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**Working Paper**

## Developing SOEPsurvey and SOEPservice: The (Near) Future of the German Socio-Economic Panel Study (SOEP)

SOEPpapers on Multidisciplinary Panel Data Research, No. 155

**Provided in Cooperation with:**

German Institute for Economic Research (DIW Berlin)

*Suggested Citation:* Anger, S. et al. (2009) : Developing SOEPsurvey and SOEPservice: The (Near) Future of the German Socio-Economic Panel Study (SOEP), SOEPpapers on Multidisciplinary Panel Data Research, No. 155, Deutsches Institut für Wirtschaftsforschung (DIW), Berlin

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<https://hdl.handle.net/10419/150702>

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# SOEPpapers

on Multidisciplinary Panel Data Research

# 155

Silke Anger et al.

**Developing SOEPsurvey and SOEPservice  
- The (Near) Future of the German  
Socio-Economic Panel Study (SOEP)**

Berlin, January 2009

## **SOEPpapers on Multidisciplinary Panel Data Research** at DIW Berlin

This series presents research findings based either directly on data from the German Socio-Economic Panel Study (SOEP) or using SOEP data as part of an internationally comparable data set (e.g. CNEF, ECHP, LIS, LWS, CHER/PACO). SOEP is a truly multidisciplinary household panel study covering a wide range of social and behavioral sciences: economics, sociology, psychology, survey methodology, econometrics and applied statistics, educational science, political science, public health, behavioral genetics, demography, geography, and sport science.

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ISSN: 1864-6689 (online)

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# **Developing SOEPsurvey and SOEPservice**

## **- The (Near) Future of the German Socio-Economic Panel Study (SOEP)**

*by Silke Anger, Joachim R. Frick, Jan Goebel, Markus M. Grabka, Olaf Groh-Samberg, Hansjoerg Haas, Elke Holst, Peter Krause, Martin Kroh, Henning Lohmann, Juergen Schupp, Ingo Sieber, Thomas Siedler, Christian Schmitt, C. Katharina Spiess, Ingrid Tucci and Gert G. Wagner*

Berlin

January 2009

## **Abstract**

After 25 years as a multidisciplinary household panel containing information on all individuals residing in panel households and thus covering all age cohorts, the German Socio-Economic Panel (SOEP) has become a true cohort study as well. The increasing success of the SOEP research infrastructure comes above all from the increasing analytical power that longitudinal studies attain with each successive survey year. In the case of SOEP, a long series of innovations in surveying, data preparation, and user service have also played a major role. For this reason, it is important to consider how the scientific capacity of SOEP can be further enhanced—not least of all since the SOEP can form a key point of reference (or “anchor”) for new, specialized panel studies (such as the National Educational Panel and the family panel PAIRFAM, funded by the German Research Foundation). Furthermore SOEP can become a kind of “control sample” for intervention studies, for example, in the field of child development. The SOEP survey and its governance structures must be prepared for these new tasks.

The numerous innovations introduced into SOEP in recent years—questions dealing with psychological concepts, physical health measures (grip strength), measures of cognitive capabilities, and behavioral experiments—have been incorporated into other panel studies as well, and thus provided with a larger sample base. In the UK, the “Understanding Society” household panel study was launched with 40,000 households; in the Netherlands, the MESS household panel study of over 5,000 households offered a new basis for testing innovative measurement methods.

The results of the SOEP survey are in continuing high demand in the research and policy advisory community. From our point of view, the large-scale consultation process conducted to define the content of the UK survey “Understanding Society” failed to identify any fundamentally new survey content that the SOEP either did not already contain or that was not already being discussed for the SOEP. More important than “discovering” entirely new survey areas is “tailoring” the details of existing survey content to address new, more specific (theoretical) questions, and thus maintaining proven and widely used elements of survey content. The “tailoring”

of survey content will be the real challenge facing infrastructure surveys like PSID, “Understanding Society,” and the SOEP in the coming years.

In the future, the “margins” of the life course should play a stronger role in survey content, since household panels are able to provide outstanding data of these life phases. The SOEP, and other household panel surveys, can be improved, on the one hand, by including the fetal phase of life and early childhood for children born into the panel, and on the other, by including late life and death. In the middle of the life course, improved questions on income, savings, and wealth as well as psychological constructs will play a central role, as will specific questions (in “event-triggered” questionnaires) on central life occurrences such as marriage, divorce, and entry into and exit from unemployment.

Current plans for SOEP foresee the addition of an “Innovation Sample” that will make it possible to better address theory-based research questions required for testing new measurement concepts (e.g., the surveying of biomarkers, qualitative surveys, but also experiments and targeted intervention studies). In order to exploit the power of longitudinal data from the outset, we plan to incorporate two smaller SOEP subsamples that have been running since 1998 and 2006 (Subsamples E and H, respectively) into the Innovation Sample.

In order to decisively improve the statistical power of long-term longitudinal data, we believe that a minimum case number of about 500 persons per birth and age cohort is required. In order to reach this goal, the case number in the SOEP standard samples needs to be increased. A positive side-effect of this enlargement would be a significantly improved potential for analyses of relatively small groups within the population: for example, lone parents or specific immigrant groups. Another positive side-effect would be an improved potential for regional analyses: for example, for the majority of federal states.

In recent times, the importance of SOEP as a “reference dataset” for specialized surveys which are independent from SOEP (observational studies such as twin studies, and laboratory and intervention studies) has become strikingly evident. To enhance this important function, new types of service are needed (advice on special surveys, possibly also data preparation for special surveys), which could become part of a Data Service Center.

**Keywords:** *Household Panels, German Socio-Economic Panel Study, SOEP*

**JEL Classification:** A12, C81, C83, C99, H2, H3, H5, I12, I21, I3, J1, J2, J3, J6, J71

## Zusammenfassung

Das Sozio-oekonomische Panel (SOEP) ist als multidisziplinäres Haushaltspanel, das Informationen zu allen Personen, die in einem Panel-Haushalt leben, erhebt und damit alle Altersjahrgänge abdeckt, nach 25 Jahren Laufzeit auch zu einer Kohorten-Studie geworden. Der zunehmende Erfolg der Forschungsinfrastruktur-Einrichtung SOEP speist sich in erster Linie daraus, dass die Analysekraft von Längsschnittstudien mit jedem weiteren Erhebungsjahr zunimmt. Hinzu kommen im Falle des SOEP seit Beginn an eine lange Reihe von Innovationen bei der Erhebung, Datenaufbereitung und Nutzer-Service. Deswegen gilt es zu überlegen, wie die wissenschaftliche Power des SOEP weiter gestärkt werden kann. Nicht zuletzt auch, da es für neue, spezialisierte Panel-Studien (wie das Nationale Bildungspanel oder das DFG-geförderte Familienpanel PAIRFAM) eine Referenz und ggf. Verankerung der Hochrechnung darstellt. Zudem kann das SOEP künftig eine größere Rolle als „Kontroll-Stichprobe“ für Interventions-Studien spielen; etwa im Bereich der Kindheitsentwicklung. Auf diese neuen Rollen muss es vorbereitet sein.

Die im SOEP in den letzten Jahren realisierten Erhebungsinnovationen wie z. B. die Inkorporation psychologischer Konzepte, physische Gesundheitsmessungen (Greifkraft), die Messung kognitiver Fähigkeiten und die Erprobung von Verhaltens-Experimenten werden in anderen Panel-Studien aufgegriffen und auf eine größere Stichprobenbasis gestellt. Im UK wird mit „Understanding Society“ ein Haushaltspanel mit 40.000 Haushalten begonnen; in den Niederlanden wird mit MESS ein Haushaltspanel von über 5.000 Haushalten für innovative Messmethoden zur Verfügung gestellt.

Die Erhebungsinhalte des SOEP werden von den Forschungs- und Politikberatungs-Communities unverändert stark nachgefragt. In UK hat ein für „Understanding Society“ breit angelegter Konsultationsprozess keine grundsätzlich neuen Befragungsinhalte zu Tage gefördert, die das SOEP nicht bereits enthält oder die für das SOEP ohnehin im Gespräch sind. Wichtiger als die „Entdeckung“ völlig neuer Erhebungsinhalte ist das thematische wie zeitliche „Zuschneiden“ der Details von Befragungsinhalten auf (zugespitzte) neue (theoretische) Fragestellungen und dabei gleichzeitig bewährte sowie viel genutzte zentrale Befragungsinhalte und deren Befragungsrhythmen beizubehalten. Das „Maßschneidern“ von Erhebungsinhalten wird in den nächsten Jahren die eigentlich Herausforderung für Infrastruktur-Erhebungen wie die PSID, „Understanding Society“ und das SOEP sein.

Bei den Erhebungsinhalten sollten die „Ränder“ des Lebenslaufs eine größere Rolle spielen, da diese von Haushalts-Panels besonders gut erfasst werden können.

Diese Verbesserungen der Erhebungen beziehen sich einerseits auf die fötale Phase von in das SOEP hineingeborenen Kindern und die (frühe) Kindheit, andererseits auf die letzte Lebensphase und das Sterben. In der Mitte des Lebenslaufs werden verbesserte Fragen zum Einkommen, Sparen und Vermögen sowie auch psychologische Konstrukte eine zentrale Rolle spielen, außerdem gezielte Fragen (event triggered questionnaires) in Verbindung mit zentralen Lebensereignissen wie z. B. Eheschließung, Scheidung, Eintritt in und Austritt aus Arbeitslosigkeit.

Es wird die Etablierung einer SOEP-„Innovations-Stichprobe“ vorbereitet, um theoriegeleitete Forschungsfragen gezielter unterstützen zu können. Dazu wird es auch notwendig sein, neue Messkonzepte zu erproben (z. B. die Erhebung von Biomarkern, qualitative Erhebungen, aber auch Experimente und gezielte Interventionsstudien). Um die Power von Längsschnittdaten von Anfang an für die Innovations-Stichprobe ausnutzen zu können, ist geplant, zwei kleinere Teilstichproben des SOEP, die seit 1998 bzw. 2006 laufen (Subsamples E und H), in die Innovationsstichprobe zu überführen.

Um die statistische Power langlaufender Längsschnittdaten entscheidend zu verbessern, schätzen wir eine Mindestfallzahl von etwa 500 Personen pro Geburts- und Alterskohorte für ausreichend ein. Um dieses Ziel zu erreichen, muss die Fallzahl des SOEP-Standard-Samples erhöht werden. Als „Nebeneffekt“ werden dadurch wesentlich bessere Analysen für relativ kleine Gruppen in der Bevölkerung möglich; etwa für allein Erziehende oder bestimmte Immigrantengruppen. Außerdem verbessern sich als weiterer „Nebeneffekt“ auch regionale Analysemöglichkeiten, z. B. für die meisten Bundesländer und in großen Bundesländern bis hin zu Regierungsbezirken (oder ähnlich abgegrenzten regionalen Einheiten).

In letzter Zeit wird immer deutlicher, welche große Bedeutung das SOEP als „Referenz-Datensatz“ für spezialisierte und vom SOEP völlig unabhängige Erhebungen hat (neben Beobachtungsstudien, wie etwa Zwillings-Studien, auch Labor- und Interventions-Studien). Zur Unterstützung dieser Funktion ist eine neue Art von Service, der in Deutschland bislang nicht vorgehalten wird, notwendig (Beratung von Spezial-Erhebungen; ggf. Datenaufbereitung von längsschnittlichen Spezial-Erhebungen), der auch in ein Datenservicezentrum eingebracht werden könnte.

Schlagworte: *Haushaltspanels, Sozio-oekonomisches Panel, SOEP*



This paper is an invitation to discuss the future substance and governance of the German Socio-Economic Panel Study (SOEP). In 2008, SOEP conducted its 25th wave of data collection, and this anniversary coincided with the emergence of both new research areas in recent years and new technological opportunities for collecting survey data. Based on these new developments, the SOEP survey group at DIW Berlin would like to open up the discussion of future directions for SOEP. After providing a brief overview of the history of the SOEP survey and its governance, we offer an outlook for the future.

## **1 SOEP's governance**

### **1.1 Selecting SOEP's topics**

Along with questions driven by the needs of basic research, the SOEP survey has always included "applied" issues designed to tackle public questions and provide information for political decision making. In fact, at the beginning, such issues dominated the survey. Gottfried Wilhelm Leibniz demanded "theoria cum praxi," and from its very beginning the SOEP, now one of the service centers of the Leibniz Society, has always put this dictum into practice.

The topics that are reflected in the survey instruments of the SOEP have proven to be extremely fertile, over the long term, for research of all kinds, from basic research through to commissioned research questions and research-based advice for policymakers. The experiences that the researchers within the SOEP survey group have gained in providing advice for policymakers and in other advisory groups have, in particular, helped to ensure that issues of interest to future research can be identified as early as possible. In designing and updating a prospective longitudinal survey, this kind of foresight is as essential as are solid research topics. Those involved must develop a kind of sixth sense for the research questions that will be important in five and even in 25 years. On the one hand, the involvement of the SOEPgroup in basic research is vital. And in addition, it is important that the SOEPgroup members do not become distracted by the large number of short-lived "hot issues" that temporarily dominate media reporting on social or economic issues.

Our experience as the SOEP survey group suggests that carrying out a range of different types of research ourselves—from basic research to advisory work for policymakers and official bodies—is a good way of identifying future research

questions early on.<sup>1</sup> And these research questions are transformed into both new survey instruments and new subsamples of SOEP.

Explicit suggestions by users are of course important (but rare). Comprehensive consultations with potential users like those carried out for the new British panel “UK HLS/Understanding Society” are helpful but expensive. They are also inefficient if repeated frequently, because they are unlikely to reveal unexpected research questions and concepts unknown previously. In fact, the consulting process for UK HLS/Understanding Society” revealed nothing really surprising. And a number of new features are already in the SOEP (for example, questions on personality). Given that the “big” research questions cannot differ significantly between Germany and the UK, we are confident that we can rely on the British findings (which are public and in which we have been involved at all stages). In addition, we can contribute our own experience with the “regular” SOEP and with the numerous innovations we have introduced over the course of time.

The new methodological changes to the SOEP are based both on new research topics and on activities in advisory services for policymakers. One of the most recent additions to the SOEP’s topics and methodologies may serve as further proof of this. Currently, our involvement in advising policymakers on issues related to early childhood has coincided with a huge rise in research interest in overall life courses (“*cohort studies*”). And this interest no longer reaches just from “cradle to

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<sup>1</sup> One of the most important reasons for the success of the SOEP longitudinal study must surely be that ever since it was first established as part of a project in one of the “Collaborative Research Units” (*Sonderforschungsbereiche*) of the German Research Foundation (*Deutsche Forschungsgemeinschaft – DFG*), it has been driven by the research goals of the same group that set it up, maintained it, and developed it (Kaemper and Niessen 2008). It was never driven by a focus on methodological development or by a desire to create an infrastructure (or “service unit”) for use only by others. In other words, from the very beginning, data production and analysis interests were closely knit. At the same time, one strength of the Berlin SOEP group has always been the research potential and the organizational energy that a cooperative network contributes. Initially, it was members of the “Collaborative Research Unit 3” who were most active in shaping SOEP. But later, other partners—including international scholars—began to exert more influence. At certain times, the research interests of the SOEP group at the DIW Berlin may have been dominant. Although this was not intended when the governance of SOEP was designed and established, it has in fact been to the project’s advantage. Based on this experience, which demonstrates the power of research interests, we intend to continue to prioritize this focus on research needs above and beyond the SOEP’s function as a service or infrastructural project. Research-driven governance is its strength, and we, the SOEP survey group in Berlin, plan to further pursue this strategy by working more closely than ever before with users interested in getting involved in the data collection process.

grave” but from the moment of conception to the surviving spouse’s receipt of a widow/widower pension (and his or her memories of the deceased respondent).

These new perspectives and research topics make it necessary to continually develop the SOEP survey, but these are not the only factors: methodological improvements and new challenges in survey methodology also have a potentially powerful impact. For example, recent research has shown that we are still a long way from solving the problems in measuring what economists describe, and model, as “income” and “wealth,” despite decades of intensive work in this area. In fact, a new round of intense international debate and possibilities for improvement in surveying income, wealth, consumption, and saving behavior has just commenced.<sup>2</sup>

In our opinion—which is based not least of all on the experience of the British Household Panel Survey (BHPS)—raising the theoretical and methodological standards of the SOEP survey cannot be done simply by launching an annual competition among users to suggest an additional “One Minute Question”.<sup>3</sup> This approach is no longer being pursued by the BHPS (or the new UK panel “Understanding Society”), and we feel it is less promising than the approach adopted by the SOEP (which has already undergone pilot testing in recent years): that of focusing on close cooperation with users who are prepared to invest time, energy, and, often, money in pretesting, with the explicit aim of increasing the SOEP’s *long-term longitudinal* potential. Some results of this strategy are the improvements to the behavioral science questions included in the SOEP survey and the behavioral experiments that have been combined with the SOEP<sup>4</sup>.

New technological developments require further intensified cooperation with the survey group in Munich (at Infratest Sozialforschung). New types of survey instruments (such as grip strength measurement, monitoring of biomarkers, or the

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<sup>2</sup> See, inter alia, the cross-national initiative AIM-AP (Accurate Income Measurement for the Assessment of Public Policies), on developing a set of harmonized proxies for non-cash income <http://www.iser.essex.ac.uk/msu/emod/aim-ap/deliverables/>. The SOEP group is making a productive contribution to this initiative, and derives income-related variables to be included into the SOEP data distribution (see Frick, Grabka and Groh-Samberg 2007). See Juster et al (2007) for recent developments in HRS and AHEAD and the most recent CES (Conference of European Statisticians) initiative on “Advancing Income, Wealth and Poverty Measurement” led by Statistics Canada <http://www.unece.org/stats/documents/ece/ces/bur/2008/mtg1/6.e.pdf> (assessed 24 Nov. 2008).

<sup>3</sup> This refers to a competition to create special questions, for which a specific amount of time will be allocated in the survey.

<sup>4</sup> See Naef and Schupp (2008) and, in German language, Schupp et al. (2008).

use of mobile phones) cannot sensibly be applied unless those responsible for the research develop them in cooperation with the fieldwork agency actually carrying out the survey. In the engineering disciplines, this type of cooperation between science and “industry” is part of the ongoing research process, and has proven extremely successful. Over the years, the following innovations have gradually be introduced into the SOEP, in close cooperation with and integrating the expertise of the fieldwork institute:

- Tracing of Non-Sample Members
- Overcoming language barriers through use of an interpreter as an assistant accompanying the (main) interviewer
- Introducing a “Gap Questionnaire” for “temporary drop-outs” (respondents who return to SOEP after a “break”)
- Establishing Subsample C in the former GDR, thus coping with the extension of the survey territory
- Establishing “Refresher Subsamples” F and H
- Establishing subsamples for special subpopulations: D (Immigrants) and G (High-Income Households)
- Shift to Infratest’s own coding scheme for answers to open-ended questions on occupation and industry
- Adjustments of the questionnaires due to the introduction of the euro
- Introducing age specific questionnaires (newborns (0-15 months), infants (2-3 years), toddlers (5-6 years), youth (16 years))
- Identification of twins (by the interviewers)
- Introduction of Re-Test-Studies<sup>5</sup> (for the first time in 2006)
- Measurement with experiments and tests (above and beyond the standard use of questions for surveying)
  - behavioral experiments (on trust, trustworthiness, and time preferences)
  - evaluation of health (by measuring “grip strength”) and cognitive abilities (by administering competency tests)

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<sup>5</sup> Re-tests repeat survey questions after a short time (i.e. six weeks) in order to test the stability (reliability) of answers and variables. Re-tests are not common in the social sciences but in the behavioral sciences.

## 1.2 A more formal governance for the development of SOEP survey

One particular goal for the coming years will be the *joint, targeted, and ongoing* development of the SOEP survey, with its growing number of researchers, and its expansion to include certain specific areas. However, suggestions for minor changes do not require a formal competition; most of the innovations proposed to us will be realized anyway, just as they have been for the past twenty-five years, without any need for complicated formal discussion procedures. The main purpose of the SOEP Scientific Advisory Board or “Survey Committee” (see below) is, and remains, that of quality assurance and it is not the appropriate forum to discuss innovations.

For the SOEP survey group at DIW Berlin, it is established tradition to work closely together on the development of the SOEP with interested researchers from other institutions, both on general and specific issues. When the SOEP survey was launched, it was within the Collaborative Research Center 3 of the German Research Foundation (DFG), which, initially, took the intellectual lead in the project.<sup>6</sup> However, when the Collaborative Research Center 3 project came to its scheduled end in 1990, no such forum for the SOEP replaced it. The SOEP Advisory Board, which was designed mainly as an oversight body, did not feel capable enough to take on this role (one obvious reason being that it met only once annually).<sup>7</sup> To date, the research carried out by the members of the SOEP group has largely matched the content of the SOEP survey because new researchers were hired who were qualified and interested in the diverse areas covered by SOEP. So, when the questionnaires for children and adolescents were being developed, additional knowledge and skills needed were brought in from outside. In the long term, however, the SOEP survey group in Berlin will not be able to supply all the in-depth knowledge needed in all the different additional research fields; for the purposes of their own research, members have to specialize in or concentrate on selected areas. For this reason, intensive cooperation between the SOEP survey groups at DIW Berlin and Infratest Sozialforschung and other national and international bodies will become more important than ever. In a way, it would be helpful if a functional equivalent to the Collaborative Research Center 3 could be established in a modern form, and if a

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<sup>6</sup> See Krupp (2008), Hanefeld/Schupp (2008), Hamermesh (2008), and Esser (2009).

<sup>7</sup> In its 1992 meeting, the Advisory Board stated explicitly that it believed the SOEP group was thoroughly capable of carrying out planning for SOEP.

wider circle than previously could again share the scientific responsibility for and provide the expertise on particular SOEP issues.

Above and beyond its own active involvement in more or less formal initiatives to foster the harmonized development of household panel studies (see, e.g., the Panel Survey Methodology Workshops<sup>8</sup>), the SOEP survey group sees the following as a minimum requirement: the role successfully played by the multidisciplinary Panel Committee of the Collaborative Research Center 3 and DIW Berlin will have to be re-invented or re-interpreted in view of the increasing number of interdisciplinary requirements for modern household panels. We therefore invite our users not merely to make suggestions about the contents and methodology of the SOEP survey, but also to contribute to the debate on its governance.

We plan to set up an “Innovation Committee” that, like the original Panel Committee of Collaborative Research Unit 3, will be research-driven and made up of both external specialists and members of the SOEP group. In this committee, both external and internal researchers will be able to engage in the long-term development of the SOEP survey. In addition to major innovations, the SOEP group will continue to look after the ongoing main business of the SOEP, to introduce “minor” innovations on an ongoing basis, to contribute to SOEP’s general development, and to implement any necessary changes. Research, policy advice, and service—which, in combination, form the unique strengths of the SOEP group—will continue to be closely linked.

We hope that by applying a more formal structure to the decision-making processes of the SOEP survey, we will reduce transaction costs and, especially, will increase the incentives for innovative ideas to be put forward by those users who have to date not felt sufficiently or explicitly invited to contribute to the development of the SOEP survey.<sup>9</sup> In the long term, we also hope that this will lead to new ideas and concepts that will open up new areas of research and opportunities for research cooperation for the Berlin SOEP group itself.

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<sup>8</sup> See <http://www.iser.essex.ac.uk/ulsc/methods/psmw2008/>.

<sup>9</sup> The new Dutch panel MESS, probably the most similar panel to the innovation sample we are planning (see Section 2.3.1 below), also invites users to participate in its development. It remains to be seen whether suggestions will be taken more in the form of a “five-minute competition” or cooperation over the medium term. The Swiss Household Panel Survey (SHP) is also suggesting in their next proposal to the “Schweizer Nationalfonds” to invite their users, and the whole Swiss potential user community to propose new questions for the SHP.

## 2 Development of the SOEPsurvey

For reasons of space, we cannot describe all the minor and major developments to the SOEP survey that are currently under development. These include improvements to its content and a large number of improvements to the survey methodology.<sup>10</sup>

Before presenting details, we should recall the fundamental principles of SOEP and its main areas of focus.

Over the first 25 years of SOEP we have learned – in terms of survey problems – at least the following lessons:

- the current SOEP sample is the minimum size desirable; especially for longitudinal analyses larger cohort sizes would be better (larger cohorts would increase the overall sample size and would enable more detailed regional analyses as a side-effect);
- the structure of household panels that survey all household members and that follow split-offs – have created a goldmine for genetically sensitive analyses (“behavioral genetics”) as an unplanned positive side-effect;
- the tails of the age distribution (fetal phase and the first years of the life course on the one hand, and the terminal phase of life on the other) are a subject of much keener interest for longitudinal analyses today than at the beginning of the SOEP (when household income was the main focus of most analyses); thus better coverage of these phases is important;
- although SOEP’s original concept focused on measuring household income, further improvements to income measurement (and economic well-being) are possible and desirable; international experiences suggest that income should be surveyed much more intensively than it has been up to now in a common setting together with savings and expenditures;

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<sup>10</sup> We are grateful to the Sub-Committee that dealt with SOEP of the Scientific Advisory Board of DIW Berlin for its encouragement in 2006 to improve and develop the SOEP (Dan Hamermesh, Shelly Lundberg, Karl Ulrich Mayer, Gisela Trommsdorff (Chairperson), Mick Couper, Karin Gottschall and Stephen Jenkins (Deputy Chairperson)). The Sub-Committee recommended in general that the SOEP survey group should focus on “activities for advancing social science and methodological development”. The Sub-Committee recommended in particular “exploring methodological improvements, including appropriate technology (...) Rather than simply aiming to increase the sample size of SOEP, the SOEP Department is encouraged to think further along the already outlined concept of expanding the quality and scope of the SOEP”, “the plan for establishing a “methodological sub-panel” ... should be further pursued”, and finally “plans for teaching survey methods for advanced user training should be pursued”.

- “power –users” of panel data demand survey instruments containing more, and more specific concepts and questions; and
- new technologies allow a much better measurement of the respondents’ behavior, their biological and physical status, and their “environments” (family, household, neighborhood, town, microclimate, etc).

Due to the importance of “time use” for human development over the life –course, surveying people’s time use, with a focus on gainful employment, is still one of the most important aspects of the SOEP survey program. In this wider definition, time use is a central topic of international analyses using the SOEP data. As a result of such analyses, recent findings in economics, sociology, and psychology are allowing time use to be described in greater detail. In addition to actual time use, its importance for personal goals (or parents’ goals for their children) and the outcomes of time use (not just income, but also life satisfaction) will be recorded more systematically than before, i.e., the topics will be more closely interlinked. Values and attitudes that have little or nothing to do with individuals’ time use will still only be recorded to a minor extent (for example, political opinions and preferences with regard to the environment and environmental protection).<sup>11</sup>

Thanks to the increasing number of observations per individual and the availability of intergenerational biographies within SOEP, analyses focusing on the life course, as well as on intergenerational transmission processes, are clearly on the advance. As such, more detailed information should be obtained about the beginning and the end points of the biographies observed.<sup>12</sup> It is becoming ever clearer that future research on intergenerational transmission (especially along the lines of a “behavioral genetic approach”) will be based more and more on household panel data<sup>13</sup>.

For different areas of life, and following in the footsteps of international developments, we intend to record in a more systematic manner than heretofore a

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<sup>11</sup> In this area, we are not following the example of the British “Understanding Society”.

<sup>12</sup> In other words, we are no longer interested in following life just “from the cradle to the grave”; recent theoretical and social developments and developments in research strategy make it necessary to record biographies from “pregnancy through the process of dying and on to memories of the deceased.”

<sup>13</sup> See the special issues of “Sociological Methods and Research” (Vol. 37, No. 2, 2008) (Guo 2008) and the “American Journal of Sociology” (Vol. 114, No. S1, 2008) (Bearman 2008) as well as, for example, Rodgers et al. (2008) and Anger and Heineck (2009).



number of biological foundations of human life (biological and personality characteristics) and the networks in which individuals, their families, and their households are embedded. In other words: we need to comprehend human beings as fundamentally social beings. It is thus important to better include the networks (and areas) in which humans live. But at the same time, we are finding more and more evidence that sociality is not only a cultural phenomenon (highlighting the importance of intergenerational “links” as mentioned above), but that sociality is – to a certain degree that varies between individuals – “hard-wired” within our genome and by epigenetic development (cf. Fehr 2008).

This systematic approach to measurement is not only the result of theoretical improvements but is also driven largely by new technological opportunities for measurement and analysis (e.g., experiments in the lab and in the field, surveys using the Internet and mobile phones, ways of collecting biomarkers and analyzing the genome). In fact, this new analytical approach currently appears to be driven even more by new technologies than by new theoretical insights. This might seem to contradict textbook reasoning and notions about the primacy of scientific theory, which assert that empirical methods should only be used to test the empirical implications of specific theories. However, in the history of science, we find numerous examples demonstrating that new measurement methods often precede and indeed pave the way for theoretical reasoning. One prominent example is Galileo’s telescope, first used 400 years ago, in the year 1609 in Padua. Although it was invented for practical purposes, it revolutionized not only the measurement of the visible universe, but a lot of theories too. In the future, “new eyes” will show us further “new skies” (cf. Kanipe 2009).

It is self-evident that such an ambitiously comprehensive measurement goal could easily overtax SOEP respondents and could lead to declining, and, in particular, selective response rates. For this reason, we intend to test new survey methodologies such as a standardized “multi-method approach” and “matrix sampling.” In matrix sampling, missing values are deliberately created (and later replaced with imputed values) by randomly assigning certain questions *not* to be asked in particular subsamples. This reduces the burden of the number of questions to be answered. Though appealing in theory, it will be a complex task to successfully implement such an approach in a long-running survey.

What we are aiming towards is the comprehensive survey program developed for, and partly realized in the classic social-scientific survey of the “Unemployed of Marienthal” (see Jahoda et al. 1933). Since the 1970s, with the growth in popularity of standardized survey research, the methodology used in that classical Marienthal Study has increasingly been abandoned. Today, new technologies make more accurate and comprehensive empirical research possible (Siegrist 2001, Butz and Torrey 2006).

SOEP provides a means of bringing together different disciplines to work on the same substantive research questions. And due to SOEP’s usefulness for governmental reporting and policy advice, it is an instrument that brings together theory and practice, providing a basis for dialogue between scholars and policy makers, organizations, and individuals engaged in hands-on work in various important fields. SOEP thus constitutes an instrument for “multidisciplinary mapping”. It is claimed that this multidisciplinary approach, which is being discussed in the field of business administration as well, is “good for practice as well as for theory building” (Osterloh and Frost 2007).

## **2.1 Fundamental issues regarding the survey program**

No survey should attempt to collect data that are already available from administrative surveys, especially if the latter provide higher quality data that can be linked with additional survey data at the individual level. In Germany, high-quality administrative data already exist for income of employees whose employers pay social insurance contributions (up to the maximum contribution cap) and for discrete periods of employment and unemployment. However, the accuracy of this data is limited to the official definition of registered unemployment (Kruppe et al. 2008). A survey like the SOEP would never be capable of replacing data such as this. However, linking the subjective and objective indicators obtained by the SOEP survey with the administrative data does allow for new types of analyses. In the future, we intend to pursue this approach further in the SOEP, working together with a number of relevant cooperation partners. This is an example of how an innovation cannot be implemented quickly in response to user suggestions; instead, it requires cooperation with external partners over a long period of time. The Innovation

Committee referred to above will be needed to provide an institutional context for such cooperation.

It would only be possible to link the SOEP data with administrative data on a one-to-one basis if respondents gave permission and supplied the necessary details—for example, their social insurance number—enabling this link to be made. But there is, of course, a risk that respondents consider the information requested to be too intimate or risky due to the individual details in question, and may, as a result, discontinue their participation in the SOEP. So far, we have felt that this risk was too high for such a project to be attempted. However, the idea could be reconsidered with a larger number of cases. The risk of selective refusal to participate would still exist, but the efficiency problem created by the reduction in numbers of observations would not be as serious as it would have been with a smaller number of overall cases.

However, there are alternatives to such a “direct” approach, thanks to the creation of Research Data Centers (RDCs) in recent years that have dramatically improved the opportunities for linking survey and administrative data. In Berlin, for example, one option would be to cooperate with the research data centre belonging to the old-age pension insurance organization (“Deutsche Rentenversicherung Bund”). We have already taken the first steps towards creating a successful cooperative project.<sup>14</sup> To date, this has not involved linking survey data and data from the pensions register at the individual level; instead, a form of statistical matching that involves no data protection issues whatsoever has been carried out, by “imputing” values on the basis of variables available in the SOEP and the social insurance records (see Rasner et al. 2007).

Another possible link with “external” register data involves infants; one option would include collecting data on babies from their mothers’ maternity records.<sup>15</sup> Including some of this data in the SOEP, and combining it with additional information

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<sup>14</sup> This new cooperation project on “Lebensläufe und Alterssicherung im Wandel” (*Life courses and old age provision in times of change*) is funded by the Volkswagen Foundation and brings together data and research expertise from the SOEP, the German Centre of Gerontology (DZA), and the FDZ-RV (see <http://idw-online.de/pages/de/news276401>).

<sup>15</sup> In Germany, all pregnant women receive a copy of this “pregnancy record” from their gynaecologist after their first visit. It is updated with all further details of the pregnancy as well as the child’s birth, and remains in the mother’s possession. This record contains the results of various blood tests, details on any previous pregnancies, the projected birth date, details on the birth (like possible complications), and other detailed health information on both the mother and the newborn.

provided by the “Mother and Child” questionnaires, might lead to new knowledge about the links between early childhood development and subsequent life events in the children’s biographies.

In addition, we plan to gradually enhance the SOEP study by carrying out our own surveys of contextual data. Starting with the new sample groups, specific surveys will gather data on organizational contexts from 2011 onwards. These will include targeted surveys in childcare centers, schools, and at respondents’ workplaces. In 2007, we administered such a pre-test and obtained positive results. It showed that respondents are – by and large – willing to pass on the addresses of their childcare centers, schools, and employers (see Schupp et al. 2008). ALLBUS 2008 will, for the first time, carry out a survey like this at the workplaces of all employed survey respondents;<sup>16</sup> the results will be used to lay the groundwork for similar questions in the SOEP.

Another possibility for linking external data with the SOEP is currently undergoing testing in the form of a cooperative project with the German Remote Sensing Data Center in Oberpfaffenhofen near Munich. This project, supported by the Federal Ministry of Education and Research, is investigating the extent to which it would be possible and useful to link environmental context data collected by satellite with the SOEP data. In particular, the project is investigating the extent to which physical measurement methods might allow information to be gained about socio-economic and environmental contexts such as settlement structures, the social segregation of neighborhoods, and noise or air pollution.

## **2.2 Selected examples of how the survey program is being developed**

In this section, we describe some *selected* examples of where it has become necessary to further develop the SOEP survey instruments. The guiding principle is to enhance the quality of measurement, especially for the consequences of life-course events and at the beginning and at the end of the life span.

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<sup>16</sup> The ALLBUS survey is being led by DIW Research Professor Stefan Liebig, who also provided advice to the SOEP when first pilots were being carried out during pretesting (for first results, see Meyermann et al. 2009).

It should always be kept in mind that any such enhancements must adhere to the idea of preserving and supporting the longitudinal nature of SOEP. This is not at all an easy task because the survey questionnaire for an ongoing prospective panel has to be updated whenever features of the society change. Our first example of future improvements will deal with this task.

### **“Changing times”: measuring employment status and education over time**

Due to widespread changes in society, questions in the SOEP on, for example, employment status have had to be changed on several occasions. At the start of the survey there were no such things as “parental leave”, “early retirement”, or “part-time jobs” for which no, or limited, social insurance contributions had to be paid. Future revisions will have to adapt to changes in educational attainment, especially with respect to tertiary education, where new degrees have been introduced as a consequence of the Bologna process (e.g., BA and MA degrees).

### **“Pregnancy and childhood”**

As a result of their design, household panels are particularly capable of tracing the biographies of birth cohorts. In an ongoing household panel, sample membership does not begin only at birth (as is the case for conventional cohort studies), but even prior to birth, through the participation of one or both parents.

### **“Challenging the validity and reliability of objective indicators”**

The experiences that we have gained with comprehensive longitudinal data on the supposedly objective questions of employment and income have taught us that we must be cautious about assuming the conceptual validity and empirical measurability of even these supposedly easy-to-measure and “objective” criteria. We will try to improve the quality of questions on income and wealth that are well known but have never really pre-tested anywhere in the world. We plan to do focus these improvements particularly on the questions about consumption and savings. We aim to develop a more comprehensive measure of economic well-being that can also raise the quality of the data by means of internal consistency checks of data on

income, consumption, savings, and changes in wealth by including all those measures in some type of accounting framework.

### **“Competencies”**

In the SOEP, as in almost all other similar surveys, the operationalization of “human capital” was for a considerable period limited to recording educational attainment such as the highest level of schooling or vocational training achieved. The introduction of the SOEP Youth Survey and the revision of the biographical questionnaire (both in 2001), as part of the SOEP Innovation Sample, added information on school grades in the major subject obtained during the final year of schooling (see Lohmann et al. 2008).

For a number of years, we have been attempting to systematically determine the cognitive competencies of respondents using standardized measurement procedures (see Schupp et al. 2008). In addition, we have gradually increased efforts to record what are known as non-cognitive capabilities, i.e., competencies that are not necessarily acquired in educational institutions but (to a greater extent) at home during early childhood. The SOEP survey program will be extended in a number of ways in recent years to cover the area of “skills” (Grabner and Stern 2008), and a Leibniz Gemeinschaft (WGL) network project will work on this objective.<sup>17</sup>

### **“Measurement improvements”: the cases of “health” and the “biological basis of social and economic behavior”**

Despite the growing interest in integrating biomarkers into surveys, we do not believe it would be useful to increase the biomarkers collected in SOEP in an unrestricted manner and solely to address medical research questions. But biomarkers that can be used to enhance social and behavioral science analyses, and in some cases consolidate their results considerably, are generally useful (cf. National Research Council 2008). It is clear that the SOEP cannot replace an independent health survey. Furthermore, attempting to move in this direction would impose too high a

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<sup>17</sup> See the research network “Nicht-kognitive Fähigkeiten: Erwerb und ökonomische Konsequenzen” (*Non-Cognitive Skills: Acquisition and Economic Consequences*). For more information, see <http://www.zew.de>.

burden on respondents (as regards the scope and duration of the survey) and would impede the useful division of labor between different methodological approaches and surveys. There is also always the risk that respondents will consider biomarkers to be just too sensitive a type of information to reveal (especially in cases of invasive measurements like blood samples), and that this will result in selective non-response. Since it is of the utmost importance to keep panel mortality as low and as least as selective as possible, it is essential to proceed with great care when it comes to the integration of individual survey data and biomarkers.

Nevertheless, the collection of biomarkers can be seen as a means of better understanding the social and economic behavior observed within a survey like SOEP (cf. Lillard and Wagner 2006). One of the reasons is that longitudinal surveys deliver—through repeated measurement—very reliable pictures of “phenotypes” (the term used by life scientists to describe human beings). Thus, with longitudinal data, which are designed by social scientists, we are much more likely to identify the biological foundations of human behavior than with converse approaches: for example, if life scientists would try to enrich biobanks with social variables.

### **“Death and memory”**

Given that the tails of the life-span remain insufficiently analyzed in the fields of economics and sociology, attempts have been made to utilize and improve SOEP to research the beginning and end of life more fully. Especially in the context of a household panel, which displays a bundle of intergenerational relations, this is a worthwhile effort. Thus, in 2007, in a special SOEP survey, we attempted to collect information for the first time about the death of relatives (Kroeger 2008). Here it was asked, for instance, who had died in the last twelve months and whether the person lived in the same household. In addition, there were questions about the closeness of the relationship to the deceased and the cause of death. Provided that the deceased person was at one time a SOEP respondent, this interviewing technique will, for the first time, make it possible to link pre-mortally collected longitudinal information on respondents with information about their death. In 2009, we will introduce a first version of such a new survey instrument into SOEP. We expect that this approach

will be the basis for significant new scientific findings with respect to the relationship between lifestyle, social sphere, and circumstances of death.<sup>18</sup>

## **2.3 Developments in sample design and fieldwork**

On the basis of increasingly specific research issues to be studied and corresponding requests from our user community, we are aiming not only to continue the regular SOEP sample, as has been carried out for 25 years (Standard Sample), but to also establish a permanent “Innovation Sample.” The latter will be carried out as a long-term panel itself, also being in principle representative of the population in cross-sectional and longitudinal perspective.

The Innovation Sample is designed to provide an opportunity to include more research issues with a sound theoretical basis. Hence, alternative survey content will first be tested and/or established longitudinally (which may be considered a “standard” function of such a sample); and second, this longitudinal sample will be made available for behavioral experiments and intervention studies. Third, the Innovation Sample will be designed to be comparable with the Standard Sample as far as possible, so that for selected issues to be studied, the overall available numbers of observations can be increased through accumulation across all available samples. And fourth, the Standard Sample will be able to serve as a control sample for intervention studies that may be carried out using parts of the Innovation Sample<sup>19</sup> or a “Related Study” (see section 2.3.2 below).

### **2.3.1 The “SOEP itself”**

The “SOEP itself” (as opposed to the SOEP-related studies described in Section 2.3.2 below) contains the Standard Survey Sample, a planned “Innovation Sample,” and pretests.

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<sup>18</sup> A new mode of surveying could be a special “proxy questionnaire” for those SOEP respondents who are no longer able to respond on their own due to bad health (either living at home or in a hospital or long-term care facility).

<sup>19</sup> The Innovation Sample should also be open for follow-up questions, i.e., for questions necessary in order to make the SOEP comparable, as a control sample, to specialized studies (laboratory studies, interventions) (e.g., in view of certain illnesses, preventive measures, level of information on certain risks). Such decisions will have to be made by the newly established Innovation Committee.



## **The SOEP Standard Sample**

At present, the SOEP survey consists of eight subsamples with sometimes greatly varying and complementary sample designs. Thus, for example, the oversampling of persons with a migration background (in Samples B and D) or high-income households (in Sample G) can be contrasted with Samples E, F, and H as new representative population samples. As well as having the effect of stabilizing the number of observations, these types of subsamples also have the task of recording changes in the population occurring through immigration since the original time of sampling, and, if applicable, of serving as a control sample for identifying possible panel effects.

To meet our objective of providing statistically reliable information on groups of individuals born in the same year ("age cohorts"), we aim for a magnitude per wave of 250 persons per gender and year of birth; in total 500 cases per cohort (see also Wagner et al. 2006). This will allow researchers to analyze the impact of new retirement regulations or measures like "child-raising allowance." With about 500 observations per birth cohort, a researcher can analyze how the new policy instrument works for two very similar birth cohorts: one that is affected by the new law and one that is not.

Above and beyond this short-term rationale, for long-term longitudinal analyses another consideration is crucial: how big does a birth cohort have to be so that after, say, 20 years, the number of cases is still large enough for meaningful analyses. Again, 250 cases might serve as a minimum (in this case taking women and men together), which would imply a sample size of about 500 cases of newborns per wave. Based on the SOEP experience over 25 years of sample development, 250 observations of men and women are sufficient assuming that single age cohorts are not so important in a long-term longitudinal analysis. One can pool observations from different cohorts born a few years prior to a certain event (e.g. the fall of the Berlin wall or the introduction of a new policy) and a few years after this event.

The SOEP Standard Sample will have to be refreshed again in 2010 just to meet the sample size goal of 10,000 households. Not only will this ensure the minimum number of households surveyed in the SOEP; this stabilization of the overall sample could also constitute the first step towards a gradual overall expansion of the SOEP, with the objective of permanently maintaining the number of 500 persons per age cohort.

It must be noted that in the short run, a sample size of 10,000 households might be a minimum that SOEP users can live with. But in the coming years, when household sizes will decrease due to societal aging, we estimate an absolute minimum number of 12,500 households to ensure a minimum number of about 20,000 adult respondents.

In order to achieve and maintain this sample size in the long term, additions to the standard sample will be required in the form of extension samples (in the years 2010 to 2015) and afterwards regular refreshment samples will have to come into play.

If the targeted minimum number of cases (10,000 households) can be achieved for the standard sample in 2010 or 2011, it will also be possible to discuss the option of sifting out either Subsample E, originally started in 1998 as part of a methodological experiment (with a split between CAPI and PAPI interviews), or Subsample H, which was started as a refresher in 2006, from the Standard Sample and turning one or both of these subsamples into the “Innovation Sample.” This sample could then be used for further methodological tests—for example, on mode effects (Schraepler et al. 2006) and links with register data—and as a basis for collecting biomarkers and doing behavioral experiments. Here, investigating a potential change of the data collection method from face-to-face interviews to a web-based technique would also be on the agenda.<sup>20</sup> Note that an innovation sample that relies on longitudinal information about life courses is much more interesting for substantive analyses than a fresh cross-section (for further details, see below).

We propose starting the enlargement of sample size in 2010/2011. Subsamples E and H should be converted into an “Innovation Sample” (about 1,500 households).

Possible developments in the SOEP sample(s) are not limited to just enlarging sample size and overall statistical power. In the first 25 years, the total sample has already been rendered more useful for analysis through the inclusion of special populations (immigrants and high-income households) and by introducing special questionnaires about young children. These kinds of qualitative further developments within the Standard Sample remain methodologically useful.

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<sup>20</sup> The vision of the British panel “Understanding Society” also includes collecting “qualitative” data and “visual” data.

- In the context of our aging society, we will need to improve coverage of persons in institutions, in particular those in (residential) nursing homes. Here the main focus should not be on achieving representative coverage of the institutional population as such, but on the life transition from a private household into an “institution.” These types of longitudinal data are of high scientific and practical relevance for attaining a better understanding of health changes, intergenerational relations, the relevance of institutional care arrangements for the individual life course and, last but not least, for the process of dying in modern societies. In the current set-up of SOEP, moving into a (nursing) home is often accompanied by non-response for elderly respondents. Here, the difficulties of interviewing persons affected by dementia constitutes a major hurdle; in this special case, the option of having care-providers conduct proxy interviews will have to be investigated.
- International migration and migration dynamics play an increasingly significant role in society. In 2006, more Germans left their native country than ever before, apart from the emigration wave of the 1950s (Diehl et al. 2008). Until recently, SOEP respondents (as is true for respondents in all other household panel studies) emigrating to another country are no longer included in the panel survey sample.<sup>21</sup> Meanwhile, however, the SOEP group has laid the groundwork for surveying abroad as well. Respondents who have left Germany since 2004 have been contacted, and surveys have been conducted in writing.<sup>22</sup> The number of cases that can be evaluated is, however, minimal so far (32 cases). In a special survey in 2007, over 2,000 persons aged 16 and over were interviewed on issues of emigration and living abroad. It emerged that respondents who had contacts abroad or had lived abroad previously were more likely to consider leaving Germany for an extended period of time or even permanently. On this basis, the SOEP group is currently looking into the option of conducting surveys abroad more systematically by mail with respondents who have left Germany. This could provide new findings on

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<sup>21</sup> There is, however, an exception for temporary emigrants such as young Turkish men who return to their parental household after military service in Turkey.

<sup>22</sup> “Living outside Germany.” See, for first results, Schupp et al. (2008).

people's experiences abroad and their social integration into the new host country. This would also make it easier to re-integrate these persons into the Standard Sample in Germany upon their return, since they will never have been completely excluded from the survey sample. Obviously, following internationally mobile individuals will require very sophisticated fieldwork.

In terms of governance and funding, it is a difficult question whether oversampling of special groups should be done with the SOEP itself (and by means of SOEP's core budget) or if it should be done with related studies that use SOEP as a reference sample (and by means of external funding) (see section 2.3.2 below). There is no unique answer possible. Whether oversampling should take place within SOEP or by means of related studies must be discussed on a case by case basis. At the moment, we believe that ensuring an increased sample size for the standard sample and ensuring the start of an "innovation sample" are more important than incorporating oversampled sub-groups into SOEP. Oversampling should take place by means of related studies, which should be managed by specialized researchers.

Concerning practical problems of data collection, two key points must be mentioned:

- A global decrease in willingness to participate in the initial survey (i.e., wave one) has prompted us to examine specifically how to improve collection of new subsamples (e.g. targeted incentives for participating for the first time). The practical problems of data collection include, for instance, the standard sampling of foreigners and those who do not have a good command of German. SOEP has gathered experience with immigrants from the very beginning (in fact, SOEP was the first major survey to incorporate foreigners in the 1980s) but there is, of course, room for improvement.
- Together with our fieldwork organization, TNS Infratest Sozialforschung, we will work to improve quality control, for example, through further interviewer surveys (after 1986 and in 2006/07) and the Benford test (Schaefer et al. 2005).

## **Innovation Sample**

We plan to set up a permanent Innovation Sample for more theory driven, highly specified research questions which require specific variables and possibly also specific survey methods. Incorporating such aspects into an ongoing longitudinal survey has the advantage that one need not wait for many years before a longitudinal analysis can be done. Of course it is impossible to ask certain questions retrospectively, for example, about well-being. But retrospective questions about “objective” indicators are also possible. One can use a retrospective question, for example, to ask when a respondent first used a PC or the Internet, or when a respondent quit smoking. This retrospective information can be compared with the answers a respondent gave about his subjective well-being many years prior. Thus, a longitudinal “innovation sample” that is open to new kinds of measurement is of much higher research value than a new cross-sectional innovation sample.

Based on this concept, Subsample E and/or H could be a good starting point for such an Innovation Sample. Given sufficient funding, these data could be gathered through a newly drawn innovation sub-sample.

The concept of an Innovation Sample partly follows the models designed for the UK “Understanding Society” and the Dutch MESS panel. While the Innovation Panel in the UK essentially deals with methodological tests (for instance, development of new questioning techniques), the SOEP Innovation Sample not only will enable us and external researchers to test new methods of data collection, but is also intended to bring about innovations in terms of content. Here we are basically following the concept of the Dutch MESS panel, which has been explicitly designed to provide the basis for experiments.<sup>23</sup>

As addressed above, the particular significance of this Innovation Sample lies in its longitudinal character. Thus, it is not a catch-all for ad hoc issues of interest to a disparate multitude of potential users. The idea is to ask persons and households who have already been surveyed several times, about whom much more is known than about first-time respondents to participate in behavioral experiments, special measurements (e.g. biomarkers, experience sampling for high- and low-frequency

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<sup>23</sup> With the concept of a clearly delimited Innovation Sample, we are systematically expanding our own ad hoc improvements that have been achieved in cooperation with users in Zurich and Bonn over the past few years: the use of the SOEP for linking with behavioral experiments. We now intend to open up innovative opportunities to collect and measure data to all interested users, which in turn obviously creates the need to establish clear rules for data use.

events, qualitative in-depth interviews) and possibly also interventions (e.g., selected randomized further training courses).

In order to make the Innovation Sample useful for analysis from the outset, it needs to be investigated—as mentioned in section 2.3.1 above—whether one or two of the existing subsamples can be transferred into the Innovation Sample (e.g., Subsample E and/or H, where the number of cases in the Standard Sample would have to be augmented by a refreshment sample). While the UK Innovation Panel includes only around 1,600 households, we hope that the size of the SOEP Innovation Sample will be considerably larger in order to allow for substantive analyses.<sup>24</sup> As indicated in section 1.2 above, an “Innovation Committee” will, among other concerns, ensure productive interlinking of the SOEP Standard Sample and the Innovation Sample. In order to optimize the numbers of cases that can be evaluated for certain issues to be studied, the Standard und Innovation Samples must follow the same sample design and follow-up design. Larger questionnaire blocks and survey methods can and should vary, however.

## **Pretests**

For the sake of completeness, it should be pointed out here that carefully selected pretests can also supplement the SOEP Standard Sample. Not only can pretests serve to test new questions and survey methods; they can also reduce the burden on the Standard Sample by providing targeted supplements—for example, specific questions with a theoretical basis. Pretests can also be used for test-retest studies, which are becoming more and more important in conforming to methodological standards of psychology, given the increased focus on psychological concepts in the social sciences.<sup>25</sup>

Since a normal pretest has no longitudinal components and belongs neither to the Standard nor to the Innovation Sample, generating pretests does not necessarily always have to be the responsibility of the Innovation Committee. What we envisage, instead, are pretests that can be conducted and financed by external partners of the

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<sup>24</sup> For example, the Dutch MESS Panel sample designed for similar purposes includes 5,000 households.

<sup>25</sup> James J. Heckman and colleagues, who call for the collaboration between economics and psychology (Borghans et al. 2008), argue expressly for a more standardized and methodologically sound measurement of “economic traits” such as time preferences and risk aversion.

SOEP survey group. We can give advice for the design and operationalization of these special pretests, which can go far beyond a short-term perspective for the SOEP samples. In other words: in principle, we are happy to help in testing new ideas that may need not just one but several years before they have a chance to become incorporated in one of SOEP's samples.

### **2.3.2 Related Studies**

For studies developed independently of the SOEP survey group and outside our budget, the SOEP survey (both the Standard Sample and the future Innovation Sample) may serve as a complementary data set or – in case of intervention studies – as a “control sample”. At SOEP, we call those studies “Related Studies.” Especially oversampling of special groups can be done in Related Studies (and not within SOEP itself) as long as it is ensured that the fieldwork procedures and the core questionnaires are exactly the same as in SOEP itself. For example, a twin study could be complemented by SOEP, which already contains many siblings. And an immigration study could be complemented by the already large number of immigrants in the SOEP. Or SOEP could act as a control sample for an intervention study with children.

This idea to use SOEP as a “control sample” has already been taken up by researchers in social medicine (Geyer et al. 2008). The authors investigate whether persons between 17 and 45 years who have had to undergo heart surgery have fewer opportunities on the labor market than persons without such heart problems. The authors compare their sample of heart patients (collected independently of SOEP) with a correspondingly delimited subsample of the SOEP.

The “Berlin Aging Study II” (BASE II) will become a role model for such an interplay of independent studies and SOEP. BASE II will contain more than 2000 subjects (all living in Berlin or Brandenburg) who go through different assessments in the Max Planck Institute for Human Development (and at Charité Hospital). In order to control for the selectivity of this “subject pool” and in order to describe the phenotypes of these subjects better they will be interviewed like SOEP respondents.

Another Related Study could be a “Twin Sample” which would boost (like the ethnicity boost in “Understanding Society”) the number of cases for a group of particular interest. Spinath (2008) discusses the advantages of additional datasets on

twins which could be complemented by observations in household panels like BHPS (Understanding Society) and SOEP. In general, it is very likely that over the next few years, creating and collecting “genetically sensitive designs” will become increasingly important for the social and economic sciences. This will make it easier to conduct causal analyses and to determine and analyze the interaction of genes and environment and how they affect human behavior (see also Diiewald 2008).

This basic concept—a special survey and the SOEP as a complement to this survey—can be further developed. So the SOEP can be used as a control sample for large-scale intervention studies.

If the SOEP is to serve as a complement and a control sample for special samples funded and controlled outside SOEP’s core budget, however, the design of these types of samples must be brought fully in line with that of the SOEP. While the effect of a related survey on the SOEP sample(s) should only be minimal, this will mean new challenges for the SOEP group in Berlin and for the survey institute commissioned with the SOEP survey, entailing detailed consultations regarding survey methods (cf. Siedler et al. 2008).

### **3 Further development of SOEP service**

Constant improvement of SOEP service is one of the central tasks and objectives of the SOEP group (see also Anger et al. 2008, Bowen et al. 2008). In 2006/07, we conducted our most recent user survey to obtain information on user-friendliness and perceived quality of SOEP data. We also collected comments and suggestions for improvements concerning the various service tasks. Here we limit ourselves to outlining a few improvements that are currently under discussion or soon to be implemented. Given the fact that Related Studies might require much more service than we are currently providing, it could become useful to establish a “Data Service Center” together with other providers of longitudinal data.

A significant improvement of SOEP service that is currently underway consists in restructuring the complete micro data, encompassing 25 years of annual information, into a user-friendly “long” format. The objective of this project is to consistently link the longitudinal data files presently stored by year and/or wave, and to convert them into a data format that assists analysts in using the panel components of the SOEP data more efficiently.



One development that has been underway for a number of years now and will continue into the near future is improving user access to regional data and/or geo-coded data (relating to the neighborhood or locality) which is considered sensitive according to data protection legislation. Since 2006, our SOEPrmote software has allowed access to this data, which relates to very small-scale regions and cannot be provided as part of the standard data delivery on DVD due to data protection regulations. This is done via a secure remote connection to our server, without requiring the user to be on-site at DIW Berlin. The special software, SOEPrmote, provides secure access, guaranteeing that the data sensitive to data protection regulations does not leave the premises of DIW Berlin. The SOEP team is currently improving this service by reducing relatively long computing times and capacity bottlenecks in connection with SOEPrmote.

New services under discussion include the improved documentation of the psychological concepts applied in SOEP, tailored imputations (multiple and longitudinal) for missing values, and improved "wave reports" that can bring together reports like SOEPmonitor and the SOEP-based reports in the "Data Reports" of GESIS.

A completely new kind of service provided by the SOEP group, which is presently at the planning stage and will depend on the available personnel capacities, is an advisory service for other longitudinal studies (see section 2.3.2 above). While providing advice to colleagues on new large-scale panel studies such as the Australian HILDA Survey constitutes one of the key tasks of the SOEP group, offering advice in the field of laboratory research and particularly medical longitudinal studies (see Section 2.3.2 above) may be or become far more time-consuming. If the SOEP can be established as a control sample for externally collected datasets, and if these are made generally accessible, all SOEP users will stand to benefit (cf. Siedler et al. 2008).

It emerged from the last user survey that young researchers and doctoral students in particular find navigating within the SOEP data complicated and difficult. As a result, in 2007, we created a new service—SOEPCampus—in order to improve training in research methods in Germany on the basis of SOEP data (see [http://www.diw.de/deutsch/soep/service\\_amp\\_dokumentation/soepcampus/59925.html](http://www.diw.de/deutsch/soep/service_amp_dokumentation/soepcampus/59925.html)). The program is aimed primarily at students, both graduates and undergraduates, in the fields of economics, sociology, and psychology. We intend to further develop

this service, which—although time-consuming for the SOEP group—has already proven to be extremely rewarding. In cooperation with academics from other institutes and universities throughout Germany, the SOEP group offers practical courses and lectures on using the SOEP survey and the variety of options it offers for analysis. In addition, special procedures for longitudinal analysis and their application are presented and discussed through the example of analyses based on the SOEP, mainly by “external” speakers. Furthermore, it should be noted that the SOEP group at DIW Berlin always welcomes guests to visit the SOEP and learn advanced, complex data handling methods. This invitation also extends to student trainees (interns).

The International SOEP Young Scholars Symposium that has already taken place four times is also part of our advanced further training program specifically designed for doctoral students. The seminar, which takes place in the spring, is based on cooperation between the Bremen International Graduate School of Social Sciences (BIGSSS) and the Hanse Institute for Advanced Study (HWK). One special feature is that an experienced discussant is assigned to each doctoral student presenting a paper. Thus, doctoral students are given specific advice on their thesis. Exchange is also fostered within the group of doctoral students participating.

#### **4 Conclusion: another reflection on governance**

The remarks in Section 2, particularly those related to subdividing the SOEP subsamples into a Standard and an Innovation Sample, and also on links with external special studies, imply complicated coordination of various tasks. To carry out this task a new body is to be created in the form of an “Innovation Committee”. In our view, the need for such a body, going beyond the role of the SOEP Advisory Board or the new “SOEP Survey Committee,” arises from the fact that long-term longitudinal studies are complex instruments that cannot be controlled only through an advisory board, especially one that also has evaluation responsibilities within the Leibniz Gemeinschaft (WGL).

If we look, for instance, at the governance of a scientific research infrastructure comparable to the SOEP, the Berlin Electron Storage Ring for

Synchrotron Radiation (*Berliner Elektronenspeicherring-Gesellschaft fuer Synchrotronstrahlung* or BESSY II), it can be seen that their “Beamtime Committee” carries out more or less the same function as our proposed Innovation Committee. It regulates who can carry out which experiment in BESSY and when.

In the case of the SOEP, the need for regulation goes far beyond the capacity of an advisory body and includes, for example, prioritizing elements of the list of questions, authorization of behavioral experiments and intervention studies, and the further development of survey instruments. Therefore, the task of the Innovation Committee is not only to provide advice; it must be integrated into the development of the SOEP survey. This also applies with respect to issues related to research ethics and data protection. We would like to emphasize that both areas are of utmost importance for the SOEP.

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