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on Multidisciplinary Panel Data Research

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**25 Waves of the German Socio-Economic Panel (SOEP):
An Asset to Inter-disciplinary Research**

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25 Waves of the German Socio-Economic Panel (SOEP): An Asset to Inter-disciplinary Research

by Gisela Trommsdorff

The German Socio-Economic Panel Study (SOEP) has been providing representative data records on the population in Germany in annual surveys since 1984, i.e., for almost 25 years. With the 2008's fieldwork, 25 waves have been completed. The SOEP expanded to include a sample from East Germany in 1990 as well as to include special samples on immigration and high-income households. Looking back over 25 years of scientific activity is, for an institution, which is what SOEP has become, also an opportunity to examine its original purpose and resources, the development steps and results that followed, and its current aims.

1 Institutional Changes in SOEP

The idea of a “Socio-Economic Household Panel“ arose at the beginning of the 1980s. The SOEP was sponsored for the first time in 1982 within the framework of the Comparative Research Centre 3 (Sfb 3 Frankfurt and Mannheim: Microanalytical Foundations of Social Policy), which was founded by the economist Hans-Juergen Krupp together with the sociologist Wolfgang Zapf. At that time the Panel was funded through the DFG (German Research Foundation) with the financial support of the BMFT (Federal Ministry for Research and Technology). The DFG Advisory Committee at the time already had an interdisciplinary structure with, among others, the influential development psychologist and later MPI Director, F. E. Weinert among its members (cf. overview by Krupp 2008).

Between 1990 and 2002, the SOEP study was a DFG project (following the corresponding application and reporting processes) with considerable financial support from the BMBFT

(Federal Ministry of Education, Research and Technology) and later the BMBF (Federal Ministry of Education and Research). Premises, administration, IT capacity, initially 3.5 and then later 2.5 members of staff were provided by the DIW (German Institute for Economic Research) Berlin. In 2003 the SOEP became part of the DIW as a separate department and service facility within the Gottfried Wilhelm Leibniz Science Association (WGL).¹ After Hans-Juergen Krupp gave up the leadership of the SOEP in 1988 (he became Finance Senator for Hamburg), Gert G. Wagner took his place and has led the SOEP since 1989 as Principal Investigator (cf. on this subject Hanefeld and Schupp 2008).

An international Advisory Committee with an inter-disciplinary structure (expert and later user Committee) has continually accompanied the work of the SOEP. Since 1993, I was a member of this Committee, and from 2004 until 2007 I chaired it. Consultations and evaluations have been conducted by the Committee regarding, for example, the aims of the SOEP and appropriate processes for the achievement of these aims, its scientific results and the networking of the SOEP with other institutions.

In spite of obvious friction at different junctures, the SOEP study not only survived various dramatic organisational changes but was also able to seek out new challenges particularly with regards to the interdisciplinary direction of its own; the SOEP has generated research and it was able to tackle these new challenges. As a result of the long-term vision of the founders of the Sfb 3 and the initiators of the SOEP, conditions were already in place for the establishment of not just a household panel to respond to scientific questions for political counseling. The SOEP study exploited this opportunity on the basis of its unique and exhaustive survey data on the income of private households both in cross and longitudinal design in order to also conduct and stimulate social and behavioral research. The establishment and the development of the SOEP study appears today to be closely connected with the global history of empirical social and economic research which increasingly tries to transcend disciplinary boundaries.

¹ Problems with governance and confusion regarding the independence of the SOEP as a department as well as the role of the SOEP Advisory Committee (the responsibilities and make-up of which were altered several times) led to protracted conflicts.

2 Further Development of the of the SOEP

During the lifetime of a prospective panel, firstly, changes and adjustments are required to accommodate specific social, economic, and political events, e.g., the new states joining the Federal Republic of Germany. Secondly, new theoretical and methodological developments require appropriate changes in the survey questions and methods. Finally, a consequence of conducting an annual survey is that the original interviewees grow older, their development tasks in their work and family change (through parenthood and grandparenthood, divorce, etc.), and one day they will pass away and no longer be able to participate in the panel. These longitudinal changes demand constant review of relevant theoretical questioning and methods as well as, connected to this, adjustments to survey contents and changes in survey design (expansion to include new partial samples such as the new federal states and migrants).

Which changes to both the SOEP's survey method and its survey programme might be scientifically fruitful is debated in the Expert Committee taking into account the different preferences within individual disciplines. The SOEP leadership team is then responsible for the methodological and organisational implementation of Expert Committee recommendations emerging from discussions, which are far from always consensual. Here, there is always the problem of making the “right“ decision at the right time. Poor timing leads to a significant risk.

The right decision to include East Germany, which became later the “new federal states”, in the survey, already in June 1990, was made thanks to a series of factors such as the intuition of the responsible scientists, the flexibility of the field organisation Infratest Sozialforschung (Munich) and, last but not least, the timely provision of financial resources by the sponsor (in the case of the new sample the BMFT).

In a household panel which is constructed like the SOEP originally was, younger cohorts are included systematically. It has now become possible to include the children and grandchildren of those who have been surveyed so far in the survey and, thus, to be able to address questions of inter-generational relations in direct comparison, rather than just retrospectively (Szydlik and Schupp 1998). Recently, special survey instruments were introduced for children and adolescents because when they turn 17 they become respondents by their own within the survey.

In addition to the original 2002 and 2005 questions (posed to parents) with regards to newborns and small children, in 2008 for the first time, a questionnaire on pre-school children was used in order to capture cognitive and non-cognitive skills. As non-cognitive skills such as self-regulation and motivation are significant for economic questions (e.g., on education and career planning or provision for old age), this results in new prospects for interdisciplinary research. Older cohorts are now sufficiently well represented in the SOEP to study aspects of human development. Examinations on stability and change of diverse behavioral traits are possible over a longer life span (cf. Diener, Lucas and Scollon 2006). Furthermore, due to technical innovations, the testing and application of new survey methods (from personal face-to-face interviews to computer-assisted interviews) has become necessary. This lays the foundations for empirically-supported methodological developments which, in turn, require excellent methodological knowledge and continued training.

Such changes of the SOEP in terms of design, content and methodology, require significant competences among all scientists participating running the survey to recognize which new questions are scientifically relevant. The SOEP managed to achieve this because of its integration in an internationally-renowned scientific community and its flexibility when it comes to planning and implementation. Those responsible for the SOEP, therefore, grasped the opportunity to examine the social and behavioral science factors influencing economic actions. This enables the panel to cover issues transcending questions of economy; these are particularly sociological but also, among others, issues relating to demography and health policy, psychology and behavioral genetics. The following illustrates this interdisciplinary potential using the example of the implementation of psychological concepts and their measurement.

The move towards the individual foundations of social action was made already at an early juncture in 1984 through the SOEP with questions, which continue to be used today, on conditions for *life satisfaction* over the life span (cf. Wagner, Frick and Schupp 2007). With this came innovations which led to critical and controversial discussions by the Scientific Advisory Board and not only at the outset. Research on social indicators shows that not only the usual objective indicators like income but also subjective indicators should be included in the SOEP. This was tried and tested– as indicated by the various relevant publications – and clearly and considerably enriched research. The boom of so-called “happiness“ research

(“positive psychology“) has, in recent years, also had an impact on sociological and economic research on life satisfaction.

Life satisfaction, *inter alia*, in the context of prosperity and work productivity, is also of interest to economists (Raetzl 2007). Coherences between life satisfaction and changes in family forms are examined in demographic research (Zimmermann and Easterlin 2006). In psychology, the main question asked is whether economic conditions such as prosperity have an impact on increased life satisfaction or whether life satisfaction is a relatively stable feature over the life span, and whether it is influenced by other than economic factors. SOEP data sets are particularly useful for helping to answer these questions because here it is possible to conduct not only cross-sectional analysis on relationships but also longitudinal analysis on the influence of life events on life satisfaction, and the change and stability of life satisfaction in different contexts.

Using representative SOEP data, for example Rammstedt (2007) and Headey (2008) have tested relationships between personality traits (Big Five, control orientation, optimism and also life goals), on the one hand, and life satisfaction, on the other hand (cf. also Rammstedt and Schupp 2008). This leads us to the next question: whether and how far global personality traits, temperament, and genetic factors can predict life satisfaction or whether other factors like socialization conditions (in the family), life events, and economic conditions are more relevant predictors. Cross-sectional analysis by Trzcinski and Holst (2006) showed significant relationships between the well-being of the parents (mothers) and their young children but not between economic conditions (household income) and the well-being of the children.

The question that remains unanswered is whether longitudinal analysis shows relatively stable attitudes (differing from individual to individual) over the lifespan, i.e., whether we can assume that individual differences are based on the subjective generalized belief that life is experienced as rather positive or negative, relatively independent of economic conditions.

In the meantime, criticism has been articulated on the measurement of life satisfaction, a method which has already become well established. The validated items for measuring subjective well-being which have been used for a long time measure only cognitive and neglect emotional components (including mood). Becoming aware of this one-sided approach has presented the SOEP with a new challenge. The new task was to examine how the

theoretical construct of life satisfaction can be captured in a more differentiated and methodologically valid way. This question induced a controversial discussion in the Scientific Advisory Board, because, for scientists from different disciplines, it is rather problematic to have emotions included in the SOEP as a relevant construct. One has to note that the relevance of emotions to explain human behaviour has been discovered only relatively late in psychology. In the meantime, at least in the context of questions of “bounded rationality,” economists are no longer completely ignoring emotions. Due to the initiative of Daniel Kahneman, Nobel Prize winner in Economics and Psychology Professor at Princeton University², a short-scale on “feelings“ was adopted by the SOEP for the first time in 2007 (cf. Schimmack, Schupp and Wagner 2008).

At a relatively early stage, the SOEP considered to include additional psychological concepts and questions (thanks to the far-sightedness of its founders), which have been examined in psychological research for many years but which have, thus far, played only an insignificant role in economics and the social sciences. In spite of some early resistance from individual colleagues, newly introduced psychological constructs are still contributing to the examination of several major research questions by the SOEP.

Likewise, experimental methods (relevant for psychology and behavioral economy) are being tested, for example, for the measurement of self-regulation of children and adolescents. The underlying aim here is to complement the attitude measures with behavioral observations. For this, a particularly well-developed awareness for methodological problems is required. The SOEP's validation studies, which are presently conducted, can make an important contribution here. The majority of previous experiments and validation studies were not financed through the normal SOEP budget – instead, third party funding was sought. The requirement to apply for third party funding (and related review process) partly guarantees that the methods which have not yet been subject to final methodological validation will not be uncritically applied.

In summary, it can be said that, with the introduction of concepts from non-sociological disciplines, particularly, most recently from psychology, the SOEP has made a considerable

² Additional initiators were Ed Diener (psychologist, University of Illinois), Ruut Venhooven (sociologist, University of Amsterdam), Bruce Headey (sociologist, Melbourne Institute of Applied Economic and Social Research), Richard Lucas (psychologist, Michigan State University) and Ulrich Schimmack (psychologist, University of Toronto Mississauga).

contribution to cross-fertilization between the different research areas. The outcomes of the SOEP methodological work that accompanies this process are well-validated instruments for the examination of questions, which are of great significance for different disciplines. On this basis, the SOEP has initiated a further qualitative improvement and progress in the development of methods. Otherwise it would have been virtually impossible to implement these methods as well as to engage in interdisciplinary research building on these methods.

For psychological research itself, the following aspects of SOEP data sets, among others, are of particular significance (Trommsdorff, 2008; Trommsdorff and Lang 2008). The SOEP representative data sets allow,

- to systematically examine theoretically relevant partial samples (persons from different family structures, generations, educational groups etc.) across time and contexts (regions) (also in comparison with each other based on a quasi-experimental design);
- the isolation of confounding factors: external factors (e.g., parental education, training, the occurrence of particular life events, social networks) and internal factors (personality traits, health), which influence individual development over the lifespan (e.g., health, civic engagement and risk behavior, training and professional career);
- the examination of correlations between development factors over time and, with this, of factors influencing the dynamic intra- and interpersonal processes over the life span.

Thus it can be recommended, in the case of complex studies of the interactions between the context and the individual over the life span, to check which possibilities the SOEP offers before starting a separate data collection. A disadvantage of the SOEP for psychologists is, however, that only a small number of psychological concepts have so far managed to be included there. Based on convincing arguments, though, it has already been shown that theoretically relevant additions have been accepted for inclusion in the SOEP instrument and data collection as long as they are also relevant for the other participating disciplines. At present, the SOEP offers more extensive longitudinal and theoretically promising data sets on the population in Germany than have ever been known in psychology.

3 Present and Future

SOEP data sets are used by different disciplines for longitudinal analysis, for international comparative studies, and for methodological analysis in survey research. Social and behavioral science research profits from the SOEP's work both in Germany and internationally, particularly in the context of the empirically substantiated handling of research questions which are outside the possibilities of individual scientists or large institutions.

The SOEP has, in the meantime, also taken on a model function for other scientifically substantiated panels such as the British, Australian and Swiss household panels and also for the presently starting German national panels on family and on education.

In Great Britain, a massive expansion of longitudinal household data collection is currently under way (UK HLS) particularly to research psychological questions regarding development over the life span in the context of structural variables and changes in the life course. If the SOEP undergoes a similar expansion, this would present the panel with new opportunities to bring together the psychological lifespan research (including information on personality factors, genetic, and environmental conditions) with socio-economic questions of changing contexts in life career – an approach which Glen Elder (1974) and his colleagues have partly been pursuing successfully for some decades based on longitudinal data from the US.

In psychology, this approach allows for new theoretical dynamics through the rediscovery of interactions between person and environment. Both cannot be studied separately from each other: the ecological context influences human feelings, thinking, and behaviour, and vice versa. The empirical basis for this research can be provided by prospective panel studies as illustrated by the SOEP.

Furthermore, joining with relevant data sets from other countries would allow to conduct international comparative studies and to address questions of universality and cultural specificity of socio-economic and psychological development. In this respect, hopefully the Cross National Equivalent File (CNEF) which has thus far been dominated by economic and health science variables, and which includes panel data so far for Australia, Germany, Great

Britain, Canada, Switzerland, and the USA (cf. Frick et al. 2007), will be expanded to include also subjective and behavioural science variables.

The question as to whether or not there is a reason to celebrate the 25 year anniversary of the SOEP seems to be rhetorical, if one considers the panel's past and its future prospects. For the SOEP this is a particularly special anniversary because, with 25 data collection waves, it has completed developmental steps which, today, are leading to a completely new dimension of research activities. The achievements by SOEP has so far, in many respects, already proven well-documented advances with diverse far reaching results for the SOEP, for the infrastructure institutions within the German social science sector and for international social and behavior sciences research. The question is more about how one can and should celebrate such an anniversary.

Firstly, this anniversary is an excellent opportunity to have competent and imaginative discussions which allow to look into the future focusing on both questions around the best possible way of institutionalizing the SOEP and also about how a future research program should be shaped.

Secondly, the anniversary is an opportunity welcome to express particular thanks for the far-sightedness and commitment of the many individuals who have contributed actively to the promotion and development of this panel study since the beginnings of the SOEP. The unfortunate fate of the planned large Swiss panel on the development of children and youth (SESAM), which failed in Spring 2008, shows how difficult the establishment of a well-founded panel is if the active participation of the population is in doubt. This also indicates how much the existence and success of a panel is not only dependent on scientific, financial and organisational support but also on the willingness of the population to support such an endeavor through voluntary co-operation in the surveys. This is often overlooked. On the occasion of the SOEP anniversary, a particular word of thanks should go to the SOEP's interviewees who, over all the years, have participated in the panel. Their efforts have paid off immensely.

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