from nine to eight years (G8).[13] The project "Media, Culture, and Sport for Young People" (MediKuS)[14] run by the German Youth Institute (Deutsches Jugendinstitut; DJI) also indicates that attending all-day school limits participation in sporting activities. This apparent contradiction of the SOEP trends can be at least partially explained as a process of shifting away from informal towards education-oriented activities. Indeed, the probability of participating in at least one education-oriented leisure activity a week is higher, the younger the cohort studied, while the probability of participating in at least two informal activities a day, such as meeting with friends, is lower (see Figure 2). In the youngest cohorts, the ratio has even reversed for the first time in favor of education-oriented activities. These developments can be observed among both boys and girls.

The downward trend of informal leisure activities among young people has primarily resulted from a decline in social activities. For instance, there is a decrease in the proportion who go out with their best friend on a daily basis, from 40 percent in the oldest cohort to 25 percent in the youngest cohort.

The Leisure Time Monitor 2013 (Freizeit-Monitor 2013) published by the Foundation for Future Studies (Stiftung für Zukunftsfragen) also records particularly substantial drops in time available for informal leisure activities such as meeting friends for the youngest age group included in that report (14- to 17-year-olds).[15] On the basis

7 The skill production model was formalized by F. Cunha and J. Heckman, "The Technology of Skill Formation," American Economic Review 97, no. 2 (2007): 31–47; and F. Cunha, J. Heckman, and H. Schennach, "Estimating the technology of cognitive and non-cognitive skill formation," Econometrica 78, no. 3 (2010): 883–931.

8 In the field of music, the Bastian study in particular has been the subject of extensive public debate; see also H.G. Bastian, Musik(erziehung) und ihre Wirkung: eine Langzeitstudie an Berliner Grundschülern (2000). An overview of the research to date is provided by A. Hille and J. Schupp, "How learning a musical instrument affects the development of skills," SOEPpaper 591 (2013). There are now a number of studies on the subject of sport which have found evidence of its positive effect. C. Felfe, M. Lechner, and A. Steinmayr, "Sports and child development," IZA Discussion Paper 6105 (2011).

9 H. Solga and R. Dombrowski, "Soziale Ungleichheiten in schulischer und außerschulischer Bildung. Stand der Forschung und Forschungsbedarf," Arbeitspapier 171 (Hans-Böckler-Stiftung, 2009): 40.

10 J. Otto, "Meines kann schon mehr. Englisch für Babies. Ökonomie für Vierjährige. Wenn Eltern dem Förderwahn verfallen," Die Zeit, no. 37, September 6, 2007.

11 Kraus, Helikopter-Eltern (2013).

12 For example, Shell Deutschland, ed., Jugend 2010 – Eine pragmatische Generation behauptet sich (Frankfurt a.M.: 2010); and German Youth Institute, Medien, Kultur und Sport bei jungen Menschen (2013).

13 See, for example, T. Schultz, "Unterricht, der krank macht," Süddeutsche Zeitung, May 10, 2010. www.sueddeutsche.de/karriere/stress-durch-ganztags-schulen-unterricht-der-krank-macht-1.942372.

14 German Youth Institute, Medien, Kultur und Sport bei jungen Menschen (2013). www.dji.de/cgi-bin/projekte/output.php?projekt=1080.

15 U. Reinhardt, Freizeit-Monitor 2013 (Hamburg: Stiftung für Zukunftsfragen, 2013). www.stiftungfuerzukunftsfragen.de/uploads/media/Forschung-Aktuell-249-Freizeit-Monitor-2013.pdf.

Data

The Socio-Economic Panel (SOEP) study[1] serves as the data basis for the present analysis. This longitudinal study, comprising an annual representative sample of private households in Germany, has been conducted by the fieldwork organization TNS Infratest Sozialforschung on behalf of DIW Berlin since 1984. Currently, approximately 30,000 people in around 15,000 households participate in the survey.

Since the year 2000, young people who have reached the age of 16 have been surveyed using a separate questionnaire in which they provide retrospective information on events from their childhood, youth, school years, their relationship with their family, future education and career goals, and also current leisure activities.[2] Over 4,000 young people took part in the survey between the years 2000 and 2012. This makes the SOEP the most wide-ranging study of the life circumstances of 16- and 17-year-olds in Germany. The present study is based on survey data for the years from 2001 to 2012.

In order to provide a statistically sound picture of the trends in leisure activities over the past ten years, three periods have been created, each representing four birth years, and the findings reported accordingly. The oldest cohort consists of respondents born between 1984 and 1987; in each case, 16- and 17-year-olds are questioned in the survey years from 2001 to 2004. For the second cohort, the survey years from 2005 to 2008 are combined (birth years 1988 to 1991). The youngest cohort reflects the leisure behavior of 16- and 17-year-olds during the survey years from 2009 to 2012 (birth years 1992 to 1995).

As well as allowing us to analyze changes over this period, as a household survey, the SOEP also provides us with the opportunity to merge the youth data with information obtained directly from the parents in various survey years. Thus, in this study, the multivariate models for every young person use household information from childhood: household income, number of books in the household,[3] and also level of education, and maternal migration background. If the latter information is unavailable for the mother, it is substituted with the equivalent information for the father. If available, all the aforementioned information on the household and parents is collected when the young person is five, or, at the latest, when the family enters the SOEP. Questions on school type, parental contact with the school, and educational aspirations are asked directly to the young people in the relevant survey year.

The empirical analyses are based on data from a total of 3,551 young people born between 1984 and 1995. For 3,134 of these respondents, all the above-mentioned information on leisure and demographic background is available. Survey weights enable us to weight the data so that it is representative and can be generalized for 16- and 17-year-olds in Germany from the three birth cohorts.

1   On the SOEP, see G.G. Wagner, J.R. Frick, and J. Schupp, "The German Socio-Economic Panel Study (SOEP) - Scope, Evolution and Enhancements, " Schmollers Jahrbuch (Journal of Applied Social Science Studies) 127, no. 1 (2007): 139-169.

2   J. Schupp, C. K. Spieß, and G. G. Wagner, "Die verhaltenswissenschaftliche Weiterentwicklung des Erhebungsprogramms des SOEP," Vierteljahrshefte zur Wirtschaftsforschung 77, no. 3 (2008): 63–76.

3   The degree of cultural capital that is widely used as a measure in empirical social and education research.

of SOEP analyses, it is not possible to determine whether the time young people have left for these activities has decreased to an extent that affects development because no detailed time budget diaries have been collected, only information on the frequency of young people's typical activities (see Box 2 on leisure behavior today).

Participation in Education-Oriented Activities Heavily Dependent on Parental Home

Publications such as the study on children by the World Vision Institute or the Shell Youth Study describe the strong social differences in the participation of children from different social backgrounds in education-oriented leisure activities.[16] The SOEP analyses also show

16   See the summary of these studies discussed by D. Engels and C. Thielebein, Zusammenhang von sozialer Schicht und Teilnahme an Kultur-,

that young people from higher social classes participate in these type of activities considerably more frequently. In particular, the parents' education is a major factor determining whether their child takes music lessons or joins a sports club. The findings of the present study also show that these differences have not decreased in the last ten years. This seriously undermines the objective of equal opportunities for each child because inequalities in school, at home, and in recreational activities are all mutually reinforcing.

Maternal Education has Major Impact

The data confirms that children from higher social backgrounds more frequently pursue education-oriented leisure activities: 73 percent of children born between 1992 and 1995 (survey years 2009 to 2012) whose mothers have an Abitur (school-leaving certificate that serves as a qualification for German university entrance) or a university degree were involved in activities related to music, dance, drama, or sports, or carry out voluntary work (see Table 1, column 3). For young people whose mothers do not have an Abitur, the corresponding figure was only 54 percent. Similar differences are revealed if the social class is defined by household income, a possible migration background, or cultural capital.[17] When different school types are considered, it becomes evident that young students at Gymnasium schools participate in education-oriented activities considerably more frequently than those attending Haupt- and Realschulen (low- and intermediate-track schools). The findings are similar when a distinction is drawn between young people who aim to go to university and those who plan to train as apprentices.

Along with the parents' social background, the school type also determines opportunities for education-oriented leisure activities. There are often better leisure activities on offer in Gymnasium schools than in Real- and Hauptschulen.[18] Irrespective of the social class, it is not surprising, therefore, if students at Gymnasium schools are more frequently involved in musical or sporting activities.

Figure 1

Development of Participation in Music, Voluntary Work, Sports, and Dance/Drama[1]
From 2001 to 2012, data in percent

| | 2001 to 2004 | 2005 to 2008 | 2009 to 2012 |

1 Precise definitions: music once a week + extra-curricular music lessons; voluntary work once a week; sports once a week + participation in competitions; dance/drama once a week. Separate data for three cohorts for the survey years 2001 to 2004 (born between 1984 and 1987), 2005 to 2008 (born between 1988 and 1991), and 2009 to 2012 (born between 1992 and 1995). The differences are statistically significant.
Sources: SOEP v29 (preliminary), 17-year-olds, weighted, n = 3 134; calculations by DIW Berlin.

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There has been a sharp increase in the prevalence of music, voluntary work, sports, and dance and drama in young people's leisure time.

It can be assumed that the choice of and participation in leisure activities is not only a result of young people's motivation. The social science literature also refers to other influences, stating that parents from higher social backgrounds increasingly often take it for granted that their children will participate in education-oriented leisure activities. They see enrolling them for music lessons or at a sports club as part of their duties as parents, leading the American sociologist Annette Lareau to coin the term "concerted cultivation".[19] Against this background, increased efforts by parents to improve the relative starting position of their own children compared to others by encouraging them to engage in extra-curricular educational activities are also plausible. A successful child is widely viewed as a status symbol, which is in turn indicative of belonging to the upper class.[20] According to Lareau, although the parents of working

Bildungs- und Freizeitangeboten für Kinder und Jugendliche. Documentation commissioned by the Federal Ministry of Labour and Social Affairs, Institute for Social Research and Social Policy, Cologne.
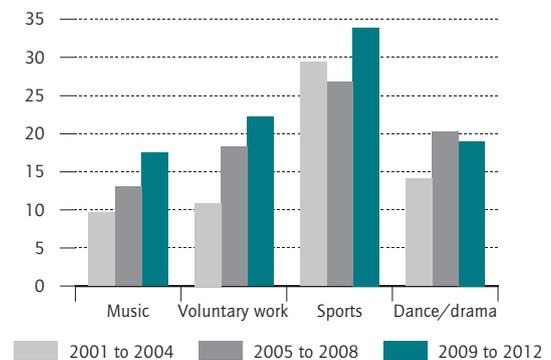
17 Here, cultural capital is measured by the number of books in the parental household, a measurement used widely in inequality research.

18 Solga and Dombrowski, „Soziale Ungleichheiten" (2009): 36.

19 A. Lareau, Unequal Childhoods: Class, Race and Family Life, 2nd ed. (University of California Press, 2011).

20 A debate which is regularly quoted in the press: L. Herzog, "Die neue Klassengesellschaft: Gleiche Chancen?," FAZ, August 4, 2013; and A. Steinle, "Das Baby-Projekt," Manager Magazin, August 1, 2007. From a sociological point of view, the objective of these parents is to transfer their own status to the next generation; on this, see P. Bourdieu and J.-C. Passeron, Reproduction in education, society and culture, vol 4. (SAGE Publications Limited, 1990).

class children are also prepared to invest in their off-springs' future, unlike parents of other social classes they trust that their children know themselves what activities best suit their needs.[21]

No Reduction in Social Inequality in Leisure Activities

The SOEP data go beyond previous findings and allow us to examine change in social inequality with regard to education-oriented leisure activities during the last ten years.

The proportion of young people who participate in at least one education-oriented leisure activity has continually increased in all subgroups (level of education and maternal migration background, household income, cultural capital, school type, parental contact with the school, and young people's educational aspirations), for young people both from privileged and disadvantaged families (see Table 1). However, the social inequality has not decreased: in 2012, the socio-economic differences in leisure behavior were the same as ten years previously. This development is particularly evident for maternal education. Here, the gap between privileged and disadvantaged families was even wider.

Further Analyses Confirm Significance of Parental Education

An examination of the different patterns of participation behavior in education-oriented leisure activities using a multivariate regression model[22] also confirms that of all socio-demographic factors affecting young people's leisure behavior, the parents' level of education stands out as an influential factor. Even if the effects of household income, migration background, household composition, and region of residence are taken into account and kept constant, parental education largely determines whether or not young people pursue education-oriented leisure activities. The probability of participating in at least one of these activities is over 20 percentage points lower for young people whose mothers have neither an Abitur nor a university degree than for other young people (see Table 2). Over time, the significance of parental education has increased even further. The maternal mi-
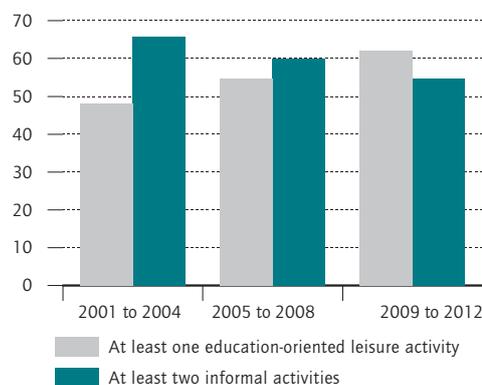
Figure 2

Development of Participation in Education-Oriented and Informal Leisure Activities
From 2001 to 2012, data in percent

Legend:
- At least one education-oriented leisure activity
- At least two informal activities

Education-oriented activities include the above-mentioned items music, voluntary work, sports, dance and drama. Informally active describes those who practice at least two of the following activities on a daily basis: watching television, playing computer games, "hanging out", spending time with their best friend or group of friends. Separate data for three cohorts for the survey years 2001 to 2004 (born between 1984 and 1987), 2005 to 2008 (born between 1988 and 1991), and 2009 to 2012 (born between 1992 and 1995). The differences are statistically significant.
Sources: SOEP v29 (preliminary), 17-year-olds, weighted, n = 3,134; calculations by DIW Berlin.

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Education-oriented leisure activities are increasingly replacing informal activities.

gration background and level of household income play a considerably less important role with regard to pursuing an education-oriented leisure activity.

The results of the multivariate regression model also confirm that the above-mentioned fundamental increase in participation in education-oriented leisure activities in all social classes over time is indeed statistically significant. Even after education, household income, migration background, and household composition are all taken into account, the proportion of those who are actively involved in music, sports, drama or voluntary work rose by 17 percentage points. Therefore, no change in the average household characteristics over time has been observed, but an actual increase in participation in these activities.

Interplay between School, Family, and Leisure Time

The social differences in participation in education-oriented leisure activities show no evidence of decreasing across different age groups and exacerbate the existing

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21 Lareau, Unequal Childhoods (2011).

22 The aim of the model is to calculate what characteristics determine participation in at least one education-oriented leisure activity. Marginal effects of a probit model are represented for each variable. These indicate by how many percentage points the probability of participation in music, sport, drama, dance, or voluntary work varies if the corresponding sociodemographic characteristic applies. Each coefficient indicates this change, assuming that all other characteristics remain constant.

Box 2

Leisure Behavior of Young People Today

What do young people do in their leisure time nowadays? An evaluation of data from the Socio-Economic Panel (SOEP) study provides detailed responses to this question: 87 percent of young people born between 1992 and 1995, surveyed in the years from 2009 to 2012, said that they listened to music every day, making this the most common daily leisure activity (see figure). Currently, 75 percent of young people watch television on a daily basis and 65 percent surf or chat on the Internet every day.[1] The most popular weekly leisure activities include sports, doing nothing or "hanging out", and going out with a best friend or group of friends. Approximately half of all young people surveyed said that they never engaged in any activities in the fields of dance and drama, music or voluntary work.

The Shell Youth Study[2] (2010) produced similar findings. In this study, young people were given a list of 18 different activities and asked to select the five which they most often engage in during the course of a week. The most frequently cited activities included surfing the Internet, listening to music, watching television, and meeting with friends. However, due to its survey methodology, the Shell Study was unable to draw any conclusions about the extent of time use for each activity.

The present study by DIW Berlin uses a factor analysis to determine regular correlations in the response behavior to questions about leisure activities and breaks the information down into different types. A comparison between the three birth cohorts can be used to identify trends in leisure time use. The correlations between the responses to the various questions are analyzed in dimensions that are independent from one another. Each

dimension explains a proportion of the data variance. By definition, the first dimension explains the largest proportion of data variance and this proportion declines with each successive dimension used as a basis for the analysis. Finally, the study analyzes the significance of the role played by each leisure activity (each variable) for the corresponding dimension (correlates with the corresponding dimension). If a series of variables strongly correlate with one dimension, this typically means that the response behavior strongly correlates between these variables.

Figure 3

Overview of Leisure Behavior
Birth cohorts 1992 to 1995, data in percent
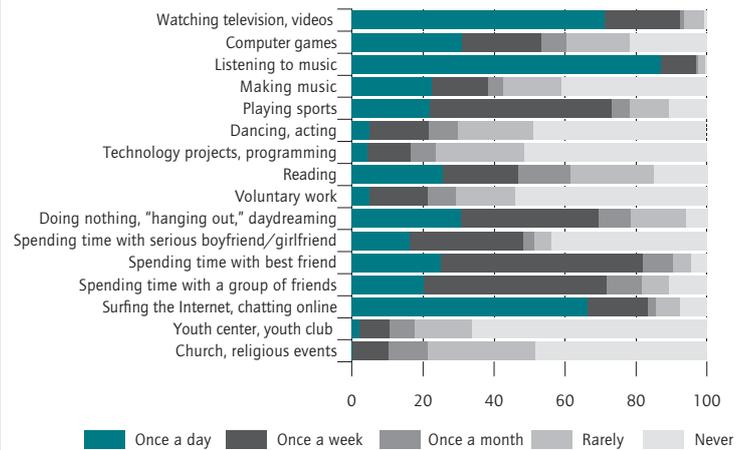
Survey years 2009 to 2012.

Sources: SOEP v29 (preliminary), 17-year-olds, weighted, n = 858; calculations by DIW Berlin.

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Television, listening to music, and surfing the Internet are particularly popular leisure activities among young people.

The factor analysis of the data on the leisure activities of young people described above takes the responses from the years between 2009 and 2012 into account (see table). The item "hanging out with a girl/boyfriend" is excluded as this question does not apply to a large number of study partici-

pants who do not currently have a girl/boyfriend. Further, questions which were only included in the survey from 2006 are also excluded from this analysis (Internet, church, and youth center).

Four factors describe the typical pattern of leisure behavior. The coefficients in the table show the correlation between the leisure activity and the relevant factor. Only values of over 0.3 are shown. The first factor describes young people interested in social/cultural activities, i.e., those who play music and dance, act, or regularly do voluntary work. The correlation in response behavior with regard to the informal leisure activities is consolidated in the second factor. This type is categorized as relaxed or sociable as they like to listen to music, read, and "hang out", but also like to meet with friends and play sports. A further leisure type could be categorized as "technology enthusiast". The "technology enthusiast" is characterized by the fact that they primarily enjoy playing computer games and programing. Finally, there is the individual leisure type who likes playing on the computer, watching television, and "hanging out".

The lower half of the table first illustrates the stability of these factors over time. For each of the three cohorts, the table shows, on average, how closely the response behavior of the young person corresponds with the relevant leisure type. It is noticeable that, over the past ten years, the prevalence of young people interested in social/cultural activities and also the "technology enthusiast" has strongly increased. The significance of "relaxed-sociable" leisure behavior has decreased slightly.[3]

The distinction made in the report between the education-oriented and informal leisure activities of young people is defined as follows: young people who tend towards education-oriented leisure activities are those who are engaged in activities in the fields of music, sports, dance, and drama or who do voluntary work at least once a week. In the case of music and sport, an additional prerequisite is that the young person attends an extra-curricular music lesson or takes part in sports competitions.[4] Young people are deemed to be involved in informal leisure activities if they participate in at least two of

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3 This is in line with the finding that changes are more likely to occur across birth cohorts than over a life cycle. S. Stadtmüller, A. Klocke, and G. Lipsmeier, "Lebensstile im Lebensverlauf – Eine Längsschnittanalyse des Freizeitverhaltens verschiedener Geburtskohorten im SOEP," Zeitschrift für Soziologie 42, no. 4 (2013): 262–290.

4 This type of quality indicator cannot be created for dance and drama as this information is missing in the SOEP.

Table 1

Factor Analysis: Leisure Behavior Response Pattern
Birth cohorts 1992 to 1995

	Cultural/ social	Sociable	Technology enthusiast	Individual
Playing music	0.55			
Dance, drama	0.55			
Voluntary work	0.51			
Listening to music		0.36		
Playing sports		0.37		−0.46
With best friend		0.43		
With group of friends		0.41	−0.35	
Computer games			0.45	0.49
Working with technology			0.64	
Watching television				0.46
"Hanging out"				0.3
Reading				−0.45
Explained variance in percent	15.5	13.5	10.6	10.5
Correlation with cohorts				
Birth cohorts 1984 to 1987	−0.48	0.11	−011	0.12
Birth cohorts 1988 to 1991	0.06	−0.02	−0.12	0.12
Birth cohorts 1992 to 1995	0	0	0	0
Correlation with types of leisure activity				
Education-oriented leisure activities	0.36	0.19	0.02	−0.14
Informal leisure activities	−0.15	0.46	−0.2	0.4

Survey years 2009 to 2012.

The upper part of the table shows which leisure activities are correlated with the relevant types. Only correlations of over 0.3 are shown.

Sources: SOEP v29 (preliminary), 17-years-old, unweighted, n = 858; calculations by DIW Berlin.

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The leisure behavior of young people can be categorized according to four types: those interested in cultural/social activities, sociable, technology enthusiasts, and individualists. In the past ten years, the proportion of young people interested in cultural/social activities has increased sharply.

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the following activities on a daily basis: watching television, playing computer games, "hanging out" with their best friend, or going out with a group of friends. The lower part of the table shows that these leisure types correspond with the types from the factor analysis: an above-average proportion of those young people who participate in education-oriented leisure activities often belong to the leisure type interested in cultural/social activities, while those engaged in informal activities are more likely to be categorized as a sociable type.

Table 2

Social Differences in Participation in at Least One Education-Oriented Leisure Activity[1]

Distinction according to socio-economic status, school type, parental contact with school, and educational aspirations, 2001 to 2012, data in percent

	2001 to 2004	2005 to 2008	2009 to 2012
Total	48	55	62
Distinction according to socio-economic status			
Mother has no Abitur or university degree	44	49	54
Mother has an Abitur or university degree	56	67	73
Lower income quintile	39	46	48
Second income quintile	50	54	54
Third income quintile	39	48	69
Fourth income quintile	47	51	64
Upper income quintile	62	73	80
Mother with migration background	40	58	58
Mother without migration background	50	54	63
Fewer than 50 books in household	35	47	47
50 to 200 books in household	48	57	63
Over 200 books in household	63	62	75
Distinction according to type of school attended			
Haupt- or Realschule	45	49	55
Gymnasium	66	68	80
Distinction according to parental contact with school			
Parents take an interest in school performance	51	59	73
Parents participate regularly in parents' evenings	51	57	65
Parents do not participate regularly in parents' evenings	40	50	55
Distinction according to educational aspirations			
Young person plans to complete an apprenticeship	41	49	51
Young person aims to go to university	67	65	77

1 Proportion of young people who participate in at least one education-oriented leisure activity. Education-oriented activities include the above-mentioned items music, voluntary work, sports, dance and drama. Separate data for three cohorts for the survey years 2001 to 2004 (born between 1984 and 1987), 2005 to 2008 (born between 1988 and 1991), and 2009 to 2012 (born between 1992 and 1995). The differences are statistically significant.
Sources: SOEP v29 (preliminary), 17-year-olds, weighted, n = 3,134; calculations by DIW Berlin.

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Social differences in participation in education-oriented leisure activities have remained constant since 2001.

inequality of educational opportunities. Young people from less privileged social classes are at a double disadvantage: not only do they lack the stimulus for extra-curricular education initiated by more education-oriented parents but they also have fewer opportunities to make use of the indirect educational effects of music, sports, dance, drama, and voluntary work. Educational economists also refer to the interplay between different skills.[23] For instance, early investments in education increase the productivity of later developments. In other words, those who learn at an early age learn better later in life. Particularly if early learning is not encouraged by parents, significantly greater effort is needed to compensate for the resulting deficits later. Moreover, modern forms of schooling increasingly expect students to have compe-

tences acquired in extra-curricular activities.[24] Since they are also unable to benefit to the same extent from extra-curricular acquisition of skills as young people from more well-to-do families, this amplifies the problems and challenges for young people who already have greater difficulties in school due to their social background.

Irrespective of the potential benefits of education-oriented leisure activities, there is currently a debate on whether these can have adverse effects on children and adolescents. With regard to this issue, information on young people's subjective life satisfaction was consulted and, again using multivariate regression models, the determinants of young people's life satisfaction were examined. The results show a significant positive coefficient, also taking into account further socio-demographic charac-

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23 On what is known as the skill complementarity, see Heckman, "The Technology of Skill Formation" (2007); and Heckman and Schennach, "Estimating the technology" (2010).

24 Solga and Dombrowski, "Soziale Ungleichheiten" (2009).

Table 3

Regression of Determinants of Education-Oriented Activities[1]
Marginal effects of probit estimate, 2001 to 2012

Dependent variable: participation in at least one education-oriented leisure activity	Coefficient	Standard error
Mother with no Abitur/university degree	−0.205***	0.052
Birth cohort 1984 to 1987* Mother with no Abitur/university degree	0.084	0.065
Birth cohort 1988 to 1991* Mother with no Abitur/university degree	0.069	0.07
Cohorts (reference group: birth cohort 1992 to 1995)		
Birth cohort 1984 to 1987	−0.17***	0.053
Birth cohort 1988 to 1991	−0.094	0.058
Mother with migration background	−0.026	0.042
Household income (reference group: middle quintile)		
Lower income quintile	−0.064	0.041
Second income quintile	0.008	0.04
Fourth income quintile	−0.008	0.039
Upper income quintile	0.141***	0.041

1   Explanatory model for participation in at least one education-oriented leisure activity. Education-oriented activities include the above-mentioned items music, voluntary work, sports, dance and drama. The following characteristics were kept constant but not shown in the table: sex, number of brothers and sisters, birth order (first-born), number of rooms in the household, region type (rural), federal state. *** Significant (1% level), ** significant (5% level), * significant (10% level). Sources: SOEP v29 (preliminary), 17-year-olds, weighted, n = 3 134; calculations by DIW Berlin.

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Parental education has a greater impact on participation in education-oriented leisure activities than any other characteristic.

teristics. This proves that young people who pursue an education-oriented leisure activity report a higher level of life satisfaction in the survey on average (see Table 3). Young people who participate in two or more of these activities show even higher levels of satisfaction.

Policy-Makers Have Recognized the Need to Act

The first PISA study in 2000 showed that educational attainment in Germany is closely linked to social background—to a greater extent than in most other OECD countries.[25] The findings of the study were the subject of extensive public debate and led to a number of school reforms. For example, almost all German *Länder* introduced the shorter eight-year *Gymnasium* program (G8) and also expanded all-day schooling. But the government recognized that there was a need to act not only with regard to school learning but also learning from extra-curricular activities. In its 12th Child and Youth Report dated 2005, the German government stressed the need for effective political intervention to reduce social inequality in extra-curricular activities.[26] Only recent-ly did the German Bundestag address a proposal by the parliamentary group Alliance 90/The Greens focusing on the increasing economization of young people's everyday lives as well as social inequality in extra-curricular learning.[27] Thus, the inequality in extra-curricular activities has now become part of the political agenda. But what courses of action are even open to a government that will have a lasting impact on young people's leisure time?

Expansion of All-Day Schooling

The German government supported the expansion of all-day schooling through its four-billion-euro investment program "The Future of Education and Care" in 2003. One of the objectives of all-day schooling is to shift leisure activities to the school sector and thus disassociate them from parental resources. There are two forms of all-day schooling. In "obligatory all-day schooling," children are supervised throughout the whole day, alternating between lessons and leisure activities. In an open all-day school, classes only take place in the mornings. In the afternoons, children can choose from a range of extra-curricular activities on a voluntary basis. According to the Bertelsmann Stiftung, in the 2011/2012 school year, around 14 percent of students in primary

25   See, for example, Max Planck Institute for Human Development, Pisa 2000: Die Studie im Überblick: Grundlagen. Methoden und Ergebnisse (2002), 13.

26   Solga and Dombrowski, "Soziale Ungleichheiten"(2009): 37 and Federal Ministry of Family Affairs, Senior Citizens, Women and Youth, Zwölfter Kinder und Jugendbericht. Bericht über die Lebenssituation junger Menschen und die

Leistungen der Kinder- und Jugendhilfe in Deutschland (2005). www.bmfsfj.de/doku/Publikationen/kjb/data/download/kjb_060228_ak3.pdf.

27   Alliance 90/The Greens, Eigenständige Jugendpolitik (2012).

Table 4

Regression for the Determinants of Life Satisfaction[1]
Change on a scale from 0 to 10, 2001 to 2012

Dependent variable: satisfaction	Coefficient	Standard error
Participation in education-related leisure activities		
(reference group: no participation in education-related leisure activities)		
Participation in exactly one education-related leisure activity	0.249***	0.067
Participation in at least two education-related leisure activities	0.589***	0.084

1   Explanatory model for life satisfaction (OLS regression). Education-oriented activities include the above-mentioned items music, voluntary work, sports, dance and drama. The following characteristics were kept constant but not shown in the table: gender, maternal education and migration background, household income, number of siblings, birth order (first-born), number of rooms in the household, region type (rural), Land. *** Significant (1% level), ** significant (5% level), * significant (10% level).
Sources: SOEP v29 (preliminary), 17-year-olds, weighted, n = 3,134; calculations by DIW Berlin.

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Young people who participate in education-oriented leisure activities are happier on average.

school (elementary school) and lower secondary school (Haupt- and Realschule as well as Gymnasium schools up until the tenth grade) attended an obligatory all-day school. Around 17 percent of students were in open all-day schools. In this type of school, however, there is a risk of social selection. Children from higher social classes might not participate in the afternoon activities because their parents hope that extra-curricular activities outside of school will be more stimulating for their children. Therefore, the Bertelsmann Stiftung is critical that the majority of funding from the investment program "The Future of Education and Care" is being spent on expanding open all-day schooling. It claims that the program has not achieved its full potential with regard to equal opportunities.[28]

There has been insufficient research to date on whether all-day schooling will be able to reduce social inequalities in leisure activities. It is clear, however, that children from lower social classes gain better access to leisure activities through all-day schooling.[29]

SOEP-based studies show an increase in the number of all-day schools, particularly elementary schools.[30] But a sharp rise in all-day schooling can also be observed among adolescents. While 14 percent of young people attended an all-day school in 2006, this share had increased to 22 percent by 2012. The level of voluntary participation among young people within the school community is also rising. While 65 percent of adolescents participating in SOEP reported active participation in at least one after-school club in 2001, the corresponding figure in 2012 was 77 percent. This indicates that leisure activities have indeed shifted to schools as a result of the expansion of all-day schooling.

Funding of School and Extra-Curricular Leisure Activities

Education-oriented leisure activities are increasingly funded by the state in order to allow more children from socially underprivileged households to participate. The "education and participation package" (Bildungs- und Teilhabepaket) introduced in 2011 subsidizes school trips, for example, as well as the acquisition of school supplies, and provides funding for members of clubs or associations or for music lessons. While the first two options have a high take-up, only around 15 percent of households entitled to apply for a grant for other education-oriented leisure activities in fact did so in the first year the program existed.[31] However, 78 percent of chil-

28   K. Klemm, Ganztagsschulen in Deutschland – eine bildungsstatistische Analyse (2013). Commissioned by the Bertelsmann Stiftung. www.bertelsmann-stiftung.de/cps/rde/xbcr/SID-9659BBB8-1B622031/bst/xcms_bst_dms_38554_38555_2.pdf.

29   E. Klieme, H. Holtappels, T. Rauschenbach, and L. Stecher, "Ganztagsschule in Deutschland. Bilanz und Perspektiven," in H. Holtappels, et al., ed., Ganztagsschule in Deutschland. Ergebnisse der Ausgangserhebung der "Studie zur Entwicklung von Ganztagsschulen" (StEG) (Weinheim: 2007), 353–382.

30   J. Marcus, J. Nemitz, and C. K. Spieß, "Ausbau der Ganztagsschule: Kinder aus einkommensschwachen Haushalten im Westen nutzen Angebote verstärkt,"

Wochenbericht des DIW Berlin , no. 27 (2013): 11.

31   H. Apel and D. Engels, Bildung und Teilhabe von Kindern und Jugendlichen im unteren Einkommensbereich (2012). A study on the implementation phase of the education and participation package commissioned by the Federal Ministry of Labour and Social Affairs.

dren and adolescents from these households were actually already members of the relevant club or association. Only 22 percent of those who made use of the funding joined a club thanks to the education and participation package.[32] This equates to 3.3 percent of all eligible children and adolescents. Possible reasons for this may be that the subsidy of ten euros per month is too low or that there are considerable bureaucratic hurdles to overcome during the application process.

Another example is the program "An Instrument for Every Child" (JeKi) which enables children to have free musical instrument lessons in school for a year. The lessons can subsequently be continued at a reduced cost.[33] JeKi was introduced in North Rhine-Westphalia in 2007 by the local government there and has now been taken up throughout Germany. Researchers at the University of Bielefeld have found that socio-economic status does not play a major role in whether or not the lessons are continued.[34] Here, it has apparently been possible to successfully disassociate participation in an education-oriented leisure activity from social background.

Conclusion and Outlook

Participation in education-oriented leisure activities such as music or sports lessons has increased considerably over the past ten years: While only 48 percent of all 16- and 17-year-olds participated in at least one of these activities in 2001, the corresponding figure in 2012 was 62 percent. This trend was observed across all social classes. However, there has been no reduction in socio-economic differences with regard to participation in education-oriented activities: Young people from socially underprivileged households still participate in such activities less frequently than those from well-off families.

Political projects such as all-day schooling or funding of extra-curricular leisure activities are indeed heading in the right direction and able to provide young people from socially underprivileged families with the opportunity for non-formal learning in the absence of suitable support and encouragement from home. But a lot more could still be done. Social inequality in extra-curricular activities is also reaching a significant level, which is all the more serious because this and inequality in school are mutually reinforcing. Policy-makers need to ensure

fair starting opportunities for young people from an educationally underprivileged family background, too.

There has been insufficient research to date on the impact of the use of leisure time on skills development, as well as on young people's choice of career and course of study. For instance, there are only a small number of empirically sound studies or field experiments on the effect of specific leisure activities.[35] Transfer effects of the program "An Instrument for Every Child" are currently being examined in the parallel research program for this project.[36]

In view of such uncertainties and gaps in the research, it also still remains to be seen to what extent "helicopter parents" in fact manage to achieve their goal of optimum advancement of their children by enrolling them in education-oriented leisure activities. At least for the moment, the findings of the present study also serve to show that fears that young people are increasingly stressed and unhappy are unfounded: young people who participate in education-oriented leisure activities show a significantly higher level of life satisfaction on average than young people who spend their leisure time pursuing alternative activities.

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32   Apel and Engels, Bildung und Teilhabe (2012).

33   This is 20 euros per month in North Rhine-Westphalia.

34   T. Busch and U. Kranefeld, "Wer nimmt an JeKi teil und warum? Programmteilnahme und musikalische Selbstkonzepte," in Koordinierungsstelle, ed., JeKi-Forschungsschwerpunkt (brochure) (Bielefeld: 2013), 46–49.

35   For an overview, see, for example, OECD, Arts for art's sake: The impact of arts education (Paris: OECD, 2013) and the review in Hille and Schupp (2013).

36   Jeki parallel research program. www.jeki-forschungsprogramm.de/.

Part III:
Summary Report SOEP Fieldwork in 2013

Nico A. Siegel, Simon Huber, Anne Bohlender (TNS Infratest Sozialforschung)

In this chapter, we summarize the most important features and results of the 2013 fieldwork in the various parts of the SOEP sample system. A general summary of the SOEP survey fieldwork unit at TNS Infratest was part of the 2012 wave report. We do not replicate this wave-invariant general information in this year's chapter but instead refer to last year's foreword (part III, p. 83 ff), which provides a concise summary of the major organisational characteristics and principles of the SOEP survey unit at TNS Infratest Social Research.

Generally speaking, over the last decade, the complexity and quantity of interviews has increased significantly, affecting both sampling and measurement-related SOEP survey tasks. This was true for the fieldwork on the various SOEP samples in 2013 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 Sample and the Innovation Sample.

For the **SOEP MAIN SAMPLE,** the year 2013 witnessed, for the third time in SOEP history, the integration of a special boost sample of 2,700 new households with a migration background. An overview of the sampling procedures, the definition of the target population, and fieldwork results will be presented in Section A. The integration of the new sample M into the SOEP's Main Sample also resulted in a significant increase of the total sample size: more than 15,500 households were interviewed in the 2013 wave of the Main Sample.

For the **SOEP INNOVATION SAMPLE** (SOEP-IS), 2013 brought not only a series of new and innovative survey measures but also a general population refresher sample that boosted the size of the SOEP-IS sample: the new subsample (I_3) consists of more than 1,000 households, resulting in a net total sample size of more than 2,000 households and 3,300 interviewed persons in the SOEP-IS.

The scope of this fieldwork report

This part focuses exclusively on the various segments of the fieldwork for the 2013 wave of "Living in Germany," the study title TNS Infratest uses with interviewers and respondents. Hence it is restricted to the various longitudinal subsamples of the SOEP Main Sample as well as the migration boost sample, and it also includes a concise summary of the SOEP-IS. This section does not address SOEP-related surveys such as Families in Germany, a longitudinal SOEP-equivalent sample established in 2010 for the evaluation of German family polices, or discuss the aims and contents of other SOEP-related or associated studies that are conducted under the label of the SOEP but that are not part of the SOEP's Main or IS sample.

Table 1

SOEP Subsamples 1984-2013

Sample	Year	1984	1990	1995	1998	2000	2002	2006	2009	2010	2011	2012	2013
A + B	"SOEP West" and main groups of foreign nationalities	1	7	12	15	17	19	23	26	27	28	29	30
C	"SOEP East" general population sample GDR 1990	-	1	6	9	11	13	17	20	21	22	23	24
D	Immigration sample	-	-	1	4	6	8	12	15	16	17	18	19
E	Refresher sample 1998 (general population)	-	-	-	1	3	5	9	12	13	14	15	16
F	Refresher sample 2000 (general population)	-	-	-	-	1	3	7	10	11	12	13	14
G	High income sample	-	-	-	-	-	1	5	8	9	10	11	12
H	Refresher sample 2006 (general population)	-	-	-	-	-	-	1	4	5	6	7	8
J	Refresher sample 2011 (general population)	-	-	-	-	-	-	-	-	-	1	2	3
K	Refresher sample 2012 (general population)	-	-	-	-	-	-	-	-	-	-	1	2

Individual interviews per sample[1]	1984	1990	1995	1998	2000	2002	2006	2009	2010	2011	2012	2013
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
C		4,453	3,892	3,730	3,687	3,466	3,165	2,769	2,559	2,392	2,262	2,111
D			1,078	885	837	780	684	565	488	461	435	398
E[2]				1,923	1,549	1,373	1,199	1,024	978	961	160	134
F					10,886	8,427	6,997	5,824	5,316	4,984	4,610	4,329
G						2,222	1,801	1,487	1,438	1,358	1,285	1,259
H							2,616	1,737	1,587	1,478	1,392	1,333
J										5,161	4,229	3,801
K											2,473	2,115
Total	12,239	13,971	13,768	14,683	24,582	23,443	22,665	18,602	17,156	21,336	21,050	19,406

1 Including the interviews given by juveniles who participated the first time by completing the youth questionnaire

2 The low number of participants in sample E in 2012 results from transferring the face-to-face-households into the SOEP-IS

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Section A – The Main Sample

1 Longitudinal Samples

1.1 Summary Overview

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 in Berlin in December of each year, always in the same cross-sectional format. It should be noted that the SOEP represents 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 trend in absolute sample sizes at the individual level (persons participating in a respective SOEP wave) from 1984 to 2013, covering ten (major) subsamples launched between 1984 and 2012. **Figure 1** provides an overview of the sample sizes of the various main subsamples at the household level for 2013.

Households and individuals with the longest history of (continuous) panel participation took part for the 30th time in 2013 (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 integrated in 2011 with more than 3,000 households.
- Sample K, a general population refresher integrated in 2012 with a total of 1,500 households. During fieldwork of 2013 wave 2 was conducted in this subsample.
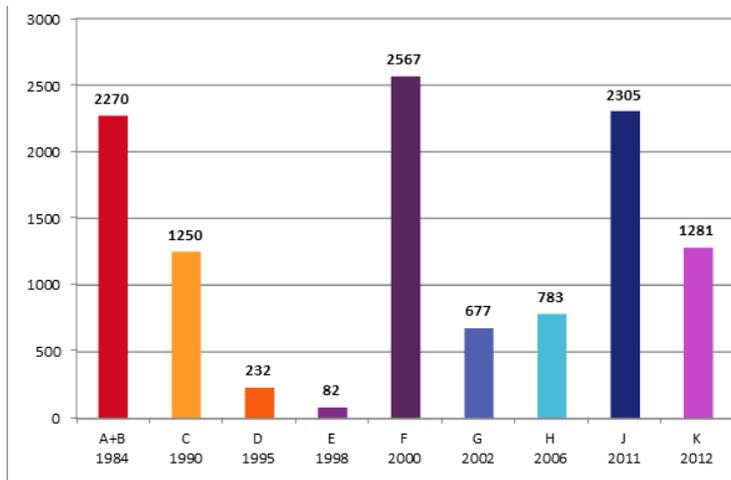
Figure 1

Overview German Socio-Economic Panel Survey

Figure 2

**Number of Participating Households in 2013
from Various Subsamples**

In 2013, the 30th wave of SOEP was conducted and resulted in a total of 11,447 households and 19,406 individual interviews in the samples A–K.

1.2 Fieldwork Indicators

The field results of a longitudinal sample can be measured in different ways. Two sets of indicators appear to be most relevant. First, from a long-term perspective, **panel stability** can be regarded as a decisive indicator for monitoring and predicting a panel sample's devel-

Figure 3

Panel Stability in SOEP Samples A-H from 2008 to 2013

opment 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 dropouts from previous samples) on the other. This approach is particularly helpful in household surveys where split-off households are tracked, i.e., 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, namely so-called "temporary drop-outs," i.e., 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.

The mean value for panel stability across the established SOEP samples A-H achieved in 2013 was 95.4%. Therefore, the results confirm the existence of a trend over the two last years of increasing or at least stable values, after several years of decreasing panel stability (see **Figure 3**).

However, panel stability varies substantially across subsamples: it ranges from a low of 92.4% (-2.0% compared to the previous year) in sample D up to 98.5% in sample G (+1.2% against 2012).[1] Panel stability in the third wave of refresher sample J was 90.2%. For refresher sample K, established in 2012, panel stability from wave 1 to wave 2 was 83.9%. For the second time in a row after sample J (81.5% in 2012), the panel stability of a new refresher sample passed the benchmark level of 80%.

Panel stability should not be confused with longitudinal response rates. **Table 2** presents key indicators of 2013 fieldwork for samples A-H, showing response rates by types of fieldwork procedures and household among other information. Overall, the headline response rate for 2013 in samples A–H was 91.8% for previous wave respondents. This was slightly above the rates for the years 2011 and 2012 (each 91.2%), when a positive turnaround was achieved after several years of decreasing longitudinal response rates. The SOEP has suffered to a certain extent from the same trend of declining response rates as other social surveys in Germany over the last two decades, although in the SOEP this trend has been significantly lower. The decline in response rates in the SOEP was almost exclusively the result of an in-

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[1] Panel stability in sample E in 2013 was in fact the lowest at 89.1%. However, due to the transfer of all interviewer-based households into the SOEP-IS in 2012, the panel stability of the few remaining centrally administered households (mail interviews) is no longer significant.
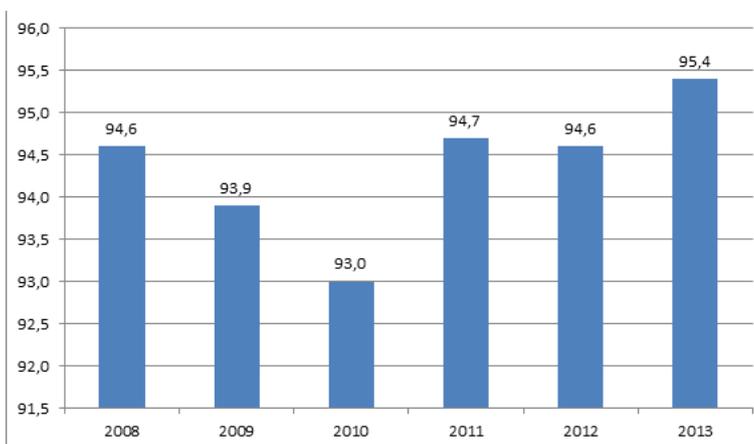
Table 2

Key Fieldwork Indicators: SOEP Samples A-H 2012 and 2013 Compared

		A – H 2012 abs. figures	A – H 2013 abs. figures	A – H 2012 in %	A – H 2013 in %
(1)	Gross sample composition by types of households				
	Previous waves' respondents	8,710	8,241	92.2	
	Temporary drop-outs	429	406	4.5	
	New households	303	264	3.2	
	Total	9,442	8,911	100.0	
(2)	Gross sample composition by type of fieldwork				
	Interviewer-based	7,037	6,551	74.5	73.5
	Centrally administered (mail)	2,405	2,360	25.5	26.5
	Total	9,442		100.0	100.0
(3)	Interviewers				
	Number of interviewers	471	468	-	-
	Average number of household interviews	14.9	13.1	-	-
(4)	Response rates by type of household				
	Previous wave's respondents	-	-	91.2	91.8
	Previous wave's drop-outs ("re-joining former panelists")	-	-	29.8	36.0
	New households (split-off HH.s)	-	-	56.1	64.0
	Total response rate	-	-	87.3	88.2
(5)	Response rates by type of fieldwork procedure				
	Interviewer-based	-	-	88.6	93.7
	"Mail/telephone" assisted	-	-	71.2	72.9

crease in the share of target households who explicitly refused to provide an interview—despite the fact that additional or improved measures for refusal avoidance and refusal conversion have been integrated into fieldwork procedures. The trend over the last three years confirms that response rates in the SOEP Main Sample are no longer declining.

The response rates presented in **Table 2** do not focus solely on the households from the previous wave. Nor are they calculated in a way that would correct for households that have stopped being part of the target population. All the "denominators" in our response rate calculations were not "corrected" as this is usually done by subtracting "out of scope" target households from the gross sample. If we readjust the gross sample in this way, the resulting response rates would be 1–2 percentage points higher than the figures printed in Table 2

The third wave response rate of sample J for the previous wave households was 86.2%. The response rate in refresher sample K for previous wave households was 82.0% and therefore two percentage points above the value for sample J in 2012.

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 beginning of February and being completed when the "refusal conversion" processes are collected in mid-October. Fieldwork in the recent refreshment samples J and K started two weeks later due to deviant fieldwork procedure rules (e.g. cash incentives and CAPI only approach).

Table 3

Fieldwork Progress 2013 and 2012 Compared: Processing of Household Interviews in Percent of Gross Sample

	2012		2013	
	A – H	J - K	A – H	J - K
February	42	17	45	20
March	67	53	67	55
April	81	75	84	77
May	89	84	91	85
June	95	91	94	90
July	98	95	97	95
August	99	98	99	98
September	100	100	100	100
October	100	100	100	100

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

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As is indicated by the figures in **Table 3,** more than 50% of all household interviews are conducted during the first two months of fieldwork, and more than 90% within the first four to five months. This indicates 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 for which various refusal conversion strategies have to be used (conducting interviews by telephone or issuing new address to interviewers).

Individual response rates

The overall response rate at the individual level reached 96.1% for samples A–K. Thus, 19,134 target persons in the participating households could be convinced to answer the individual questionnaire.[2] The individual response rate for the established samples A-H was 96.7%. The response rates for the latest refresher samples were 95.7% for sample J and 93.8% for sample K.

The figures on individual response rates relate to the (main) individual questionnaire, for which the target population consisted of all individuals in participating

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2 In addition, 15 individual interviews were completed without a household interview.

SOEP households who were born in 1993 or earlier. However, response rates can also be calculated for the various special or supplementary questionnaires, which are discussed as performance indicators in the section dealing with questionnaires.

1.3 Interview Modes

The interview mode in the SOEP is usually referred to as a mixed-mode approach. The goal of such approaches is to achieve higher overall response rates than are possible with single-mode survey approaches, which are more relevant in household samples, where they are used to keep partial unit non-response as low as possible. When using a mixed-mode approach, it is critical to employ a pool of various modes that can be used on a case-by-case basis in the individual households. This became particularly important in the SOEP, which had conducted all interviews using paper-and-pencil interviewing (PAPI) from 1984 to 1998, when computer-assisted personal interviewing (CAPI) was introduced as a kind of "regular choice" mode: up to this point, many respondents had been using PAPI for a long time, and some older long-time interviewers who worked exclusively for the SOEP had a strong preference for paper-and-pencil questionnaires. Finally, in multi-person households, the option of dropping off a PAPI questionnaire for individuals who were unable to provide an interview while the interviewer was there is a useful option, particularly for younger household members and household members who are seldom at home during the day.

The methods used in the SOEP are face-to-face interviews and the self-administered interview that requires respondents to answer the questionnaire by themselves. The latter is performed in two different ways:

- As an alternate option to face-to-face interviewing, with the interviewer present (SELF interview)
- As a mail interview, without the interviewer present (MAIL interview)

The recent refresher samples J and K use CAPI only. The interviewers are not allowed to use PAPI questionnaires or to drop off a questionnaire to be returned by mail.

In general, a distinct pattern can be detected across the various SOEP samples: the "older" the sample, the higher the share of MAIL interviews. This is mainly the result of the transition from interviewer-based to centrally administered fieldwork, which reflects a major pillar of the SOEP's refusal conversion strategy: households that are no longer willing to participate in the survey based on face-to-face interviewing are offered the chance to participate by mail. Thus, the proportion of MAIL in-

Table 4

Interviewing Methods by Sub-Samples (in Percent of All Individual Interviews)

| | Interviewer-Based | | | | | | Centrally Administered | |
| | CAPI | | PAPI | | SELF | | MAIL | |
	2012	2013	2012	2013	2012	2013	2012	2013
A – D	21	22	18	16	37	37	25	26
F	31	33	20	18	32	33	15	16
G	32	33	12	10	42	41	14	16
H	60	62	12	8	21	22	8	8
A – H	29	30	17	15	34	34	20	21
J	100	100	-	-	-	-	-	-
K	100	100	-	-	-	-	-	-

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terviews differs substantially across samples, revealing a clear pattern of increased mail shares over the "life span" of a sample. In sample H, for instance, mail interviews account for just 8% of all interviews conducted in 2013, whereas the proportion of households participating by mail was 26% for samples A–D (see **Table 4**).

1.4 Questionnaires

The SOEP is presented to respondents and interviewers under the catchy name "Living in Germany." This name covers a total of 13 different field instruments, one contact protocol, and 12 questionnaires, most of them processed with PAPI as well as CAPI:

1. **Address/Contact protocol** (PAPI only)
2. **Household questionnaire**
3. **Individual questionnaire** for all persons aged 16 years and older (criteria in 2013: born in 1995 or earlier)
4. Supplementary questionnaire **"life history"** for all new persons joining a panel household (with the samples J and K, which are CAPI only, the life history questions are integrated into the individual questionnaire)
5. **Youth questionnaire** for all persons born in 1996
6. Additional **cognitive competency tests** for all persons with a completed youth questionnaire (PAPI and f2f only)
7. Supplementary questionnaire **"Mother and Child A"** for mothers of children who were born in 2013 (and for those mothers of children born in 2012 who were not given the questionnaire in 2012 because the child was born after fieldwork was completed)
8. Supplementary questionnaire **"Mother and Child B"** ("Your child at the age of 2 or 3") for mothers of children born in 2010. In households where the fa-

ther is the main caregiver, fathers are asked to provide the interview.
9. Supplementary questionnaire **"Mother and Child C"** ("Your children at the age of 5 or 6") for mothers of children born in 2007. In households where the father is the main caregiver, fathers are asked to provide the interview.
10. **Questionnaire for parents**, both mothers and fathers of children born in 2005 ("Your child at the age of 7 or 8"). 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.

Table 5

Supplementary Individual Questionnaires: Volumes and Response Rates, Samples A – K

	Gross sample/ reference value[1]	Number of interviews	Response rate/ coverage rate
Youth	303	257	84.8
Cognitive competence tests[2]	228	217	95.2
Mother and child questionnaire A	201	182	90.5
Mother and child questionnaire B	186	179	96.2
Mother and child questionnaire C	211	202	95.7
Questionnaire for parents D[3]	249	380	95.6
Mother and child questionnaire E	239	227	95.0

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

2 Test can only be implemented if the fieldwork is administered by an interviewer and if the youth questionnaire is completed. Therefore the denominator for the respective gross sample of the target population (n=228) is different from that for the youth questionnaire (n=303).

3 For 238 (95.5%), of 249 children born 2005 and living in households that participated in 2013, at least one questionnaire has been completed. For 142 children (57.0%), two questionnaires have been completed.

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Table 6

Mean Interview Length for Face-to-Face Interviews in Samples A - K (Minutes per Interview)

Sample	Household Questionnaire		Individual Questionnaire		Time Occupied for a Model Household[1]	
Target length in minutes	15		30		75	
Actual mean length	PAPI	CAPI	PAPI	CAPI	PAPI	CAPI
A SOEP West	18	15	37	35	92	85
B Foreigners	18	14	39	35	96	84
C SOEP East	24	16	44	36	112	88
D Immigrants	18	15	40	39	98	93
E Refresher 1998	–[2]	–[2]	–[2]	–[2]	–[2]	–[2]
F Refresher 2000	21	15	42	38	105	91
G High income	20	16	40	35	100	86
H Refresher 2006	22	16	43	37	108	90
J Refresher 2011	–[3]	15	–[3]	38	–[3]	91
K Refresher 2012	–[3]	15	–[3]	38	–[3]	91
Total (A – H)	20	15	41	37	102	89
Total (A – K)	–[3]	15	–[3]	38	–[3]	91
Saldo	5	0	11	8	27	14

1 Household with two interviewed adult individuals
2 No data due to the transfer of all respondents interviewed personally by an interviewer into the SOEP innovation sample (SOEP IS).
3 No data due to all interviews in subsamples J and K being CAPI.

11. Supplementary questionnaire **"Mother and Child E"** ("Your children at the age of 9 or 10") for mothers of children born in 2003. 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 (therefore referred to as "Lückefragebogen," i.e., "gap" questionnaire)

13. Supplementary questionnaire for panel members who experienced a death in their household or family in 2012 or 2013: **"The deceased person"**

Table 5 provides an overview of the number of interviews for various supplementary questionnaires and the respective response rates.

Table 6 shows the mean interview length for face-to-face interviews divided by subsample and mode. Given the interview length trends over the last 10 years for the core questionnaires and the integration of new supplementary questionnaires for specific subgroups of respondents, it is highly unlikely that the historically defined interview length of 75 minutes for a model household con-sisting of two persons will be achieved in coming years. Rather, the new benchmark length for a two-person household should be set at a maximum of 90 minutes, bearing in mind that the overall stay of an interviewer in a household will be approximately 30 minutes longer.

The figures in **Table 6** indicate a significant difference in the mean interview length between PAPI and CAPI. The PAPI household and individual questionnaires both take about 5 minutes longer on average than the respective CAPI questionnaires (e.g., due to better efficiency in filtering, etc.).

2 The Refresher Sample M (Migration Sample)

2.1 Overview

In 2013, a special refresher sample was added: sample M, 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. Using a sampling design based on addresses provided by the Federal Employment Agency, the sample considerably improves the representation of immigrants in Germany in the SOEP and thereby also the analytical potential of the SOEP for research on integration and migration dynamics. All in all, 2,723 households containing at least one person with migration background were interviewed.

Sample M is the third subsample in the history of the SOEP that is composed exclusively of migrant households. The first wave of the SOEP in 1984 already included subsample 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). Subsample D, established 1994/1995, was designed to map the migration dynamics in Germany between 1984 and 1994. Therefore, the adequate representation of migrant households has been a core element of the SOEP's sample design from the very beginning of the panel. Nevertheless, due to recent migration movements, the younger generations of migrants were underrepresented for the last decade. As a result, sample M was established, which focus on immigrants since 1995 and second generation migrants.

The migration sample M differs considerably from the former migrant refresher samples in both size and sampling design. With more than 2,700 households, 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, the sample design and sampling for sample M did not take place at TNS Infratest.

2.2 Sampling design and distribution of gross sample

In order to implement an innovative sampling procedure to map recent migration and integration dynamics, research cooperation was established between the SOEP unit at the German Institute for Economic Research (DIW Berlin) and the Institute for Employment Research (IAB Nürnberg). On this basis, the Integrated Employment Biographies Sample (IEBS) of the Federal Employment Agency (BA) could be used as the sampling frame. The IEBS contains data on employment histories, unemployment benefits, job search, and participation in active labor market programs.

As the actual sampling was conducted by experts at the SOEP group at the DIW, we will just provide general information on the sampling procedure in this report.

There was a multi-level approach for drawing the gross sample:

- The sampling frame was the IEBS (autumn 2012). Each available dataset was flagged to indicate an assumed migration background according to the information available at the BA.
- All datasets were assigned to primary sampling units (PSU) according to regional criteria (municipal boundaries)
- An onomastic-based flag was added as second indication of presumed migration background
- Sampling of 250 PSU, stratification by federal state and administrative district
- Sampling of 80 addresses by PSU. Only datasets with both migration flags were considered. Disproportional stratification by year of migration and country of origin
- Sampling of 12,992 cases that comprise the gross sample

Tables 7 and 8 show the distribution of the gross sample by federal state and municipal type. The distribution reflects approximately the distribution of migrants living in Germany. Compared to the distribution of all households in Germany, migrant houshold are significantly more often located in western states and in the center of bigger cities, and less often in eastern states, the periphery of bigger cities, and in both mid-sized and smaller cities.

2.3 Specifics of Sample M

The key specifics of sample M are summarized in **Table 9**.

Table 7

Distribution of Sample Points by Federal State

Federal State	Number of Sample Points	Share Sample Points	Share Households in Germany[1]
Schleswig-Holstein	6	2.4%	3.4%
Hamburg	9	3.7%	2.4%
Lower Saxony	20	7.8%	9.6%
Bremen	3	1.2%	.9%
North Rhine-Westphalia	67	27.2%	21.6%
Hesse	25	10.1%	7.3%
Rhineland-Palatinate	12	4.7%	4.7%
Saarland	3	1.2%	1.2%
Baden-Wuerttemberg	38	14.8%	12.5%
Bavaria	38	15.1%	14.8%
Berlin	15	6.1%	5.0%
Brandenburg	3	1.3%	3.1%
Mecklenburg-West Pomerania	1	.4%	2.1%
Saxony	5	2.0%	5.5%
Saxony-Anhalt	3	1.2%	3.0%
Thuringia	2	.8%	2.8%
Total	250	100.0%	100.0%

1 Mikrozensus 2010

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Questionnaires and field documents

Fieldwork in the refresher samples is conducted exclusively by CAPI: as with the previous refreshers J (2011) and K (2012), sample M did not use PAPI.

Two CAPI scripts were fielded in sample M: a combined tool to screen the anchor person and, if that person was in the target population, to gather the household composition and the actual questionnaire.

The screening part consisted of five questions maximum to validate the anchor person's migration background. If the anchor person and both parents were born in Germany, the interview was ended and the anchor person was "screened out." Other screen-out criteria were: the anchor person was born abroad but his or her stay in Germany is only temporary (e.g., seasonal workers); neither parent was born in Germany but that both parents came to the Federal Republic of Germany as "displaced persons" in the context of post-WWII resettlement. The number of screen-outs and the distribution of screen-out cases are stated in the chapter Fieldwork Results (see **Table 13**).

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 led to a positive result and the migration background of the anchor person was validated, this individual was asked to state the composition of the household in the electronic household protocol, which has been used with other recent refresher samples as well. In most cases, the

Table 8

Distribution of Gross Sample by Municipal Type (BIK)

BIK Type[1]	Share of Households in Gross Sample M	Share of Households in Germany[2]
0 (more than 500,000 inhabitants/ center)	39.7%	28.3%
1 (more than 500,000 inhabitants/ periphery)	8.6%	9.0%
2 (100,000 to 499,999 inhabitants / center)	19.0%	15.8%
3 (100,000 to 499,999 inhabitants / periphery)	9.6%	14.1%
4 (50,000 to 99,999 inhabitants (center)	1.4%	2.4%
5 (50,000 to 99,999 inhabitants / periphery)	5.7%	7.9%
6 (20,000 to 49,999 inhabitants)	7.4%	10.3%
7 (5,000 to 19,999 inhabitants)	6.8%	8.0%
8 (2,000 to 4,999 inhabitants)	1.0%	2.5%
9 (less than 2,000 inhabitants)	.8%	1.7%
Total	100.0%	100.0%

1 Municipal type (BIK) groups regions into categories according to number of inhabitants and location
2 Mikrozensus 2010

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Table 9

Specifics of the SOEP Migration Sample

	SOEP Migration Sample
Target population	People with a migration background living in Germany, who either immigrated after 1994 or were born in Germany but at least one of their parents immigratetd
Sample design	Multi-level sampling design; sampled from the Integrated Employment Biographies Sample (IEBS) of the Federal Employment Agency (BA); partly onomastic-based sampling procedure
Primary sampling unit	"Anchor person" sampled from the IEBS; validation of migration background through a short screening questionnaire
Secondary sampling unit	In a household with a positively screened "anchor person" every member who was born prior to 1996
Fieldwork period	Mid-May to end of September 2013
Mode	CAPI
Questionnaires	– Combined screening and household composition tool – Household questionnaire – Integrated individual-biographical questionnaire – Declaration of consent to linkage of the survey data with register data from the BA
Incentive	Cash incentive (€5/household interview; €10/individual interview)

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anchor person then completed the individual questionnaire. The household questionnaire was completed either by the anchor person or by another person in the household. Generally, every person living in the household born prior to 1996 was asked to complete an individual questionnaire, whether they had a migration background or not.

In comparison to the longitudinal samples, data collection in refresher sample M was focused on the main questionnaires: the household and the individual questionnaire. Following the design shift for refresher samples since sample J in 2011, the collection of life history by means of the so-called "biography questionnaire" was integrated into the individual questionnaire from wave 1. This ensures that biographical information will be available for all target persons that provided an individual interview in participating households, as the life history questions were integrated into the CAPI script for the individual questionnaire and are not administered as a separate CAPI or PAPI questionnaire, generating the risk that all of the life history data could be missing for some individuals who declined to complete the supplementary questionnaire. Other supplementary questionnaires were not integrated into the survey program for first-wave respondents. The reason for focusing on the key questionnaires is to avoid "overburdening" re-

spondents with an extremely lengthy first-wave interview, especially for this target population.

The household questionnaire was identical to the questionnaire used in the SOEP core sample. The individual questionnaire differed in some parts, as the migration history and other additional questions about migration and integration were included.

As the target population is people of (mostly) foreign origin, language problems were expected. Therefore, both main questionnaires were translated into five languages: English, Russian, Turkish, Romanian and Polish. These languages—besides English—represent the nationalities that were overrepresented in the gross sample. In any case, the translated versions were not implemented in CAPI but printed on paper and given to the interviewer as an additional support tool to overcome language problems. **Table 10** shows what kind 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 was the declaration of consent required to link respondents' survey

Table 10

Language Problems and Use of Translated Paper Questionnaires in Wave 1

	Number	In % net sample
No language problems occured/no need for assistance in the event of language problems	4,171	84.0
Assistence with language problems needed	793	16.0
Of that:[1]		
German-speaking person in the same household	516	10.4
German-speaking person outside the household	90	1.8
Professional interpreter	6	0.1
Paper questionnaire	242	4.9
Of that:		
Russian	111	2.2
Turkish	57	1.1
Romanian	33	0.7
Polish	29	0.6
English	12	0.2

1 In 59 cases, more than one kind of assistence was needed

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data with register data from the databases of BA/IAB for the evaluation of respondents' educational and occupational biographies. The respondent's written consent was required for the record linkage. At the end of the individual interview, interviewers gave respondents an extra page describing the procedure and purpose of the linkage and providing information on data protection, and asked for the respondent's signature.

Consent to record linkage was not required from every respondent: 70% of the gross sample (household level) was designated for data linkage in wave 1; 15% in wave

Table 11

Fieldwork Progress by Month

	Gross Sample in %	Net Sample in %
May	11	10
June	33	35
July	47	51
August	63	66
September	83	86
October	93	95
November	100	100

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

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2, and the remaining 15% were not designated for linkage at all. The idea behind this approach was that the rate of cooperation with such a request 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 the control group.

In every household designated for record linkage, each person who completed the individual questionnaire was to be asked for their consent. At the end of the individual CAPI questionnaire, the interviewers were asked to hand the respondent a declaration of consent and to state whether or not consent was given. All in all, 3,277 persons were asked to give their consent. Of those, 1,662 (50.7%) provided their consent according to the CAPI question. In any case, only 1,583 declarations of consent were signed and 79 persons changed their minds when confronted with the actual declaration. On the other hand, in 21 cases the declaration was signed by persons who refused to give consent according to the CAPI question but changed their minds after reading the declaration. Altogether, 1,604 declarations were signed. That amounts to a response rate of 48.9%.

2.4   Fieldwork Results

Table 11 shows the progress of the fieldwork over the whole face-to-face period.

Table 12

Final Disposition Codes

	Number	In % gross sample
Gross sample	**12,992**	100.0
Unknown eligibility	**3,371**	25.9
- Not attempted or not possible (e.g., interviewer was ill)	7	0.1
- Anchor person moved, unable to locate address	2,114	16.3
- Unable to reach during fieldwork period	1,250	9.6
Not eligible	**1,487**	11.4
- Miscellaneous QNDs (e.g., business address, address does not exist)	342	2.6
- Screen-out (anchor person not in target population)	1,145	8.8
Eligible, non-interview	**5,411**	41.6
- Anchor person permanently living abroad	416	3.2
- Anchor person deceased	38	0.3
- Permanently physically or mentally unable/incompetent	54	0.4
- Language problems	208	1.6
- "Soft" refusal (currently not willing/capable)	258	2.0
- Permanent refusals	4,437	34.2
Interview (household and individual interview completed by anchor person)	**2,723**	21.0

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Household level

The sampling design and the specifics of the sample posed several challenges for the processing of addresses by interviewers in a response-maximizing way. The crucial characteristic that distinguishes the migration sample from the other SOEP samples is the so-called "anchor person concept." In the other SOEP samples, households are the primary sampling unit and all household members (of a certain age) are supposed to take part in the survey. However, a household is considered as having been interviewed when even just one individual questionnaire has been completed in addition to the household questionnaire. With the first wave of the migration sample, the primary sampling unit is not the household as a whole but an "anchor person" with a (presumed) migration background, whose data were obtained from the Integrated Employment Biographies Sample of the Federal Employment Agency. This anchor person, if willing to take part in the survey, was asked to complete a short screening questionnaire designed to verify whether he or she belongs to the target population. Only if the anchor person reported having moved to Germany after 1994 or having at least one parent who was not born in Germany was he or she—and therefore the

whole household – chosen for the main survey.[3] Whether a household was interviewed therefore required that a) the anchor person was traceable, b) the screening interview was completed and the anchor person was willing to participate in the survey, and c) the anchor person was verified as belonging to the target population according to the screening criteria.

The first consequence was a comparably large number of addresses that could not be processed or that were not eligible. **Table 12** shows the final disposition codes and fieldwork results for sample M. In total, the percentage of anchor person addresses that could not be processed because the individuals did not live at the given address and their new address could not be determined—in spite of intensive efforts to track them down[4] —was 16.3% of the gross sample. On the one hand, this result shows that addresses originating from an official register are not as up-to-date as addresses that have been obtained in the course of a random address procedure carried out

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3 In addition, anchor persons were also screened out of the survey when their stay in Germany was only temporary (e.g., as seasonal workers) or when both parents came to Germany (current territory) as displaced persons in the context of post-WWII resettlement.

4 The main sources to locate removed anchor persons were requests at the local registration offices and post offices.

Table 13

Distribution of Screen-Out Cases

	Number	In %
Seasonal labor	46	4.0
Migration to Germany prior to 1995	658	57.5
Anchor person and both parents born in Germany	430	37.6
Anchor person born in Germany and both parents "displaced persons" (migrated to Federal Republic in context of post-WWII resettlement)	11	1.0
Total	1,145	100.0

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shortly before the survey. On the other hand, it shows the high mobility of the target population as well as the frequent lack of reporting address chages to authorities.

The second challenge was posed by the anchor person concept itself. The anchor person was the key person to be contacted and interviewed. Thus, the effort required of interviewers was considerably higher than with usual SOEP surveys, in which any adult in the sampled household can be interviewed. Nevertheless, the share of households that could not be reached during fieldwork—in the sense of "anchor persons who could not be contacted during fieldwork"—was 9.6% of the gross sample. The screening process showed that another 8.8% of the gross sample did not belong to the target population. The distribution of the screen-out cases is shown in Table 13.

In total, 62.6% of the gross sample was eligible, 41.6% resulted in non-interviews, and 21.0% in interviewed anchor person households. The main reasons for a non-interview were permanent refusals (82.0% of all non-interviews). As was expected with this target population, the share of anchor persons living abroad permanently (7.7% of all non-interviews), and the share of language problems that led to a non-interview (3.8% of all non-interviews) were comparably high.

Table 14 shows the fieldwork results as used to calculate different outcome rates, which are shown in **Table 15.** 19.0% of all addresses (gross sample I) could not be processed by the interviewers. That defines gross sample II with 10,529 processable addresses. Adjusted by deceased anchor persons and anchor persons who moved abroad, 10,075 addresses remained (77.5% of gross sample I). All in all, 8,825 anchor persons could be contacted by the interviewers, that is, 67.9% of gross sample I. Due to the high number of non-traceable addresses

and anchor persons who could not be found at home, the contact rate is considerably lower than expected before fieldwork.

Compared to the recent refresher samples, the response rate of 27.0%, defined as the number of interviews divided by the adjusted gross sample, seems to be relatively low (sample J: 33.1%; sample K: 34.7%). In any case, to compare the response rate for sample M with the rates for samples J and K, one has to take into account the high number of screen-out interviews. Due to the screening procedure, 29.6% (1,145) of the anchor persons who indicated their willingness to participate could not be surveyed further as they did not fulfil the screening criteria. Whereas the actual net sample amounts to 2,723 households, the interviewers actually completed interviews with 3,868 households. This leads to a remarkable cooperation rate of 38.4%, which puts the response rate of 27.0% into perspective (both referring to adjusted gross sample II).

Individual level

As with all the longitudinal samples, one of the major challenges of the refresher samples is that all household members aged 16 and older define the target population for the individual questionnaires. Basically, there are two key performance indicators of whether the ambitious goal of interviewing all persons aged 16 years and older in participating households has been met. The first indicator is the share of all households in which at least one person has not completed the individual interview, thereby producing "gaps" in the data, which are particularly problematic for all household indicators that can only be generated correctly if an individual interview has been provided (e.g., household income, assets etc.). The share of households in which at least one person

Table 14

Fieldwork Results

	Number	In % gross sample I	In % gross sample II
Gross sample I (all addresses)	12,992	100.0	
Non-processable addresses (Not attempted or possible; Anchor person moved/unable to locate address, QNDs)	2,463	19.0	
Gross sample II (processable addresses)	**10,529**	**81.0**	
Deceased or moved abroad	454	3.5	
Gross sample II adjusted	**10,075**	**77.5**	**100.0**
Unable to reach during fieldwork period	1,250	9.6	12.4
Contacted processable addresses	**8,825**	**67.9**	**87.6**
Non-Cooperation (Permanently unable/incompetent; language problems; soft and permanent refusals)	4,957	38.2	49.2
Cooperation:	3,868	29.8	38.4
- Screen-outs	1,145	8.8	11.4
- Valid Interviews (net sample)	**2,723**	**21.0**	**27.0**
- Household completely interviewed	2,041	15.7	20.2
- Household partially interviewed	682	5.2	6.8

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could not be interviewed, despite belonging to the target population for an individual interview, was 25.0%. If one excludes the single-person households from this figure, partial unit non-response was 28.8%. Compared to the first wave results for samples J (2011: 22.9%) and K (2012: 21.4%), partial unit non-response in sample M was significantly higher.

The second indicator to assess the participation patterns at the individual level is the response rate for the individual questionnaire, which was 83.8%. Compared to the refresher samples J (2011: 90.4%) and K (2012:

90.9%), the migration sample shows a roughly 7 percentage point lower rate of participation.

Whereas the household-level results exceeded expectations and showed that response rates, or in this case cooperation rates, of nearly 40% can be reached even with a sample consisting exclusively of immigrant households, the comparably poor results on an individual level were expected. With a migration sample, the effort required by interviewers to make contact on an individual level is higher than usual, and the contact process as well as the interview situation are more complicated and delicate (e.g., language problems, cultural specifics, lower level

Table 15

Outcome Rates

	In % gross sample I	In % gross sample I[1]
Contact Rate (Contacted addresses / gross sample)	67.9	87.6
Cooperation Rate (Cooperation / gross sample)	29.8	38.4
Response Rate (Interviews / gross sample)	21.0	27.0

1 Adjusted by deceased and permanently moved abrad anchor-person households

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Volumes, Response Rates, and Median Interview Length of Both Questionnaires

	Number of Interviews	Response Rate	Median interview length (in min.)
Household	2,723	27.2[1]	15
Individual[2]	4,964	83.8	30

1 Corresponds to response rate II in table 15
2 Target population: persons in participating households born in 1995 or earlier

of education, etc.). Furthermore, the mean number of persons living in these households is considerably higher than in general population samples. In sample M, the mean household size in the net sample was 3.1, and in 15% of all housholds five people or more were living in one household. Compared to that, in samples A-K the mean household size in the net sample 2013 was 2.2, and only 5% of all households had five or more household members. The bigger the household size, the harder it is to obtain all individual questionnaires.

Section B
The SOEP Innovation Sample

3 SOEP-IS

3.1   Overview

The SOEP Innovation Sample (SOEP-IS) has been designed as a separate panel to enable substantial methodological research such as testing innovative questionnaire modules and fieldwork procedures. Established in 2011, it constitutes a relatively new household longitudinal survey that complements the SOEP's main sample system. Important features of sampling design and core fieldwork procedures are similar to those in the main sample, but the SOEP-IS also offers special design features that ease the piloting and testing of innovative survey modules.

Sample I_1, which was established as main SOEP sample I in 2009, served as the first SOEP-IS sample when the study was institutionalized officially in 2011. Since then, the innovation sample has been expanded in sample size with refresher samples in 2012 (sample I_2) and 2013 (sample I_3) and a transfer of a subset of households from the main SOEP's sample E in 2012 (sample I_E). With more refresher samples planned in the following years, the aim of a total sample size of 5,000 households should be achieved in 2017.

In the 2013/2014 wave, it was possible to conduct interviews in 3,173 households. In addition to the 1,166 households of the new I_3 refresher sample, 833 households from last year's refresher sample I_2, 863 households from the sample I_1 and another 311 households from sample I_E took part in this wave of the SOEP-IS. The panel stability of samples I_1 and I_E has slightly increased to a measure closer to some of the main SOEP samples (92.7%). In the case of sample I_2, which went through the challenging transition from a cross-sectional to a longitudinal survey in this wave, panel stability also reached an overall satisfactory rate of 82.5%. However, the response rate in refresher sample I3 did not turn out as well as hoped (27.1%). In total, 5,141 individuals in the participating households took part in the SOEP-IS in wave 2013/2014.

The quantitative expansion of the IS was accompanied by several changes in the fieldwork procedures. First, in August 2013, a select group of interviewers, the so-called "contact interviewers," were trained at a central location for the first time in the context of the SOEP-IS survey. Subsequently, the contact interviewers trained their colleagues who were in charge of the data collection in the households. It was possible to combine the training for both the refresher and the longitudinal samples because this year's fieldwork in these samples was con-

Table 17

Distribution of the Innovation Modules

	I_E / I_1	I_2	I_3
Narcissistic admiration and rivalry questionnaire (NARQ-S)	x		
Conspiracy mentality	x		
Physical activity		x	x
Preload education	x	x	
Language at work	x		
Individual job tasks			x
Factorial survey on job preferences and job offer acceptance	x	x	
Test effort-reward-imbalance at work scale (ERI)	x		
Day reconstruction method (DRM)	x		
Sleep characteristics		x	

ducted at nearly the same time, between August/September 2013 and February/March 2014. Furthermore, the incentives were standardized such that the reward for a completed interview is now €10, which made it necessary to increase the incentives in samples I_I and I_E.

The continuous enhancement of the sample size of SOEP-IS enables the introduction of more innovative modules without simultaneously having to increase interview time and therefore respondent strain. Thus, in the 2013/2014 wave, it was possible to implement an interesting, varied questionnaire with a tolerable interview length. This wave's innovation modules, which are described in more detail in the next section, dealt, for example, with physical activity, sleep characteristics, and several questions concerning the workplace, topics closely related to the respondent's daily life. One of these programs, a factorial survey on job preferences and job offer acceptance, exploits SOEP-IS's design as a household survey to estimate the probability of job changes, especially for persons in relationships.

3.2   The SOEP-IS Questionnaire

An integrated core questionnaire, which is based on questionnaires from the SOEP's main sample, sets the recurring frame of 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 in order to pro-

vide a fluent and smooth interview situation. The SOEP-IS core questionnaire that was used in 2013 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 1996)
- Only in the longitudinal samples: three **mother-child modules** to be completed by:
  - Mothers of children up to 23 months old
  - Mothers (or main caregivers) of children between 24 and 47 months old
  - Mothers (or main caregivers) of children older than 48 months

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 integrated in the questionnaire for the SOEP-IS in 2013. To be able to consider as many different ideas as possible, given the limited interview time, the samples received different sets of innovation modules. In order not to overburden the new SOEP-IS panel members in refresher sample I3 who have to answer life history questions, the number of innovation modules in their version of the question-

naire was limited. Table 17 illustrates the distribution of innovation modules in the subsamples.

Narcissistic Admiration and Rivalry Questionnaire (NARQ-S)

The NARQ-S is the short version of the "Narcissistic Admiration and Rivalry Questionnaire," which is a recently developed survey instrument to measure narcissism. The scale is based on the idea that narcissism can be decomposed into two dimensions: admiration, the tendency to approach social admiration by means of self-promotion (assertive self-enhancement), and rivalry, the tendency to prevent social failure by self-defense (antagonistic self-protection).

Respondents were asked to assess how much six statements such as "I deserve to be seen as a great personality," "I manage to be the center of attention with my outstanding contributions," and "I want my rivals to fail" apply to them.

Conspiracy Mentality

On the basis of the "Conspiracy Mentality Questionnaire" (CMQ) this module gathered information about respondents' individual belief in conspiracy theories. So far, affinity to conspiracy theories has been studied mainly in relation to specific situational factors such as social inequalities. However, there is growing evidence of individual differences in the tendency to believe in conspiracy theories and their possible influence on both attitudes and behavior. Up to now, no representative data on a national level for Germany has been available on this issue.

Using a rating scale, respondents could express their consent to five statements, such as "I think that many very important things happen in the world, which the public is never informed about", "I think that government agencies closely monitor all citizens" or "I think that there are secret organizations that greatly influence political decisions."

Physical Activity

This set of questions was included in the questionnaire to be able to examine determinants and consequences of physical activity in various areas of life. Particularly the following contexts are of interest to the researchers who initiated this module: physical activity and its effects on health, the causal direction of the relationship between physical activity and educational achievement,

and physical activity and its influence on personal labor market opportunities.

The module was divided into three sections. In the first part, all respondents answered questions about their physical activity in general. In this case "physical activity" was defined as all activities that co-occur with a faster-beating heart and increased breathing. The second section dealt with sports in a more narrow sense and in the context of the two main sports in which the respondent reported participating. For these, questions about the sports' nature, frequency, duration, participation in sports competitions, place and context were asked. Finally, a third section included questions on the main sport that the respondent participated in during childhood and adolescence.

Preload Education

This module consisted of two new questions that displayed the secondary and tertiary educational degrees that were recorded for the respondent during the first SOEP-IS interview up to four years before. The respondent was asked to confirm the previously obtained information on degrees. Whenever the recorded information was incorrect, the interview automatically filtered into the relevant questions from the life history questionnaire to obtain the correct data.

Language at Work

The section with questions about the use of different languages at work investigates which languages persons use in their workplace and what the official language of their company is. In the context of growing internationalization of enterprises and an increasing level of language proficiency within the workforce, this module allows a closer look at language use in current German work settings.

Individual Job Tasks

Technological and demographic change as well as globalization within the last few decades suggests that the activities people perform at work might have changed significantly in recent years. To understand these developments and their consequences for the job environment, this module aimed at the collection of detailed individual data on work activities using a set of questions of which one was already used in 1986 in a survey on job tasks by the Federal Institute for Vocational Education and Training (Bundesinstitut für Berufsbildung (BIBB). The academic researchers who are responsible for the content of this module hope to answer a number of research questions by its use in a longitudinal study:

Table 18

Factorial Survey—Overview Dimensions and Levels Vignettes

Dimensions	Levels					
	1		2		3	
Income increase	0%	20%	30%	40%	50%	60%
Minimum working hours	20 hours		30 hours		40 hours	
Career prospects	none		few		many	
Duration of employment contract	unlimited		lim. for 1 year		lim. for 3 years	
Demand to work overtime	no		sometimes		often	
Schedule flexibility	no		some		high	
Childcare facilities	no		part-time		full-time	
Commuting distance (one way)	45 min		1 hour		4 hours	
Partner's job prospects at new location[1]	worse		similar		better	

1 Presented only to respondents living in a cohabiting partnership

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How are jobs changing over time? Which activities are important, and which ones are less important? Which jobs are at a higher risk of being outsourced and which jobs are more likely to remain in the country?

First, respondents were asked to assess how much time they spend on certain activities in a regular working day. The next questions dealt with the need to be at a certain location and build relations to clients to be able to carry out their work. Finally, panel members were asked to rate how codifiable and routinized their job tasks are.

Factorial Survey on Job Preferences and Job Offer Acceptance

The factorial survey on job preferences and job offer acceptance was designed mainly as a self-administered questionnaire presenting each respondent who belongs to the workforce with five vignettes designed in the form of five fictitious job descriptions. After each job description, the respondent had to answer a question about the attractiveness of the offer, his or her probability of accepting the offer, and the probability that he/she and, if applicable, his/her partner would relocate to the new workplace. The systematically varied elements in the vignettes are displayed in **Table 18**.

Depending on whether the respondent was living with a spouse or partner, three different variants of the scenario ("mover vignette," "tied-mover vignette," or "single vignette") were displayed, benefitting from the set-up of the SOEP-IS, which includes all adult household members in the survey. One of the married or cohabiting partners received the mover vignette, describing a job offer aimed at him or her but including a statement about his/her partner's job opportunities at the location. The second partner in the same household was given the vignette showing the job offer aimed at the first partner (tied-mover vignette) and was asked to rate it in terms of attractiveness and likelihood that the first partner would accept the offer and that both partners would move to the city where the new job is located. The remaining respondents who were single or not living with a partner received the single vignette, a job offer that did not include any references to a partner.

The module examines the conditions under which respondents are willing to accept a new job and to relocate for the new job, and aims to examine the impact of gender, household structures, working conditions, and work family policies on inequalities in labor market participation.

Effort-Reward Imbalance (ERI)

A version of the Effort-Reward Imbalance (ERI) scale has been used in the SOEP main sample (2006, 2011) as well as in the SOEP-IS (2011) to measure effort-reward imbalance at work. This year, in a split design, a slightly altered version of this module was introduced along with the version of the module that has been used traditionally in the SOEP. Half of the panel members in

Table 19

Fieldwork Progress for Samples I$_1$, I$_2$ and I$_E$: Processing of Household Interviews

	2012/2013		2013/2014	
	Gross Sample	Net Sample	Gross Sample	Net Sample
September[2]	4	3	30	32
October	52	58	66	71
November	76	82	80	86
December	90	93	89	94
January	90	94	91	95
February	98	99	99	100
March	100	100	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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samples I$_E$ and I$_I$ received the questions as they appear in the regular SOEP version of the scale. The other half received the questions with slightly modified scales.

Day Reconstruction Method (DRM)

The set of Day Reconstruction Method (DRM) questions is designed to deliver an accurate reconstruction of the respondent's previous day. The module collected information on all activities as episodes, including start and end time, with the help of a list that contained 24 activities, such as "shopping," "watching children," and "doing sports." Afterwards, other 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.

The extensive module was already used in the SOEP-IS refresher sample 2012 as a pretest and later in the year in the SOEP-IS longitudinal sample. The intention is to measure the long-term stability of the DRM ratings over four consecutive waves, 2012 to 2015. The module is an adaptation of the DRM as introduced by Kahneman and colleagues in 2004. By asking about the respondent's sensations throughout the day, researchers have an opportunity to build new measures of subjective well-being and examine the impacts of different activities on the quality of life.

Sleep Characteristics

The sleep module is set within the framework of the project "The National Cohort" (a prospective, population-based cohort study to investigate common diseases, their early detection, and prevention). This broad initiative also intends to investigate certain characteristics of sleeping behavior. The SOEP-IS Sample I$_2$ is one of many samples that are used in this project. At least 100,000 persons were interviewed in total. The module's comprehensive questionnaire was developed based on a variety of previously validated instruments. It considered numerous characteristics of sleep, such as "snoring/apnea," "nodding off while driving," "naps" and "sleeping environment."

3.3 Longitudinal Samples I$_1$, I$_2$ and I$_E$

Fieldwork progress

To distinguish fieldwork of SOEP-IS from fieldwork in the main sample that traditionally starts in February and lasts until September or October, fieldwork for the SOEP-IS usually starts in September. Data collection for the main fieldwork wave goes on until December and is then followed up by an additional fieldwork period at the beginning of the next year because the four months between September and December do not provide sufficient time to process all households as thoroughly as is needed for a high longitudinal response rate.

For 2013, this routine was followed again. The main fieldwork period lasted from September to December 2013. As is indicated by the figures in **Table 19**, 94% of the households were processed within this period. The remaining gross sample was assigned to the next fieldwork stage, in which households that could not be interviewed during the main fieldwork period were contacted again face-to-face. This stage lasted until the end of February 2014.

Table 20

Fieldwork Results (Households)

	Total			Sample $I_1 + I_E$			Sample I_2		
	Num.	In % Gross	In % Net	Num.	In % Gross	In % Net	Num.	In % Gross	In % Net
Total	2,472	100.0		1,417	100.0		1,055	100.0	
QNDs	-	-		-	-		-	-	
Deceased[1]	6	0.2		5	0.4		1	0.1	
Expatriates[2]	5	0.2		2	0.1		3	0.3	
Interview	2,007	81.2	100.0	1,174	82.9	100.0	833	79.0	100.0
Completely	1,689	68.3	84.2	998	70.4	85.0	691	65.5	83.0
Partly	318	12.9	15.8	176	12.4	15.0	142	13.5	17.0
Not realized	454	18.4		236	16.7		218	20.7	
No contact	49	2.0		21	1.5		28	2.7	
Interview not possible[3]	45	1.8		21	1.5		24	2.3	
Refusals	356	14.4		190	13.4		166	15.7	
Temporary	81	3.3		40	2.8		41	3.9	
Final	275	11.1		150	10.6		125	11.8	
Other	4	0.2		4	0.3		0	0.0	

1 That is, the last person in the household was deceased
2 Whole household moved abroad
3 Due to sickness, mental disease, permanent absence during fieldwork period or other reasons

Fieldwork indicators (household level)

Table 20 presents final fieldwork results for samples I_1, I_2, and I_E at the household level. The total gross sample consisted of 2,472 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, 2,007 households took part in the SOEP-IS, i.e., 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 21**. Combining all three subsamples, 2,277 (92.1%) of the 2,472 gross sample households were previous wave respondents. One hundred and twenty-nine households (5.2%) were temporary drop-outs from the previous wave that were contacted anew 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 2013, 66 new households were integrated into the gross sample.

The fieldwork results of longitudinal samples can be measured using two basic parameters: the first is panel stability, which is the decisive indicator of a household panel survey's successful development from a long-term perspective. Since panel stability is calculated as the number of participating households in the current wave 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 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.

At 92.7%, the panel stability achieved in samples I1 and I_E in 2013 is again slightly higher than in the last wave, reaching levels closer to those for some of the main SOEP samples. In the case of sample I2, which went through the challenging transition from a cross-sectional to a longitudinal survey in this wave, the panel stability also reached an overall satisfactory rate of 82.5%.

Key Fieldwork Indicators

	2012/2013		2013/2014			
	Sample $I_1 + I_E$		Sample $I_1 + I_E$		Sample I_2	
	Num.	In %	Num.	In %	Num.	In %
(1) Gross sample composition by types of households						
Previous wave respondents	1,487	92.4	1,267	89.4	1,010	95.7
Temporary drop-outs prev. wave(s)	62	3.9	115	8.1	14	1.3
New households (split-off hh)	61	3.8	35	2.5	31	2.9
Total	1,610	100.0	1,417	100.0	1,055	100.0
(2) Net sample composition by types of households						
Previous wave respondents	1,217	96.1	1,109	94.5	807	96.9
Temporary drop-outs prev. wave(s)	27	2.1	43	3.7	9	1.1
New households (split-off hh)	23	1.8	22	1.9	17	2.0
Total	1,267	100.0	1,174	100.0	833	100.0
(3) Panel stability[1]		89.2		92.7		82.5
(4) Response rates by type of household (adj. gross sample)[2]						
Previous wave respondents		82.4		87.9		80.2
Temporary drop-outs prev. wave(s)		43.5		37.7		64.3
New households (split-off hh)		37.7		62.9		54.8
Total response rate		79.2		83.3		79.3
(5) Interviewer[3]						
Number of interviewers	207		205		139	
Average num. of households per int.	7.6		6.8		7.6	

1 Number of participating households divided by previous wave's net sample—2012/2013 restricted to I_1

2 Adjusted by deceased persons and expatriates

3 Total (Sample I1, IE and I2): Number of Interviewers: 258, average number of household interviews: 9.5

Individual response rates

The share of only partially completed households was 15.8%. Therefore, in 318 of the participating households, at least one target person did not complete an individual interview.

A total of 4,410 persons were living in the 2,472 households that participated in SOEP-IS in the longitudinal samples in 2013, 3,670 of whom were at least 16 years old and were therefore asked to complete an individual questionnaire. The 3,301 personal interviews that could be conducted result in a response rate of 89.9% (**Table 22**).

3.4   Refresher sample I_3

Sampling

Refresher sample I3 was introduced to further enhance the sample size of SOEP-IS by adding approximately 1,000 newly recruited households. Similar to all previous general population samples in the SOEP (including refresher samples J (2011) and K (2012)), sample I3 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 sam-

Table 22

Distribution of Screen-Out Cases

	Interviews	Response/Coverage Rate
Individual questionnaire	3,301	89.9
Mother and child questionnaire A[1]	61	92.4
Mother and child questionnaire B[2]	83	96.5
Mother and child questionnaire C[3]	565	96.1

1   Coverage rate for children up to 23 months old
2   Coverage rate for children between 24 and 47 months old
3   Coverage rate for children older than 48 months

pling 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 I3, we provide some context for why the ADM sampling system for face-to-face interviews is used for SOEP.

The most important background information to bear in mind is that in Germany no centralized population (let alone household) directory is available that contains the addresses of all private households or individuals. The data, which are collected by the local authorities (Städte, Gemeinden) for the personal registers, are available for surveys that prove to be of "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 the elements for 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."[5] Based on the combination of the 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 randomly using a

street data base 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 facing dead ends, split roads, or other special problems on his or her walk through the sampled area.

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 according to two major regional layers, it is possible to observe the deviations from the "target shares" for the inference populations in the respective regional segments. As the SOEP does not use any kind of quota balance according to which adjustments of the gross sample during the fieldwork period could be justified, deviations from the target figures can only be used within the given gross address sample to increase

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5   ADM: The ADM-Sampling-System for Face-to-Face Surveys 2012.

Distribution of Sample Points by Federal State

	Number Sample Points	Share Sample Points	Share Households in Germany[1]	Share Households in Net Sample
Baden-Wuerttemberg	15	12.0%	12.5%	10.1%
Bavaria	18	14.4%	14.8%	16.6%
Berlin	6	4.8%	5.0%	4.6%
Brandenburg	4	3.2%	3.1%	3.6%
Bremen	1	0.8%	0.9%	0.7%
Hamburg	3	2.4%	2.5%	0.9%
Hesse	9	7.2%	7.3%	9.3%
Mecklenburg-West Pomerania	3	2.4%	2.1%	1.8%
Lower Saxony	12	9.6%	9.6%	10.5%
North Rhine-Westphalia	27	21.6%	21.6%	21.4%
Rhinel.-Palatinate	6	4.8%	4.7%	4.7%
Saarland	2	1.6%	1.2%	1.3%
Saxony	7	5.6%	5.5%	4.7%
Saxony-Anhalt	4	3.2%	3.0%	2.6%
Schleswig-Holstein	5	4.0%	3.4%	3.9%
Thuringia	3	2.4%	2.8%	3.3%
Total	125	100.0%	100.0%	100.0%

1 Microcensus 2012

the efforts in sample points and regions where significant deviations can be observed. This leads, in general, to an underrepresentation of households in urban areas, due to lower response rates in the more densely populated regions.

Stage 2: Random Route Walk and Address Listing

In the second stage of the selection process, the households that are supposed to participate in the study are chosen for each sample point. Here a special version of the random route technique is employed. Instead of choosing the addresses and conducting the interview at the same time, the selection of addresses is 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 SOEP delivers essential methodological advantages compared to the standard random walk routine:

- Since the addresses are available before the start of fieldwork, they can be checked with regard to 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 has been correctly implemented by the interviewer who has listed the addresses.
- The address listing is a prerequisite for the fieldwork institute to use measures to increase response rates and decrease unit non-response, such as an advance information letter along with a study brochure before fieldwork commences. Given the declining 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

Table 24

Distribution of Sample Points by Municipal Type (BIK)

BIK-Type[1]	Number Sample Points	Share Sample Points	Share Households in Germany[2]	Share Households in Net Sample
0	35	28.0%	28,4%	27.8%
1	11	8.8%	9.0%	6.9%
2	20	16.0%	15.8%	16.8%
3	17	13.6%	14.0%	15.0%
4	3	2.4%	2.4%	2.1%
5	10	8.0%	7.6%	7.2%
6	14	11.2%	10.6%	11.8%
7	10	8.0%	8.1%	7.7%
8	4	3.2%	2.5%	3.0%
9	2	1.6%	1.7%	1.5%
Total	125	100.0%	100.0%	100.0%

1 Municipal type (BIK) groups regions into categories according to the number of inhabitants and the location:
  0 = more than 500,000 inhabitants (center)
  1 = more than 500,000 inhabitants (periphery)
  2 = 100,000 to 499,999 inhabitants (center)
  3 = 100,000 to 499,999 inhabitants (periphery)
  4 = 50,000 to 99,999 inhabitants (center)
  5 = 50,000 to 99,999 inhabitants (periphery)
  6 = 20,000 to 49,999 inhabitants
  7 = 5,000 to 19,999 inhabitants
  8 = 2,000 to 4,999 inhabitants
  9 = less than 2,000 inhabitants

2 Gemeindedatei 2012

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detail on contact sheets (referred to in SOEP as the "address protocol"). This facilitates the generation of important data on the "gross sample," regardless of whether a household participates 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, 36 addresses per sample point were randomly selected for fieldwork. The addresses were issued to the interviewer in two sample releases, the first release in August 2013 with 24 addresses per sample point and a second release in January 2014 with another 12 addresses per sample point.

Fieldwork progress

Fieldwork in the SOEP-IS refresher sample lasted from August 2013 to March 2014. Around 50% of house-

Table 25

Fieldwork Progress 2013/2014 in Sample I$_3$ as a Percentage of the Gross and Net Sample[1]

	Gross Sample	Net Sample
August[2]	5	3
September	31	35
October	44	52
November	48	56
December	50	59
January	70	78
February	92	97
March	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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Table 26

Fieldwork Results (Households)

	Gross Sample			Adjusted Gross Sample		
	Num.	In % Gross	In % Net	Num.	In % Gross	In % Net
Total	4,500	100.0				
QNDs	194	4.3				
				4,306		
Interview	1,166	25.9	100.0	1,166	27.1	100.0
Completely	989	22.0	84.8	989	23.0	84.8
Partly	177	3.9	15.2	177	4.1	15.2
Not realized	3,140	69.8		3,140	72.9	
No contact	363	8.1		363	8.4	
Interview not possible[1]	227	5.0		227	5.3	
Refusals	2,550	56.7		2,550	59.2	
Temporary	140	3.1		140	3.3	
Final	2,410	53.6		2,410	56.0	
Other	–	–		–	–	

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

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holds 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 participation. Since 2000, the motivation of the public to take part in surveys has decreased

Table 27

Fieldwork Results (Households)—Refresher sample I$_3$ by Sample Releases

	Total			Sample Release I			Sample Release 2		
	Num.	In % Gross	In % Net	Num.	In % Gross	In % Net	Num.	In % Gross	In % Net
Total[1]	4,306			2,875			1,431		
Interview	1,166	27.1	100.0	824	28.7	100.0	342	23.9	100.0
Completely	989	23.0	84.8	704	24.5	85.4	285	19.9	83.3
Partly	177	4.1	15.2	120	4.2	14.6	57	4.0	16.7
Not realized	3,140	72.9		2,051	71.3		1,089	76.1	
No contact	363	8.4		191	6.6		172	12.0	
Interview not possible[2]	227	5.3		141	4.9		86	6.0	
Refusals	2,550	59.2		1,719	59.8		831	58.1	
Temporary	140	3.3		70	2.4		70	4.9	
Final	2,410	56.0		1,649	57.4		761	53.2	
Other	–	–		–	–		–	–	

1 Adjusted by QNDs
2 Unable because of mental or health issues, respondent was permanently unavailable during the entire fieldwork period, or other reasons

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substantially. There have been several initiatives to stop this trend, and these measures initially seemed to have helped stabilize response rates in first-wave SOEP surveys. However, refresher sample I_3 seems to deviate in a disappointing way from this trend, which in recent years even appears to have come to an end halting and even slightly reversed trend in the last years.

It was possible to motivate 1,166 households to take part in SOEP-IS refresher sample I_3, but only by issuing a larger gross sample than first intended. After starting fieldwork with a gross sample of 3,000 addresses, close monitoring during the fieldwork period showed that it would not be possible to generate the intended net sample without enlarging the gross sample. So another 1,500 addresses were issued to the interviewers at the beginning of January 2014.

So the response rate in the total adjusted gross sample equals 27.1% (28.7% in the first sample release). This is significantly lower than other recently established samples (e.g., J 2011: 33.1%; K 2012: 34.7%; I_2 2012: 34.7%). **Tables 26** and **27** show the fieldwork results in detail.

Individual response rates

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 standard SOEP survey, the innovation sample tries to target every member of the household who has reached the age of 16. The share of all households in sample I_3 for which at least one person did not complete the individual interview is 15.2% (**Table 26**). Therefore, in 177 of the 1,166 households at least one interview is missing. This means that the level of unit non-response in sample I_3 is lower than in the previous sample I_2 (22.0%) and similar to samples J and K (J 2011: 16.0%; K 2012: 14.6%).

Another indicator for response on an individual level is the number of people who were interviewed with the individual questionnaire. For I_3 from 2,043 adults in participating households 1,840 took part in the survey. This equals a response rate of 90.1%.

Part IV: Conferences and Events

Celebrating 30 Years of Happiness Research with the SOEP Data

The SOEP Anniversary Colloquium on Happiness Research

How does poverty affect life satisfaction? How do factors like work and volunteering affect well-being? Is life satisfaction contagious? Does happiness follow a U-shaped trajectory over the life course? At the Colloquium on Happiness Research, the SOEP celebrated its 30th anniversary. The colloquium took place on September 20, 2013, at the Hertie School of Governance in Berlin.

Eleven renowned researchers from around the world—economists, psychologists, and other social scientists—presented their findings from research on happiness, well-being, and life satisfaction based on the SOEP data. Recent findings were also presented in a poster session. One keynote lecture was dedicated to new methodologies for modelling happiness.
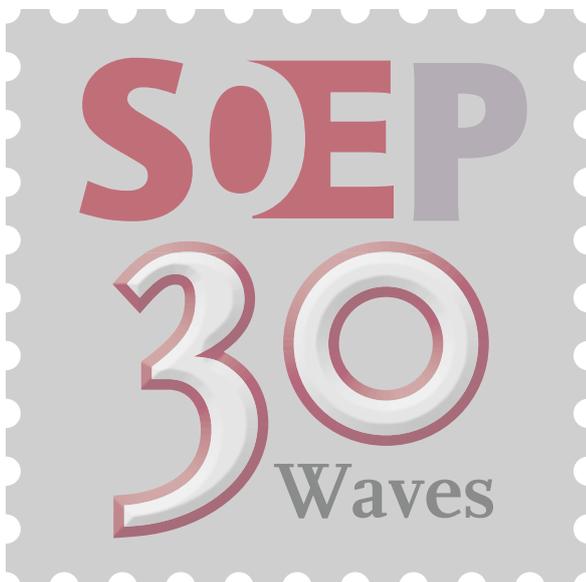
A few highlights from the program:

Can people adapt to poverty?

Luxemburg economist Conchita D'Ambrosio explored the question of how poverty can affect people's life satisfaction over the course of time.

Is happiness mainly the result of personal choices? Australian social scientist Bruce Headey discussed evidence that the effect of personal choices and professional decisions on life satisfaction is equal to the influence of traits that are genetic in origin or that develop during childhood. The study was based on data from the SOEP, the UK longitudinal study BHPS, and the Australian longitudinal study HILDA.

Do people really have a midlife crisis?

British economist and Science editor Andrew Oswald argued: Yes. Data on happiness from around the world show that happiness is U-shaped through life in many countries.

What does the life course sound like?

Nilam Ram, psychologist from the USA, presented a lecture on time-oriented design and data analysis based on the SOEP data together with an artistic performance. With the participation of the attendees, he transformed their individual life courses into a joint sound experience—with the aid of eight kinds of small art objects, including rubber bands, coins, and matchboxes.

At the end of the day, the SOEP Best Publication Prizes were awarded for papers based on SOEP data that were published in 2011 and 2012. A journalistic award was also presented.

Photo: Christine Kurka

Box 1

Happiness Research with SOEP Data

Since its beginning in 1984, the SOEP has been surveying more than 10,000 people every year on their **life satisfaction** (or in more general terms, "**happiness**"). On a scale from 0 to 10, respondents are asked to rate how satisfied they are overall with their lives. An answer of 0 means completely dissatisfied and an answer of 10 means completely satisfied. Happiness research has become one of the most im-

portant fields of research using the SOEP data in recent years. Around 450 SOEP studies on happiness have been published to date. According to SOEP Director Jürgen Schupp, "Data on personal life satisfaction are an important variable for measuring quality of life. For those who want to understand quality of life, it is crucial not only to consider objective living conditions but also to take life satisfaction into account."
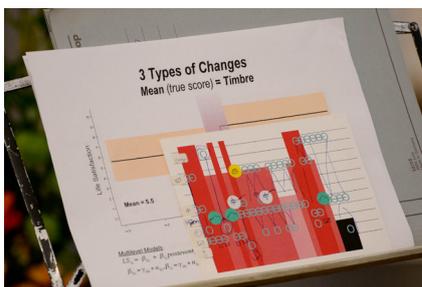
Participants of the
Anniversary Colloquium

The 2013 SOEP Best Publication Prize

The SOEP Best Publication Prize is awarded on a biennial basis in the year between the international SOEP user conferences. The prize is awarded in three categories: the best scientific publication (first prize: 1,000 euros, second prize: 500 euros), the best scientific publication by a junior researcher (aged 35 or under, 500 euros), and the best media contribution by a journalist (500 euros).

The SOEPprize is funded by the Society of Friends of DIW Berlin (VdF) and the winners were selected by the SOEP Survey Committee. We are proud to present the 2013 prize winners, selected from the 115 eligible scientific and 80 media contributions registered in our SOEPlit database 2011 and 2012 (excluding publications by SOEP staff). These publications provide striking testimony to the high level of scholarly research that can be produced using SOEP data. The awards ceremony was held at the Happiness Colloquium on September 20, 2013.

The prize certificates were handled out by Alexander Romanski, a board member of the VdF. This year's winners are:

First Prize for the Best Scientific Publication:

This year, the prize for best paper of all the publications listed in the SOEP database goes to a top publication in the field of economics:

Anke **Becker***, Thomas* **Deckers***, Thomas* **Dohmen,** *Armin* **Falk***, Fabian* **Kosse:** *"The Relationship between Economic Preferences and Psychological Personality Measures" (Annual Review of Economics, 2012, 4: 453–78)*

In this article, the young team of experimental economists around Leibniz award winner Armin Falk shows that economists would be well advised to expand their research to consider psychological concepts and to integrate these into their models to better understand the mechanisms underlying individual action.

Although both economists and psychologists seek to identify determinants of heterogeneity in behavior, they use different concepts to capture them. In this review, we first analyze the extent to which economic preferences and psychological concepts of personality, such as the Big Five and locus of control, are related. We analyze data from incentivized laboratory experiments and representative samples and find only low degrees of association between economic preferences and personality. We then regress life outcomes (such as labor market success, health status, and life satisfaction) simultaneously on preference and personality measures. The analysis reveals that the two concepts are rather complementary when it comes to explaining heterogeneity in important life outcomes and behavior.

The second prize this year goes to three empirical analyses published in top journals in three different disciplines that are based on the SOEP data.

Eric **Bonsang,** *Tobias J.* **Klein***: "Retirement and Subjective Well-Being"*
(Journal of Economic Behavior & Organization, 2012, 83(3): 311-29)

Second Prize for the Best Scientific Publication
(3 winners, listed in alphabetical order by first author):

Economics

The first Second Prize—this one from the field of economics—goes to two economists whose article explores the question of how voluntary vs. involuntary transitions to retirement affect individual well-being.

Eric **Bonsang,** *Tobias J.* **Klein***: "Retirement and Subjective Well-Being"*
(Journal of Economic Behavior & Organization, 2012, 83(3): 311-29)

The life cycle model predicts that individuals substitute leisure for consumption when they retire. We show that the effect of retirement on various well-being measures available in the German Socio-Economic Panel (SOEP) are compatible with this prediction: the overall effect on life satisfaction is negligible, while satisfaction with the free time increases and satisfaction with household income decreases. The life cycle model also predicts that involuntary retirement is likely to have adverse effects because individuals would actually prefer to work in order to consume more, but are prevented from doing so. They find that indeed, involuntary retirement results in an overall negative effect that can partly be explained by a bigger drop in income satisfaction and a smaller increase in satisfaction with the free time.

Psychology

The second Second Prize—this one from the field of psychology—goes to a team of two British researchers who completed their study based on the SOEP data during a research stay at the Paris School of Economics. In it, they explore how individual personality traits affect the ability to adjust psychologically following illness or disability and thus to regain previous levels of life satisfaction.

Christopher J. **Boyce,** *Alex M.* **Wood:** *"Personality Prior to Disability Determines Adaptation: Agreeable Individuals Recover Lost Life Satisfaction Faster and More Completely" (Psychological Science, 2011, 22(11): 1397-402)*

Personality traits prior to the onset of illness or disability may influence how well an individual psychologically adjusts after the illness or disability has occurred. Previous research has shown that after the onset of a disability, people initially experience sharp drops in life satisfaction, and the ability to regain lost life satisfaction is at best partial. However, such research has not investigated the role of individual differences in adaptation to disability. The authors suggest that predisability personality determines the speed and extent of adaptation. The authors analyzed measures of personality traits in a sample of 11,680 individuals, 307 of whom became disabled over a 4-year period in SOEP. The authors show that although becoming disabled has a severe impact on life satisfaction, this effect is significantly moderated by predisability personality. After 4 years of disability, moderately agreeable individuals had levels of life satisfaction 0.32 standard deviations higher than those of moderately disagreeable individuals. Agreeable individual adapt more quickly and fully to disability; disagreeable individuals may need additional support to adapt. Whereas the approximately 50% who stay loyal to either the CDU or the SPD (or remain independent) are the stabilizing base of the party system, the 50% who are unstable partisans may be the crucial element in elections and in determining periods where one major party will be dominant over the other.

Political Science

The third Second Prize—this one from the field of political science—goes to a team of three political scientists. In their article, they examine partisan identification over a 24-year period. They use mixed latent Markov models to identify change and stability in individual-level attachment or identification voters have with political parties. Their focus is on the voters who report long-term partisan identification with the German parties SPD and CDU.

Anja **Neundorf,** *Daniel* **Stegmüller,** *Thomas* **Scotto:** *"The Individual-Level Dynamics of Bounded Partisanship" (Public Opinion Quarterly, 2011, 75(3): 458-82)*

Over the past half century, scholars have utilized a variety of theoretical and methodological approaches to study the attachment or identification voters have with political parties. However, models of partisan (in)stability ignore its bounded character. Making use of Mixed Latent Markov Models, the authors measure the change and stability of individual-level West German partisan identification captured over a 24-year period via the German Socio-Economic Panel (SOEP). Results suggest that distinctive subpopulations exist that follow different patterns of partisan stability. One party's loss is not necessarily another party's gain.

And, as in the past years, the SOEP again is awarding prizes for talented junior researchers. As with the Second Prizes for Best Paper, our jury also chose winners in three disciplines.

Best Scientific Publication by a Junior Researcher (3 winners, listed in alphabetical order by first author):

The first Junior Prize—for a study in the field of economics—goes to Christina **Felfe** from the Swiss Institute for Empirical Economic Research (SEW) at the University of St. Gallen.

*Christina **Felfe:** "The motherhood wage gap: What about job amenities?" (Labour Economics, 2011, 19(1): 59-67)*

Women with children tend to earn lower hourly wages than women without children — a shortfall known as the 'motherhood wage gap'. While many studies provide evidence for this empirical fact and explore several hypotheses about its causes, the impact of motherhood on job dimensions other than wages has scarcely been investigated. In order to assess changes in women's jobs around motherhood, Christina Felfe uses data from the German Socio-Economic Panel and employs a first difference analysis. The results reveal that women when having children accommodate at their original employer primarily through adjustments in working hours. Yet, when changing the employer women adjust their jobs in several dimensions, such as different aspects of the work schedule (working hours, work at night or according to a flexible schedule) as well as the level of stress. Further analysis provides some limited support for the motherhood wage gap being explained by adjustments in the work conditions.

The second Junior Prize—for a study in the field of family sociology—goes to two sociologists for their SOEP-based publication in the renowned Journal of Marriage and Family.

*Michael **Kühhirt**, Volker **Ludwig:** "Domestic Work and the Wage Penalty for Motherhood in West Germany" (Journal of Marriage and Family, 2012, 74(1): 186-200)*

Previous research suggests that household tasks prohibit women from unfolding their full earning potential by depleting their work effort and limiting their time flexibility. The present study investigated whether this relationship can explain the wage gap between mothers and nonmothers in West Germany. The empirical analysis applied fixed-effects models and used self-reported information on time use and earnings as well as monthly family and work histories from the German Socio-Economic Panel. The findings revealed that variation in reported time spent on child care and housework on a typical weekday explains part of the motherhood wage penalty, in particular for mothers of very young children. Furthermore, housework time incurred a significant wage penalty, but only for mothers. The authors concluded that policies designed to lighten women's domestic workload may aid mothers in following rewarding careers.

The third Junior Prize—for a publication in the field of psychology—goes to the research team headed by Jule **Specht,** who is now a Junior Professor at the Free University Berlin.

Jule **Specht,** *Boris* **Egloff,** *Stefan C.* **Schmukle:** *"Stability and Change of Personality Across the Life Course: The Impact of Age and Major Life Events on Mean-Level and Rank-Order Stability of the Big Five" (Journal of Personality and Social Psychology, 2011, 101(4): 862-82)*

Does personality change across the entire life course, and are those changes due to intrinsic maturation or major life experiences? This longitudinal study investigated changes in the mean levels and rank order of the Big Five personality traits in a heterogeneous sample of 14,718 Germans across all of adulthood. Latent change and latent moderated regression models provided four main findings: First, age had a complex curvilinear influence on mean levels of personality. Second, the rank-order stability of Emotional Stability, Extraversion, Openness, and Agreeableness all followed an inverted U-shaped function, reaching a peak between the ages of 40 and 60, and decreasing afterwards, whereas Conscientiousness showed a continuously increasing rank-order stability across adulthood. Third, personality predicted the occurrence of several objective major life events (selection effects) and changed in reaction to experiencing these events (socialization effects), suggesting that personality can change due to factors other than intrinsic maturation. Fourth, when events were clustered according to their valence, as is commonly done, effects of the environment on changes in personality were either overlooked or overgeneralized. In sum, the analyses show that personality changes throughout the life span, but with more pronounced changes in young and old ages, and that this change is partly attributable to social demands and experiences.

Best Media Contribution:

The SOEP Award for the Best Media Contribution in 2012 goes to journalist Barbara **Leitner** for her radio program on "Lebensläufe in Zahlen" (figures on the life course), which was broadcast on Deutschlandfunk on July 5, 2012.

Barbara **Leitner:** "Lebensläufe in Zahlen – Studien auf der Basis des Sozio-oekonomischen Panels" (Deutschlandfunk, Studiozeit: Aus Kultur- und Sozialwissenschaften, July 5, 2012)

In her radio program, Barbara Leitner covers research findings based on SOEP data presented at the SOEP User Conference in 2012. The main theme of her program is the unequal distribution of educational opportunity and of the resulting opportunities at social advancement. In it, Barbara Leitner discusses the importance of factors including parental wealth, peer effects, and personality traits. Her program is thoroughly researched and reports SOEP findings from a broad multidisciplinary perspective while at the same time capturing the atmosphere of the conference. Barbara Leitner also succeeds in explaining SOEP research methods in terms that are clear and comprehensible to non-scientists. In sum, Leitner's program exemplifies journalistic excellence in the coverage of SOEP-based scientific findings.

SOEP Respondents Invited by Federal President Gauck to Celebration at Schloss Bellevue in Honor of Volunteer and Community Service

On August 30, 2013, four SOEP respondents attended a summer celebration hosted by German Federal President Joachim Gauck in honor of volunteer and community service work. These respondents, who all live in the Berlin area, have been taking part in "Living in Germany", as the SOEP is known to its respondents, for many years.

The two families were invited by Federal President Gauck to attend the celebration honoring their special form of volunteer service to the community on behalf the approximately 30,000 respondents who voluntarily took part in the study in 2013. Participation in a scientific study over the course of many years should not be taken for granted, but recognized as an expression of the respondents' community spirit.

The SOEP respondents spent an entertaining evening in the gardens of Schloss Bellevue, the presidential residence, together with around 4,000 other invited guests who have provided valuable service to the community through various forms of volunteer and community work. Before attending the summer celebration, the SOEP respondents stopped at DIW Berlin, where they were welcomed by Jürgen Schupp and Gert G. Wagner. SOEP Director Jürgen Schupp told his guests, "when we introduced the SOEP to Federal President Gauck at Schloss Bellevue last year, he personally suggested inviting longtime SOEP respondents to the celebration in honor of volunteer work. We share our respondents' pride in this special recognition from Joachim Gauck.

Photo: Stephan Röhl

Federal President Joachim Gauck and Daniela Schadt greet their guests in the gardens of the presidential residence, Schloss Bellevue

Photo: Stephan Röhl

Mother and son meet famous television host Dr. Eckart von Hirschhausen

Photo: Stephan Röhl

Photo: Stephan Röhl

The "SOEP table" in the gardens at Schloss Bellevue

Special Feature on the SOEP in *Bild der Wissenschaft*

Bild der Wissenschaft, a popular German science magazine, featured the SOEP in its October 2013 special issue on applied social science research. The 25-page special section on the Socio-Economic Panel highlighted some of the most important findings from the last 30 years of the SOEP longitudinal study. Bild der Wissenschaft is distributed throughout the German-speaking world and has a circulation of around 100,000 copies. The special SOEP section (in German) can be downloaded free of charge at: https://www.diw.de/sixcms/detail.php?id=diw_01.c.435417.d

SOEP in the Social Media Facebook and YouTube

Since February 2012, the SOEP has been using Facebook to keep researchers, journalists, and the interested public up to date on the latest news from the SOEP. We post news about the latest research publications based on the SOEP data, media reports, and events; links to the quarterly SOEPNewsletter and the annual Wave Report; as well as job vacancies in the SOEP—all at www.facebook.com/soepnet.de.

In 2012, we launched the Facebook series "Was ist eigentlich?" (What is that, anyway?) to explain key concepts from the SOEP. In 2013, to celebrate the SOEP's 30th survey wave, we launched a special 30-week-long timeline series, with one episode in the history of the SOEP each week.

Summing up our social media activities in 2013:

We gained 200 new Facebook friends (followers)

- Most of our followers (80%) live in Germany; around 8% (49) live in English-speaking countries (e.g., Australia, UK, Canada, USA), other: 2%.
- 50% of our followers are women, 50% are men
- Our Facebook page is most popular among 25-34-year-olds: more than half of our followers belong to this group. Our SOEP Facebook page is used least by people older than 55 years of age (approx. 5%).
- The topics of our most frequently "liked" Facebook posts in 2013 were: income distribution, inequality of educational opportunities, and the Anniversary Colloquium on Happiness Research.

Since February 2013, the SOEP also has a YouTube channel, where first two SOEP films can be seen.

The SOEP **informational** film was produced for us by the Berlin film production company Teer & Feder. The topics of the short film were: Who are the researchers behind the multidisciplinary SOEP study? What were their motivations for creating this one-of-a-kind research infrastructure? What do the SOEP data tell us about the lives of people in Germany?

The SOEP **motivational** film was produced for us by the Berlin film production company Bildungsfilm. In this short film, SOEP respondents tell why they participate in the study. Our survey institute TNS Inftratest Sozialforschung uses this film to motivate potential new participants to join this longitudinal study.

Both films can be viewed at:

www.youtube.com/SOEPStudie

Part V: Publications

SSCI-Publications 2013 by SOEP Staff

Social Sciences Citation Index (SSCI) is an interdisciplinary citation index product of Thomson Reuters' Healthcare & Science division. It was developed by the Institute for Scientific Information (ISI) from the Science Citation Index.

Börsch-Supan, Axel, Martina Brandt, and Mathis **Schröder.** 2013. SHA-RELIFE—One Century of Life Histories in Europe. Advances in Life Course Research 18 (1), 1-4.

Busch, Anne, and Elke **Holst.** 2013. Geschlechtsspezifische Verdienstunterschiede bei Führungskräften und sonstigen Angestellten in Deutschland: Welche Relevanz hat der Frauenanteil im Beruf? Zeitschrift für Soziologie 42 (4), 315-336.

Cooke, Lynn Prince, Jani Erola, Marie Evertsson, Christian **Schmitt,** Michael Gähler, Juho Härkönen, Belinda Hewitt, Marika Jalovaara, Man-Yee Kan, Torkild Hovde Lyngstad, Letizia Mencarini, Jean-Francois Mignot, Dimitri Mortelmans, Anne-Rigt Poortman, and Heike Trappe. 2013. Labor and Love: Wives' Employment and Divorce Risk in Its Socio-political Context. Social Politics 20 (4), 482-509.

Egloff, Boris, David **Richter,** and Stefan C. Schmukle. 2013. Need for Conclusive Evidence that Positive and Negative Reciprocity Are Unrelated. Proceedings of the National Academy of Sciences of the United States of America 110 (9), E786.

Frick, Joachim R., and Nicolas R. **Ziebarth.** 2013. Welfare-Related Health Inequality: Does the Choice of Measure Matter? The European Journal of Health Economics 14 (3), 431-442.

Fuchs, Judith, Markus M. **Grabka,** Stefan Gruber, Birgit Linkohr, Carsten Oliver Schmidt, Gerhard Schön, Susanne Wurm, Ralf Strobl, and Eva Grill. 2013. Daten für die epidemiologische Altersforschung: Möglichkeiten und Grenzen vorhandener Datensätze; Ergebnisse des 2. Workshops der Arbeitsgruppe Epidemiologie des Alterns der Deutschen Gesellschaft für Epidemiologie (DGEpi). Bundesgesundheitsblatt 56 (10), 1425-1431.

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Lemola, Sakari, and David **Richter.** 2013. The Course of Subjective Sleep Quality in Middle and Old Adulthood and Its Relation to Physical Health. The Journals of Gerontology, Series B, Psychological Sciences and Social Sciences 68 (5), 721-729.

Marcus, Jan. 2013. The Effect of Unemployment on the Mental Health of Spouses: Evidence from Plant Closures in Germany. Journal of Health Economics 32 (3), 546-558.

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Tucci, Ingrid, Ariane Jossin, Carsten Keller, and Olaf Groh-Samberg. 2013. L'entrée sur le marché du travail des descendants d'immigrés : une analyse comparée France-Allemagne. Revue française de sociologie, 567-596.

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SOEPpapers 2013

SOEPpapers is an ongoing series publishing papers based on SOEP data either directly or as part of an international comparative dataset (for example CNEF, ECHP, LIS, LWS, CHER/PACO). Opinions expressed in SOEPpapers are those of the authors and do not necessarily reflect views of the DIW Berlin.

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SOEP Survey Papers 2013

The aim of the SOEP Survey Papers Series is to thoroughly document the survey's data collection and data processing.

The SOEP Survey Papers is comprised of the following series:

Series A – Survey Instruments (Feldinstrumente)
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Series D – Variable Description and Coding
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Series G – General Issues and Teaching Materials

Editors:

Prof. Dr. Gert G. Wagner, DIW Berlin and Technische Universität Berlin
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