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The potential for comparative panel research using data from the US Survey of Income and Program Participation (SIPP) and the German Socio-Economic Panel (SOEP)

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Diskussionspapiere
Discussion Papers

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**The Potential for Comparative Panel Research
Using Data from the U.S. Survey of Income
and Program Participation (SIPP) and the
German Socio-Economic Panel (SOEP)**

James C. Witte*

Die in diesem Papier vertretenen Auffassungen liegen ausschließlich in der Verantwortung des Verfassers und nicht in der des Instituts.

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Working with panel data such as that collected by the U.S. Survey of Income and Program Participation (SIPP) can be relatively expensive, both in terms of manpower and computing resources. The costs of using two or more panel data sets for comparative research increases, nearly proportionately, with the number of data sets. Experience with one panel data set is an advantage for working with another. Still there is no substitute for the detailed technical and substantive knowledge needed to use microdata, particularly a complex hierarchical longitudinal data set such as SIPP. Likewise, the data processing expenses (hardware, software and programmer time) associated with the use of multiple panels is considerable.

For these reasons, researchers are only likely to conduct analyses based on two or more data sets of this type, if a convincing case can be made for the methodological advantages and practical feasibility of such research. The opening section of this paper presents the methodological rationale for comparative panel research. Assuming that the reader is familiar with the Survey of Income and Program Participation (SIPP), the second section begins with a general introduction to the history, organization and design of the German Socio-Economic Panel (SOEP)¹. The discussion goes on to consider the SOEP survey instruments and their content, field procedures, and data management and dissemination. The final section of the paper reviews the most important differences between SIPP and SOEP and assesses their potential for comparative studies in specific substantive areas (including: employment and earnings, program participation and benefits, household composition and family events, education, and health and disability). This section is intended to aid SIPP users in determining whether they should look more closely into the SOEP as an additional source of data.

A. The Rationale for Comparative Panel Research

The comparative approach to the study of society is as old as the endeavor. Plato's Republic is designed with an eye to the strengths and weaknesses he observed in the various Greek city-states. Similarly, much of Aristotle's work is devoted to describing and classifying phenomena from diverse societies in order to identify correct and proper principles of society. Modern sociology's "founding fathers", Weber and Durkheim, were

¹ General information concerning SIPP and SOEP may be found in: Kasprzyk, D. (1988) "The Survey of Income and Program Participation: An Overview and Discussion of Research Issue" SIPP Working Paper 8830 and Autorengemeinschaft Panel (1990) "Das Sozio-oekonomische Panel für die Bundesrepublik Deutschland nach fünf Wellen, Vierteljahreshefte für Wirtschaftsforschung, No. 2 (Berlin).

both masters of comparative analysis. Though it has been argued that they use different types of explanation and different degrees of generalization (Ragin and Zaret 1983), the intent is the same: both rely upon descriptive and structural analyses of other societies to highlight the distinctive character of modern industrial society. Not unlike the principle of triangulation in navigation, historical and cross-cultural comparisons served both Weber and Durkheim in their attempts to formulate abstract rules about the organization of society.

Today the comparative method remains central to most macro-sociological approaches to contemporary society, including historical sociological research. The use of the comparative method from a micro-sociological perspective is less common, particularly among researchers who emphasize the analysis of large-sample survey data. These studies generally remain bound to a particular social context: data for historical comparisons often are simply not available, while attempts to compare survey data across countries have tended to bog down in discussions of whether or not it is possible to obtain truly comparable data. These concerns have focused on the organizational problems related to the administration and coordination of study design and data collection, as well as measurement problems, such as language and the specificity of cultural context.

These concerns are by no means trivial, especially when a complex data set, such as SIPP, is under consideration. However they must be placed in perspective, considering that a crucial analytical tool is at stake. From a methodological perspective, comparative research may serve modern survey research in the same way it did Durkheim and Weber. Comparative research provides a means to introduce variance and control at the macro-level; it is the only way for social scientists to argue that their findings are generalizable, that they go beyond the idiosyncrasies of history. This insight was by no means forgotten as survey research came to assume its current dominant role in western sociology.² And, though the methodological arguments may not stand out, there are important examples of comparative analyses and efforts at

²Two examples from this period should suffice. Parsons writes in The Structure of Social Action (1949[1937]) "Experiment is, in fact, nothing but the comparative method where the cases to be compared are produced to order and under controlled conditions." Similarly, Merton in his essay "Manifest and Latent Functions" (1968) argues that validation in functional analysis "requires, above all, a rigorous statement of the sociological procedures of analysis which most nearly approximate the logic of experimentation. It requires a systematic review of the possibilities and limitations of comparative (cross-cultural and cross-group) analysis." (emphasis in original)

compiling and collecting microdata specifically for comparative studies (e.g. the Luxembourg Income Study project and Erik Olin Wright's multinational survey on class structure and consciousness).³

However, comparative research based on nationally representative panel studies remains essentially untried. To a certain extent this may be attributed to the lack of data -- until recently national panel data for countries other than the US were not available. Today the situation has changed: there is a second major US panel and large-scale panel studies have already collected multiple waves of data in Germany, Luxembourg, France, Sweden, the Netherlands and Belgium. But now that data for comparative studies is available most researchers are satisfied simply with the advantages of panel data relative to cross-sectional data. However, with panel data from a single country one remains unable to consider variance at the macrosocial or structural level. Only a comparative perspective allows one to introduce at this level the degree of methodological control sufficient to consider more general models of behavior.

A second argument on behalf of comparative panel research is practical rather than methodological. Working with other panel data sets, or at least knowing a good deal about them, allows one to profit from the experience of others. The international panel project in Luxembourg aims to facilitate the flow of information between panel projects, to encourage the individual panels to collect comparable information, and to inform the research community about the potential for comparative panel research.

Moreover, the practical value of a comparative approach extends beyond questions of design and feasibility into the analytical process itself. Panels offer a wealth of information, in particular data on change, which has previously been unavailable. However, there are no baselines or historical standards, against which researchers may evaluate this information. Whether a particular transition rate is high or low, or a certain pattern of change is abnormal, is neither a matter of intuition, nor can it be gleaned from history. Whether one has found the extraordinary or the commonplace in one's panel data is not self-evident. Examining panel data on similar processes elsewhere is an effective means to put one's findings into perspective and define a baseline. Panel data provide researchers with a completely new

³ For an overview of the LIS project see: Buhman Brigitte, et al., "Equivalence Scales, Well-Being, Inequality, and Poverty: Sensitivity Estimates Across Ten Countries Using the Luxembourg Income Study (LIS) Database." 1988. The Review of Income and Wealth. Series 34 (2). 115-142. Wright's project is discussed in: Wright, Erik Olin, Classes. 1985. (London: Verso Editions).

way to look at social processes, and practically any results may appear novel. A comparative approach may indicate which findings are truly important and those which only appear to be due to the novel means of observation.

B. The German Socio-Economic Panel (SOEP)

1. History, Organization and Design of the Panel

The German Socio-Economic Panel is the only nationally representative panel study of households and individuals in the Federal Republic of Germany. The panel was started in 1984 by the Sonderforschungsbereich 3 (Sfb 3): Mikroanalytische Grundlagen der Gesellschaftspolitik (Special Collaborative Program 3: Micro-analytical Foundations of Social Policy). The Sfb 3 is a multi-disciplinary research effort located at the Universities of Frankfurt, Berlin and Mannheim and funded by the Deutsche Forschungsgemeinschaft (the German National Science Foundation). The Deutsches Institut fuer Wirtschaftsforschung (DIW: German Institute for Economic Research) is a cosponsor of the project, providing staff, office space and computer facilities in Berlin. Data collection is contracted out to Infratest Sozialforschung in Munich. In addition, Infratest provides technical assistance and consultation on all aspects of fieldwork. Funding for the Sfb 3, will run out at the end of 1990. However, the SOEP will outlive its parent organization: the Bund-Laender-Kommission fuer Bildungsplanung und Forschungsfoerderung, (the federal/state commission with budgetary authority for educational planning and the promotion of research) has agreed to finance the panel for six additional years.

The original panel sample was selected to represent the legal residential population of the Federal Republic of Germany (including West Berlin).⁴ The original sample, which serves as the basis for the panel, should be seen as two separate subsamples, each with its own design. The "German" subsample is based on the random route selection of households within selected sampling areas. Households headed by Turkish, Greek Yugoslavian, Spanish or Italian heads of household were ineligible for selection in this subsample. The "alien resident" subsample was designed to oversample these five major groups of alien residents. For this subsample, lists of registered individuals in

⁴ Persons in institutions, as well as private households, were included in the population, and were eligible to become members of the sample. Data representing the institutionalized population from the early waves are generally viewed to be of limited validity. A greater emphasis is placed on information concerning subsequent transitions of individuals from private households into the institutional population.

selected sampling areas served as a basis for sample selection; the selection of any one individual in a household, then brought the entire household into the panel. Design weights are employed to adjust the sample due to differences in sampling probability between respondents of these five nationalities and all other respondents.

Based on this design, 10,638 households (7,979 with a German or 'other nationality' head of household and 2,659 with a member of one of the five major nationality groups as head of household) were selected. Uninhabited dwellings, those with incorrect addresses, and cases in the German subsample where the current head of household did not meet the nationality selection criteria were then removed from the sample yielding 9,599 eligible households (7,519 with a German or 'other nationality' head of household and 2,080 with a member of one of the five major nationality groups as head of household).

Another 32.% of the German subsample and approximately 25% of the alien resident subsample were dropped from the sample after the first wave, because not all adult members of a household were interviewed. After these households were dropped from the sample, 5,969 households (4,554 with a German or 'other nationality' head of household and 1,415 with a member of one of the five major nationality groups as head of household) remained in the panel and these households are referred to as "the original sample". The representativeness of the sample was then validated and the design weights were modified to adjust for variations in wave 1 nonresponse.⁵ Later nonresponse among members of this original sample is then treated as panel mortality and its influence is counteracted through a set of longitudinal weights developed on the basis of subsequent data collection efforts.

SEP and SIPP are similar in that all adult members of sample households are considered members of the original sample, as are children who become adults during the course of the panel. Moreover, both panels use essentially the same "following rules". These rules state that an individual remains a member of the panel, even if he or she leaves this original household to live alone or with other persons -- subject to certain geographical constraints. As in SIPP, those persons who become members of households with original SEP sample members are interviewed as long as they continue to share a dwelling with a member of the original sample. Death or emigration are the principle legitimate means for a member to withdraw from the sample. Also similar to SIPP, persons in the original SEP sample who enter institutions

⁵ The evaluation of representativeness was based on comparisons of preliminary analyses with the SOEP data and benchmark figures obtained from other data.

are not interviewed, but are retained in the sample and become eligible for further interviews once they leave the institutional population and return to a private household.

Two of the more important differences between SIPP and SOEP are related to the interview schedule. SOEP interviews are conducted once a year in the late spring and early summer, rather than three times each year as in the case of SIPP. Additionally, the German panel is designed to run indefinitely and, unlike the SIPP panels, will not be "retired" after a set period of time or number of waves. The original sample will be retained, so long as its representativeness is not challenged due to the cumulative effects of panel mortality.

2. Survey Instrument

Three types of survey instruments are employed for each wave of SOEP data collection: the address protocol, household questionnaires and individual questionnaires. It is particularly important that users understand these differences as they are crucial to the structure of the available data files. The variable list in Appendix 1 provides a list of data collected during the first five waves using these instruments.

The address protocol serves the same function as the SIPP control card. The interviewer fills out an address protocol for each household including names, identification numbers and important demographic characteristics of all persons in the household, as well as a summary of field work to date and interviewer information about the dwelling. Changes in household composition are also recorded on the address protocol. An additional address protocol is created when a member of the original sample brings a new address into the panel. Others living in the same household at this address become members of the panel as long as they live with a member of the original sample. All individuals and households listed on address protocols constitute the gross data set (Bruttodaten), while those households and individuals who actually provide interviews are referred to as the net data set (Nettodaten). The reason a household or individual belongs to the gross data set but not the net data set, i.e. why an interview was not conducted, is recorded on the address protocol.

Each person 16 years of age or older in a SEP panel household is to complete an individual questionnaire -- in SIPP individuals aged 15 or older are interviewed. SOEP is also unlike SIPP in that beginning with the second wave there are two basic versions of this instrument each year: a green version for persons interviewed in the previous year and a blue version for persons new to the panel. The blue version is designed to collect information, which has already been collected from persons who entered the panel earlier. Actually, there are twelve versions of the individual questionnaire in each year -- blue and green

German questionnaires as well as blue and green versions in the language of each of the five major groups of alien residents. Not only are the questionnaires translated but they are also modified to a limited extent to consider issues specific to the resident alien population.

The example presented in Table 1 illustrates this point. The highest level of schooling completed was asked of all respondents in the first wave. These respondents are then asked a filter question in subsequent years as to whether or not they completed a further level of education in the previous year. If this is the

Table 1: Variables Available to Determine Completion of a University Degree at the Time of the Second Interview for 4 Hypothetical Respondents

Variable	Original sample member German version Uni. degree 1980	Original sample member German version Uni. degree 1985	New to sample German version Uni. degree 1980	Foreign respondent German university degree 1980
AP0708	1	-2	--	-2
AP07A10	-2	-2	--	1
BP53	-2	1	-2	-2
BP5402	-2	1	-2	-2
BP92B08	-2	-2	1	-2
BP102A10	-2	-2	-2	-2

AP0708 Wave 1 German version. Holds a university degree.
 AP07A10 Wave 1 Foreign version. Holds a degree from a German university.
 BP53 Wave 2 German and foreign versions. Completed additional education since last interview.
 BP5402 Wave 2 German and foreign versions. Additional completed education was a university degree.
 BP92B08 Wave 2 German version new respondents. Holds a university degree.
 BP102A10 Wave 2 Foreign version new respondents. Holds a university degree.

For all variables: 1 = yes; -2 = missing, not applicable

case, then the respondent is queried regarding the type of education involved. Persons new to the sample, however, receive a set of questions comparable to those asked of all persons in the first wave. Thus, the same information, the highest level of schooling completed, is collected at different times depending on when the person entered the panel and when his or her education was completed.

It is important that users understand this feature: since the data set is organized on a wave by wave basis, information regarding the highest level of education for all persons in the panel is contained in several variables. New information is added sequentially to the data base rather than updating old variables. This block of questions is also organized differently in the foreign versions, because many resident aliens have been educated outside of Germany, as well as in the German system.

Users should consult the address protocol to determine which version of the individual questionnaire has been used for each person in a given wave. Several variables may have to be combined to create a single unified variable. Failure to do so may lead one to ignore a valid piece of information, and use a missing value, because a different questionnaire version was used and the valid information is stored elsewhere.

The individual questionnaires contain between sixty and ninety questions and require approximately thirty minutes per person to complete. As in the case of SIPP, the information collected by the individual questionnaires may be divided into core and topical components. Core questions deal with the following areas:

- Education
- Labor force participation
- Occupational mobility
- Unemployment
- Personal income
- Taxes and social security
- Time use
- Satisfaction with various aspects of one's life
- Health
- Values and political attitudes.

Two calendars are also included in the core questionnaire: 1) an activity calendar that records participation in schooling, vocational education, military service, full-time employment, part-time employment, unemployment, homemaking or retirement on a monthly basis for the previous year and 2) an income calendar where respondents indicate, also on a monthly basis, whether they received income from various sources in the past year and the average monthly amount received from each source (whereby the average is based only on the months income was received from a particular source).

Table 2 lists the existing and planned topical modules for the first eight SOEP waves.

Table 2: SOEP Topical Modules

Wave 1	Biographical information, in particular labor force participation
Wave 2	Marital and family history
Wave 3	Family background, including age, education and occupation of parents
Wave 4	Social security and retirement
Wave 5	Asset balance (completed by only one household member)
Wave 6	Continuing education and occupational qualifications
Wave 7	Detailed questions regarding time use and time preferences
Wave 8	Family, social services and social networks

The first three topical modules are of particular importance because they are designed to collect background information useful for a variety of analyses.⁶ In wave 1 individuals were asked to provide a short biography, indicating for each adult year of their lives whether they had been involved in the following activities: schooling, vocational education, military service, full-time employment, part-time employment, unemployment, homemaking or retirement. In wave 2 respondents were asked to provide a marital history and information concerning the type of area they grew up in, as well as when they left the parental household. Women were also asked to complete a fertility history. Further information concerning social background (in particular age, education and occupation of respondents' parents) was then collected as the topical module in wave 3.

The information collected in the first three topical modules should be seen as an attempt to extend the timeframe back before the start of the panel to provide life history data for panel members. In both core and topical questions, whenever appropriate and feasible, an attempt is made to date respondents' entry into a particular state or the beginning of a spell so that the data may be used for event history analyses. In general, only the year for events and transitions prior to start of the panel are available, but those events and transitions that occur during the panel are dated on a monthly basis.

The third SEP survey instrument is the household questionnaire, which is completed once for each household -- usually by the person designated as head of household. The household questionnaire contains about forty questions and requires fifteen to twenty minutes per household to complete. Here, too, there are different versions when the household has just entered the panel or the head of household belongs to one of the five major groups of alien residents. Furthermore, since describing a household's dwelling is an important part of the household questionnaire, a blue version (which collects information on the physical attributes of a household's dwelling) is also given to households which have moved to a new dwelling since the previous interview. Households remaining at the same address receive a shorter, green version, since most data on the dwelling do not need to be collected again. In addition to dwelling characteristics, the household questionnaire collects information on children in the household, the care of household members with special needs, and

⁶ Beginning with the 1986 panel these data are comparable to the personal history data collected in the SIPP Wave 2 topical module.

household income, assets and program participation. In wave 3 questions regarding neighborhood characteristics and in wave 4 regarding child care were included in the household questionnaire.

3. Field Procedures and Results

Household and individual interviews are designed as personal interviews conducted by trained interviewers. However, if a different interview method is preferred by a respondent and may help to keep this person in the panel, other options are available. As a result, about one-third of all individual questionnaires are filled out by the respondents themselves and then returned to the interviewer. The foreign questionnaire versions are bilingual to aid the interviewer in transcribing responses. Interviewers are also permitted to hire a bilingual companion to assist them on interviews with foreign respondents. This option was exercised in one-quarter of all individual interviews with persons in the foreign subsample during the first wave, but has been used less frequently in subsequent waves (16% in the fourth wave).

In part, this reduction may be due to processes of selection; those persons with the greatest need for an interpreter may have already dropped out of the panel. However, the reduced need for interpreters is certainly also related to continuity among the interviewer staff. This continuity is intended to reduce panel mortality, but is likely to also reduce the need for interpreters as respondents and interviewers learn to complete the questionnaires together despite language differences. The degree of continuity among the interviewer staff is impressive: in the fourth wave 92% of the fieldwork was conducted by interviewers involved with the project since the first wave. Introductory letters, small gifts (such as pens, pocket calculators and lottery tickets), and yearly brochures describing applications of the data are also used to encourage response and keep panel mortality to a minimum.

Nonetheless, panel mortality does occur, so members of the SOEP project have paid particular attention to monitoring nonresponse, assessing its impact, exploring its causes and developing longitudinal weights to correct for its effects. Table 3 reviews the overall development of the panel during its first four waves. Fluctuations in panel size are a combination of demographic forces (births, deaths, emigration and institutionalization) and panel mortality.

Table 3: Development of the German Socio-economic Panel during the First 4 Waves

Data set	Wave 1 (1984)	Wave 2 (1985)	Wave 3 (1986)	Wave 4 (1987)
Individual records* (gross tape)	16,252	16,977	16,536	15,984
Individuals (gross tape)	16,252	16,737	16,235	15,726
Designated respondents (gross tape)	12,290	12,910	12,297	11,856
Individual interviews (net tape)	12,245	11,090	10,646	10,516
Household records (gross tape)	10,638	6,142	5,878	5,512
Household interviews	5,921	5,322	5,090	5,026

Beginning with the second wave, the number of individual records exceeds the number of individuals because two records exist for mobile individuals: in the gross tape these individuals appear as "latent" records in their original households as well as in the households in which they currently live. This structure simplifies analyses of mobility, but for other purposes one must ensure that latent records are not treated as valid cases.

For this reason it is useful to decompose the development of the panel over time into its constituent elements as in Table 4. Results for the German and resident alien subsamples are provided separately, in each case the percentages are based on the number of individual interviews provided in wave 1; that is, the results are cumulative indicators of change in the panel.

Table 4 differs from Table 3 in that it considers the question of sample size from a longitudinal perspective. For example, in Table 3 the number of individual interviews in wave 4 is equal to 85.9% of the number in wave 1; but this includes persons who were interviewed for the first time after wave 1. These interviews are relevant if one wishes to look at data from wave 4 as a cross section or if one is interested in a longitudinal sample covering a shorter time period. However, if one is interested in a longitudinal sample based on the wave 1 to wave 4 data, then the figures in Table 4 determine the available sample, which equals 75.5% of the original German subsample and 68.3% of the alien resident subsample. Lower rates of panel mortality would certainly be desirable. However, as Table 4 also shows, some of the attrition, particularly among the alien resident subsample, mirrors demographic processes in the population (death and emigration). Moreover, in both subsamples the yearly loss due to panel mortality has declined continuously since wave 2. Finally, it should be noted that for many analytical purposes a shorter observation period may be sufficient, which effectively serves to increase the number of available cases.⁷

⁷ This is particularly true when one is interested in causal analyses, when inferences concerning the absolute number of similar cases in the population at large is not of interest. In this case,

Table 4: Development of the German Socio-economic Panel due to Demographic Processes and Panel Mortality during the First 4 Waves Measured as a Percentage of Individual Interviews in Wave 1

	Wave 1 (1984)	Wave 2 (1985)	Wave 3 (1986)	Wave 4 (1987)
<u>German subsample</u>				
emigration		- 0.2	- 0.3	- 0.4
death		- 0.7	- 1.7	- 2.4
panel mortality		-10.9	-17.2	-21.6
realized interviews	100.0	88.1	80.7	75.5
16 year olds		+ 1.9	+ 3.8	+ 5.6
new adults		+ 1.2	+ 2.9	+ 4.9
<u>Alien resident subsample</u>				
emigration		- 5.4	- 7.7	- 9.5
death		- 0.2	- 0.3	- 0.4
panel mortality		-13.3	-17.5	-21.7
realized interviews	100.0	80.9	74.4	68.3
16 year olds		+ 2.2	+ 4.7	+ 7.3
new adults		+ 1.3	+ 2.5	+ 4.4

Panel mortality includes respondents who could not be located as well as those who refused to be interviewed. New adults are 200+ persons in SIPP terminology.

4. Data Management and Dissemination

The completed survey instruments are put into machine-readable form by Infratest Sozialforschung in Munich. In a manual editing process open-ended responses are coded and all responses are then entered into data files. Missing values are also coded at this time, whereby a distinction is made between data missing due to nonresponse and data missing because an item is not applicable due to a previous filter question.⁸ At this stage the data are also subject to initial cleaning and plausibility checks. All

if one is only concerned with short-term features of the process and assumes that the process remains constant during a the overall time period, cases occurring at various times may be analyzed together.

⁸ In the raw data sets a blank indicates the item is not applicable and a 9 (or 99 or 999 or 9999) nonresponse. In the SIR database, -2 indicates that an item is not applicable and -1 stands for nonresponse.

responses are keyed in twice to avoid transcription errors and all data originating from each household is linked to check for consistency and completeness -- particularly to assure that identification numbers are accurately assigned. In addition, a series of reliability, plausibility and consistency programs have been designed to check that data are entered into the proper columns, that responses fall within permissible ranges and that they do not contradict other information obtained during the interview. In the event of an error, the original survey instruments are consulted and, if necessary, respondents may be contacted to clarify the problem. If a problem can not be resolved, the response remains in the data but is marked with an error flag.

At this point, the data for a given wave are sent to the DIW in the form of two raw data tapes, one containing the gross data set and the other the net data set (see above). The DIW panel project has organized the data in a SIR (Scientific Information Retrieval system) database. In this form the household and individual data for each wave are subdivided into a number of distinct files or records. These records are designed to reduce data storage requirements, while identification and pointer variables allow data from the various records and waves to be efficiently linked. Table 5 provides an overview of the records contained in the current (waves 1-4) version of the SIR database.

Table 5: Currently Available Records in the SIR Database of SOEP

PPFAD	Interview status and household IDs all persons all waves
PHRF	All design, cross-sectional and individual weights
NHRF	All design, cross-sectional and household weights
AP	Data from individual interviews - Wave 1
APKAL	Individual income and activity calendars - Wave 1
AKIND	Data on children in panel households - Wave 1
APAU5L	Data from questions asked only of alien residents Wave 1
APBRUTTO	Respondent and Nonrespondent gross data - Wave 1
APBIO	Life history information collected in Wave 1
AH	Data from household interviews - Wave 1
BP	Data from individual interviews - Wave 2
BPKAL	Individual income and activity calendars - Wave 2
BKIND	Data on children in panel households - Wave 2
BPAU5L	Data from questions asked only of alien residents - Wave 2
BPRUTTO	Respondent and nonrespondent gross data - Wave 2
BH	Data from household interviews - Wave 2
BHBRUTTO	Household gross data - Wave 2
CP	Data from individual interviews - Wave 3
CPKAL	Individual income and activity calendars - Wave 3
CKIND	Data on children in panel households - Wave 3
CPAU5L	Data from questions asked only of alien residents - Wave 3
CPBRUTTO	Respondent and nonrespondent gross data - Wave 3
CH	Data from household interviews - Wave 3
CHBRUTTO	Household gross data - Wave 3
DP	Data from individual interviews - Wave 4
DPKAL	Individual income and activity calendars - Wave 4
DKIND	Data on children in panel households - Wave 4
DPAU5L	Data from questions asked only of alien residents - Wave 4
DPBRUTTO	Respondent and nonrespondent gross data - Wave 4
DH	Data from household interviews - Wave 4
DHBRUTTO	Household gross data - Wave 4

Using the SIR database, further plausibility and consistency programs are conducted. At this time, special attention is paid to checking the data against responses provided in previous waves, a type of editing that Infratest Sozialforschung is generally unable to conduct. Considerable effort has gone into cleaning demographic data (age, sex, marital status etc.), as these data are relatively objective and are especially important for assessing the effects of panel mortality and devising weighting schemes to correct for differential patterns of nonresponse. Data problems discovered at this time are reported to Infratest, where the original survey instruments and, if necessary, followup phone calls are used to resolve the problems. If a definite error is discovered, the data are corrected; unresolved problems are marked with an error code. All changes to the data as well as unresolved inconsistencies or implausibilities are documented in a separate record in the SIR database.

Once in this form the data are released on a wave by wave basis to users outside the Sfb 3 and the DIW. Data from the first four waves of the SEP are currently available to researchers at over 30 universities and research institutes in the FRG. Users with access to SIR at their local computing facility are provided a copy of the data base. Other users receive raw data sets,

collections of rectangular files, each of which contains data from one or more SIR records. Strict German nondisclosure laws have restricted the use of the data abroad. Recently in several cases, the concerns of data confidentiality officials regarding use of the data abroad have been met. As a result, the data have been made available to individual researchers in the US, Australia and to the LIS project in Luxembourg. At this time, the principle constraints limiting wider distribution of the data are data management questions, in particular the limited availability of SIR and the size and complexity of the raw data set, rather than the nondisclosure issue.

C. The Potential for Comparative Research using SOEP and SIPP

1. General Similarities and Differences

Based on the preceding overview of the SOEP, this panel is clearly a good overall candidate for comparative studies using the SIPP. The general designs of the two studies are quite similar, with regard to the population of inference, "following rules" and the inclusion of all adults in a household in the sample of individuals. The limited duration of the SIPP panels, however, does constrain the extent to which long-term processes may be compared. On the other hand, during the period of observation SEP does not always offer the same degree of precision in the dating of events and transitions, due to more frequent SIPP interviews and the collection of some data on a weekly basis. Though the original SOEP sample is by no means small (approximately 6,000 household and 12,000 individual interviews), the number of households and individuals in the panel is far greater in the SIPP. Whether both or either panel includes sufficient cases varies according to the nature of the study and the duration of observation, as well as patterns of nonresponse.

There is also considerable overlap in the content of the data collected. On the whole, one can say that the SIPP has a more narrowly defined research agenda than that of SOEP. Both of the central themes of SIPP - income and program participation -- are emphasized in the SEP as well. However, the SEP core data ranges wider to consider topics, such as time use, political attitudes, and life satisfaction that are never a part of the SIPP survey, or topics such as health that are only raised once in a SIPP topical module. However, in the areas it emphasizes, the SIPP questionnaires ask for a greater degree of precision and disaggregation. In the following section, the question of comparability, in particular the degree of overlap in survey content in specific research areas is discussed.

2. Individual Substantive Areas

Employment and Income

This area may well be the most fruitful for comparative studies using the SIPP and SOEP data, particularly for the period of direct panel observation. Questions in three main sections of the SIPP core questionnaire (Labor Force and Reciprocity, Earnings and Employment, and Amounts of Income Received) collect relevant information. As part of the core questionnaire the SIPP data include information on employment status, sources of income, type of employment (the branch of industry, as well as employee occupation), and whether a disability hinders employment. All of these areas are covered in the SOEP core questionnaire as well, though there are several important differences. To begin with, the two studies measure employment status, particularly unemployment, somewhat differently. The criterion emphasized in SIPP, as in most American studies is whether a person without work is looking for work. Thus SIPP asks for each week not worked, whether a person was looking for work or wanted work, but was not looking. SOEP, on the other hand, only asks those out of work at the time of the interview, if they intend to work in the future and, if this is the case, how soon they intend to resume employment. However, SEP also asks these persons if they are registered with their local employment office, which is a requirement for various unemployment benefits. The local employment offices also serve as important employment placement agencies and, to a certain extent, benefits are contingent upon looking for work and accepting suitable referrals from the employment office. Respondents are asked as part of the yearly activity calendar to indicate in which months during the previous calendar year they were registered as unemployed. Thus, this information provides an approximately comparable definition of unemployment, but dated on a monthly basis and not weekly as in the case of SIPP.⁹

SIPP also dates employment relationships and job shifts somewhat more accurately than SEP, which asks respondents to provide the month an employment relationship begins or ends. The SIPP questionnaire also collects more precise information on the amount of income obtained from various sources: for each month of the panel, respondents are queried as to the amount of income obtained from each source. SEP asks respondents to indicate the sources of income for each month, but only asks them to provide an average amount for all months in which income from this source

⁹ Of course, the more detailed SIPP information can be recoded to indicate monthly labor force participation. In fact, monthly labor force participation recodes are included with the public release files.

was received. Also, if a respondent has worked for more than one employer, the SIPP data provides a more accurate measure of the amount of income received from each. Both studies provide information on reciprocity and income from a variety of sources (including social programs, pensions, asset income, alimony and child support) on a monthly basis. These data are highly comparable and for their respective countries both SIPP and SOEP are unique sources for data of this type.

The SOEP core questionnaire collects a variety of additional information regarding employment relationships that goes beyond the data available in SIPP. Respondents are asked a number of questions regarding working conditions, their attitudes toward employment and to assess the fit between their current position and the education and vocational training they have acquired. Respondents experiencing job shifts in the previous year (job changes within a firm as well as those between firms) are asked the reasons for the shift and to compare their current and past jobs on a number of dimensions. Though direct comparisons are not possible using these data, it is, nonetheless, of considerable interest for comparative research. The SOEP provides longitudinal data on current labor market processes in the FRG that is unavailable from any other data set. Seen in this light, this additional information provides invaluable background information for understanding differences and similarities observed using the SIPP and SEP data.

Both SIPP and SOEP have also featured questions relevant to the study of employment in the topical module components of their questionnaires. Most importantly both have collected employment histories and information regarding spells of nonemployment, while SOEP also asks about periods of registered unemployment. This information is dated by years, rather than months, but it still does a great deal to counter the problem of left-censoring in pure panel designs. Though neither panel attempts to retrospectively collect income data, the wealth of data concerning labor force participation provides a strong basis for imputing earnings prior to the beginning of the panels.

Finally, the issue of reservation wages raised in Part C of the SIPP wave 5 topical module became a part of the SOEP core questionnaire beginning in wave 4. These data provide a unique opportunity for an international comparison of the subjective appraisal of the role that financial incentives play in the employment decision.

Program Participation and Benefits

Research regarding program participation and the amount and types of benefits received is another potentially rich area for comparative research using the SOEP and SIPP panels. Careful attention, however, must be paid to the broader scope of social

programs in the FRG. Not only greater availability, but also a different sense of acceptability and entitlement lend a different character to program participation in the FRG. The relatively smaller SEP sample size must also be kept in mind. The small absolute numbers of participants and of transitions in and out of programs within the sample limit the potential for long-term analyses. However, by focusing on the short-term and accumulating cases from several waves, a sufficiently large number of cases may be found.

Since household criteria are used in the FRG to determine eligibility and benefits for most programs, most information concerning program participation is obtained from the household reference person as part of the SEP household interview. Each year the reference person is asked whether any one in the household received benefits from a variety of programs, including housing assistance, children's benefits, general welfare, social assistance and other more specialized programs. In the event that benefits were received, the respondent is queried as to the number of months they were received and the average monthly amount. The particular months in which they were received is not recorded. For individual-based programs, most notably unemployment compensation, Federal Educational Assistance, maternity benefits, and assistance during continuing education, similar information is obtained from each individual as part of the yearly income calendar. In this case the specific months of reciprocity are recorded as well.

Similarly, as part of the core questionnaire, each SIPP respondent provides information regarding program participation. On the whole, the SIPP attempts to obtain this information more precisely than SOEP -- respondents are to name the specific months in which benefits were received and, in most cases, the amount received in each month. In addition to the information pertaining to State unemployment compensation and Supplemental Unemployment Benefits, these questions pertain to Social Security, Supplemental Security Income (SSI), Veterans Administration benefits, Medicare, Food Stamps, AFDC, WIC, energy assistance and school lunch programs.

The SIPP Welfare History topical module provides important supplementary information concerning program participation. In the event of current reciprocity, respondents are asked when program participation began, thereby addressing the left censoring problem for many spells.¹⁰ All respondents are asked about

¹⁰ Left-censoring remains a problem for persons receiving benefits at the start of the panel, who no longer receive them at the time of the Wave 5 interview. Questions regarding prior spells of program participation do not unambiguously provide the needed information. Beginning with the 1986 Panel this problem is

past program participation: whether or not benefits from particular programs were ever received, and, if they have been, when was the first time they were received and for how long. Unfortunately retrospective information is not available in the SOEP, so comparative analyses must focus on the time period covered by the panel.

Household Composition and Family Events

The study of household composition and family situation are among the primary research objectives underlying SEP. SIPP, on the other hand, is principally concerned with providing data for the study of income and program participation. However, the data SIPP must collect in order to provide an adequate foundation for the study of income and program participation necessarily include a wealth of information concerning household composition and family events that may serve as the basis for comparative analysis.

For the study of household composition, the SOEP address protocol and the SIPP control card are the most important data collection instruments; each provides a month by month record of persons in a household. Due to the similar following rules used by both panels, these records provide a unique data source for dynamic analyses of household composition.

Data from the SOEP address protocol, for respondents as well as nonrespondents, belong to the gross data records. This information can be linked, either in the SIR data base or in raw data format, with the actual interview results found in the net data records. These variables include current household size, relationship to household reference person,¹¹ and household membership at the time of each interview. The latter variables (APZUG, BPZUG, CPZUG, DPZUG) indicate if a person is currently a household member and if this person was a member of the household at the time of the previous interview. If a person has left or entered a household, a related set of variables indicates when the change occurred.

significantly reduced as these questions are asked in Wave 2.

¹¹ Coding for this variable is: 0=household reference person; 1=spouse of reference person; 2=unmarried partner of reference person; 3=child of reference person; 4=foster child of reference person; 5=son-in-law or daughter-in-law of reference person; 6=mother or father of reference person; 7=stepmother or stepfather of reference person; 8=brother or sister of reference person; 9=grandchild of reference person; 10=other relative of reference person; 11=person not related to head of household.

Comparable information on household composition, as well as family and subfamily composition, is recorded on the SIPP control card, though the actual organization of the data varies between the rectangular and complex versions of the data sets. Additional information includes coded reasons for entry and exit from the household and a set of codes for family and subfamily types. A similar set of generated household type codes based on relationships between household members and the household reference person is available for SEP households as well.

As part of its core questionnaire the SOEP asks a series of questions regarding changes in family situation. Individuals are asked if during the current or previous calendar year whether they have married, moved together with a partner, been divorced, widowed, separated, broken up with a partner, and whether a child was born or left the parental household. If any of these events occurred, respondents are asked to name the month in which it occurred. Combined with information on changes from the gross data set concerning changes in household composition one may use this information to analyze the reasons for entering and leaving a household quite similar to those possible with SIPP.

Each year SOEP respondents also report their current marital status: single, married living together, married living apart, divorced or widowed. The data for alien residents further distinguishes for married couples living apart whether both spouses live in the FRG or one lives abroad. Persons not living with a spouse are asked if they are currently cohabitating. Beginning in wave 3 cohabitants are also asked when they began to live with their partners.

Other data on family events has been collected as part of the SOEP topical modules. In wave 2 respondents were asked to provide a marital history; the year each of their first three marriages began, whether it had been dissolved through death or divorce and, if so, in what year. Women were also asked to provide a fertility history, listing the birth year and sex for up to eight children, whether each child still lives with its mother and, if not, the year the child moved away. Respondents are also asked when they left the parental household, whether the majority of their childhood was spent in a rural or urban area and if they still live in the same area.

The wave 3 topical module explores respondents' family background still further. This information includes the birth and death years of both parents, and the level of schooling and type of occupational training obtained by each. Respondents are also asked whether the majority of their childhood was spent with one or both of their natural parents and the employment status of their parents or natural guardians during these years. In addition, respondents are asked to think back to when they were fifteen and provide detailed information as to the occupation of

their fathers. Alien residents answer a slightly shorter series of questions concerning family background, followed by questions regarding their experiences as foreigners living in the FRG.

Very similar marital and fertility histories were collected in the wave 8 topical module of the 1984 SIPP panel. Here, too, the SIPP questions aim for more precise dating as respondents are asked to also provide the month in which a marriage, divorce or birth occurred. Equally precise dating in the SEP is available, if the marriage, divorce or birth occurs during the panel.¹² Additional information is collected in SIPP's wave 8 topical module on private transfers to persons outside the household. Questions concerning payments of this type are a part of the regular SEP core questionnaire, so that this issue also lends itself to comparative study. The matrix of household relationships completed by each SIPP reference person (detailing the relationship of each person in the household to every other household member) is not directly available for SOEP households, though the vast majority of these relationships can be determined from other information.

Wealth and Asset Ownership

Through tax policy and other forms of selective incentives, the state plays a crucial role in determining the amount of resources available to individuals for savings and investment and the allocation of these resources among various types of savings and investment. In an area such as this, a comparative approach is particularly appropriate, since it introduces variation in the structure of incentives offered to individuals and provides a more general test of the extent to which such incentives govern individual actions.

Both SIPP and SOEP collect an enormous amount of detailed data concerning wealth and asset ownership, much of which lends itself to longitudinal analyses of the processes of acquiring and losing wealth. Unfortunately these processes are often slow and gradual, such that the degree of comparability is reduced by the differing temporal perspectives of the two studies. Here, too, SIPP provides detailed data collection concerning the short run, while the SEP data is less detailed but covers a greater

¹² The SIPP fertility history also includes questions concerning a woman's employment status and maternity benefits received when her first child was born. Though not asked as part of the fertility history, this information is available in the SOEP for those children born during the course of the panel. Additionally, life history data collected in the first wave provides an indicator of mothers' employment on a yearly basis for children born prior to the start of the panel.

time period. This general difference is exacerbated with regard to wealth and asset ownership; the 5th topical module focussed on this area, however wealth and asset ownership will not be surveyed in this detail again until the 10th SOEPwave.

As part of its core questionnaire SEP collects relatively little information concerning wealth and asset ownership, primarily through a short series of questions in the household interview. To begin with, the reference person is asked whether any household member received revenue from property in the preceding calendar year. If this is the case, respondents are queried regarding the amount of revenue and yearly expenses, broken down between mortgage, interest and maintenance costs. The household reference person is also asked to estimate interest and dividend payments received by household members. The reference person is also asked whether any member of the household owns other types of assets (including a savings passbook, life insurance, stocks and bonds, or business assets) but is not asked to estimate the value of these assets. As noted in other sections, information is available regarding home ownership and participation in private insurance plans. However, these forms of wealth and asset ownership do not have the same significance in the FRG as in the US and an ongoing record of the value of assets of these types is not collected.

Data from the 5th SEP topical module provides a far more complete picture of asset ownership, particularly with regard to estimating the value of each household's holdings. This information is also provided by the household reference person and begins with an estimate of the assessed and market values of owner occupied dwelling units. If any member of the household owns other property, the reference person is asked to provide an estimate of this property's market value.

Owners of agricultural business's are identified and their holdings are characterized according to size and principle crops. Owners (other than shareholders) of other types of businesses are asked to identify the form of ownership and the market value of their holdings. At this time the approximate current value of other holdings (savings passbook, homeowner savings plans and stocks and bonds) are ascertained. Information is also collected for the three most valuable life insurance policies held by household members and the three most valuable inheritances received in the past twenty-five years. Finally, the reference person is asked to estimate the combined indebtedness and net worth of all household members.

Though the SIPP core questionnaire emphasizes income, the data collected for this purpose also provide information on assets and wealth, in so far as they generate income. Thus, section 1

of the core questionnaire identifies whether a respondent owns particular types of assets.¹³ Section 3 then concentrates on the amount of income these assets generated during the past 4 months. In this context, respondents are also asked to report the value of interest bearing assets, while for stocks, mutual funds rental property, mortgages, royalties and other financial investments they are simply queried as to the income they have produced.

Details as to the amounts of other types of assets and wealth are collected in SIPP as part of various topical modules. In wave 4 further details on interest earning assets, business ownership, the value of stocks and market funds, the market value and debt on rental property, and equity in other investments are collected. SIPP also gathers information on debt liability, examining this area in greater detail than SEP. Finally, particular attention is paid to assets targeted toward retirement, including IRAs and Keough accounts, and home equity (see sections e and h below). This information is then updated in the wave 7 topical module. The wave 6 and wave 9 topical modules, which review 1984 and 1985 earnings respectively, add further to the continuous record of SIPP respondents asset ownership.

Housing Conditions and Residential Mobility

On the whole, the SEP data on housing conditions and dwelling characteristics are more specific than that collected by SIPP. Both collect these data in a similar manner, relying on two sources. SEP interviewers enter a general description of the dwelling unit on the address protocol similar to that given by SIPP interviewers on the control card. In both cases, a supplementary description of the dwelling unit is provided by the household reference person. Here, however, there is an important difference. In SEP these questions were asked during the first interview and were then repeated each time a household moved to a new address, allowing for a detailed comparison of old and new dwellings. In SIPP this information is collected as part of the wave 4 topical module. It is only available for a single dwelling and not each dwelling inhabited by an individual during the course of the panel. Thus, the comparison of old and new dwellings in SIPP is confined to the characteristics contained on the control card.

¹³ Respondents are asked about: passbook savings, money market deposit accounts, certificates of deposit, NOW checking accounts, money market funds, U.S. government securities, municipal or corporate bonds, stocks, rental property, mortgages and other financial investments.

Publicly available information based on the SOEP address protocol includes the region in which the dwelling unit is located (Northern, Central or Southern Germany), the number of inhabitants in the community where the dwelling is located, a characterization of the community (using the Boustedt codes based on the number of inhabitants and the degree of urban development), whether the neighborhood is residential, industrial or mixed, and whether the dwelling unit is a single family home or is in a multi-unit building.

The detailed information provided by each SEP household reference person includes: the year the house was built, when the reference person moved into the dwelling, and whether the building is in need of renovation. Whether the unit contains certain amenities (a basement, central heat, etc.) is then recorded, as is its size, both in square meters and number of rooms, and the reference person's assessment of whether the size is adequate for the household.

SOEP questions regarding the cost of housing are based on an initial filter question separating owners and renters. Renters report their monthly rent and any costs incurred for modernization and renovation. Owners are asked how they acquired the unit (through purchase, new construction or inheritance), monthly payments, and their estimation of how these costs compare to renting a comparable unit.

As mentioned above, beginning with wave 2, two different versions of the SOEP household questionnaire are used: one for households remaining at the same address and a second for households now located at a new address. If the household is at a new address, questions similar to those asked in wave 1 collect information on the characteristics of the new dwelling unit. These households are also asked to compare several dimensions of their previous and current dwellings and state whether their living situation has improved. Households remaining at the same address simply report on modernization or renovation that may have changed these characteristics. Information on current housing costs is then collected using the same sets of questions for all households.

The SOEP wave 3 household questionnaire includes several additional questions concerning the neighborhood in which a household currently lives. These questions concern the distances to shopping, schools, recreational facilities and public transportation, the presence of air and noise pollution, the degree of contact with neighbors and satisfaction with the neighborhood as a whole.

The SIPP control card information lists whether the housing unit is located in a rural or urban area, the type of housing unit (house, motel, rooming house, mobile home, etc.), the number of units in the structure, tenure, and whether public or subsidized

housing is involved. The latter characteristic is used as a filter for the SIPP core questions regarding housing, which are only asked of those in public housing or receiving government housing subsidies.

Most information in SIPP regarding housing costs, conditions and energy usage is provided by the reference person as part of the wave 4 topical module. Homeowners provide detailed information concerning mortgages and home equity loans including the size of the mortgage, when it was obtained, monthly payments, purchase price, current value and date of construction. A separate block of questions apply to mobile home owners including questions related to site ownership or rental. The block of questions for renters includes monthly rent, length of occupancy, utility costs, and whether any member of the household owns other real estate. All household reference persons are then asked about the number of rooms in the dwelling, the type of fuel used for heating, hot water and cooking, and whether the unit has air conditioning and a variety of major appliances.

The potential for comparative research on housing costs and conditions using the data available in SEP and SIPP is limited. SIPP was not designed for this purpose and caution must be exercised when using the SIPP data from the topical module, since the information may describe a dwelling occupied for only part of the observation period. Restricting the analysis to immobile households is one solution but this may introduce selectivity bias.

On the other hand, the housing data obtained in the two surveys, combined with the vast amount of additional household and individual data collected, may prove quite useful, particularly for describing differences in housing conditions and patterns of home ownership in the two countries. For these purposes, SIPP and SEP can be seen as rich sources of cross-sectional data. Longitudinal analyses are also possible, if one concentrates on housing conditions and costs at the time of the third SIPP wave. Both studies ask when the current dwelling was first occupied so that the length of occupancy is not left-censored. Information from the first two SIPP waves and retrospective questions are available for understanding the housing data, but little is known about other dwellings occupied during the panel. Moreover neither panel collects information on other dwellings occupied before the start of the panel. In sum, the data are well-suited for research linking the current dwelling to other aspects of the life course, but other data sources may be better suited for those interested in comparative analyses of the relationship between current and previous housing.

Similar restrictions apply to the comparative study of residential mobility using the two data sets -- to the extent that residential mobility is related to the characteristics of

both dwellings, SIPP does not collect the data needed. Moreover, both panels employ strict nondisclosure policies to protect the anonymity of respondents so that studies of intra and interregional patterns of mobility are hampered.

These problems aside, one should not underestimate the importance of the available data and how much this adds to the potential for comparative research. At an absolute minimum both SIPP and SOEP offer for each panel member for the entire observation period a month by month record of whether an individual has remained at the same address. For a number of purposes, for example research on marital separation or changes in household composition, this information is invaluable.

The two studies differ in the techniques used to collect data on residential mobility (SIPP relies on a topical module, while SEP uses a special version of the household questionnaire for households at new addresses), but in many ways the data they obtain is similar. Both studies also provide subjective information concerning the motivation for moves. All SOEP reference persons who move during the panel are asked why the household moved. All SIPP respondents are asked during the Part C of the wave 8 topical module ("Migration History") to describe the reasons for their last move, to date this move and the previous occupancy spell. At the beginning of the panel SEP household reference persons were asked how long they have occupied their current dwelling so that analyses of tenure at the current address using either data set are not hampered by left-censoring.¹⁴ SOEP asks respondents if they live in the same area as during their childhood and SIPP asks respondents to identify where they were born. Thus both data sets offer rough measures of lifetime mobility, limited in the same way: except for the very young or those who have never or rarely moved before the panels began there is a gap in respondents' mobility histories.

Education

Education is yet another area where the SOEP and SIPP panels would serve as excellent sources of data for an international comparative study. This information not only covers the period of direct observation, but also extends retrospectively to include important educational events that occurred prior to the start of the panel. Both panels record not only the highest level of education completed by respondents but when schooling was completed. Using this information one may go beyond explanation of the level of education to consider the timing of school leaving. For other

¹⁴ Since this information in SOEP was collected during the household interview, dating occupancy spells of other persons in the household may present a problem.

purposes this information allows education to be used as a time-varying independent variable and not simply a background characteristic.

The biographical information collected in the first wave of the SOEP serves as the basis for reconstructing an individual's educational history. Beginning with the fifteenth year of his or her life, each respondent is asked whether school was attended for part or all of each year. In a separate series of questions individuals provide summary information about the type of education they have received. These questions distinguish between schooling (Schule) and vocational education and training, including higher education (Ausbildung). Respondents are also asked whether they are enrolled in school or vocational education at the time of the interview and at what level. Furthermore, as part of the activity calendar, all respondents are asked to indicate the months in the previous calendar year during which they were engaged in educational activities.

All of this information is updated at each interview: respondents are asked if they are currently in school and whether they have completed a level of education in the past year. Those in school are also asked whether or not they receive federal educational assistance. The translated versions of the questionnaires for alien residents contain slightly different questions designed to provide information about education obtained abroad as well as in Germany. The activity calendar is repeated at each interview for the previous calendar year, thereby producing a month-by-month record of enrollment for the life of the panel.

As part of the household interview, information concerning the school enrollment of household members under the age of sixteen is collected from the household reference person. This information includes the type of school or day care facility attended, whether the facility is state-funded or private, and tuition costs. In addition, the wave 6 (1989) SOEP topical module gathers detailed information on continuing education -- the further educational activities of adults, both general and occupation-related.

The SIPP core questions concerning education are limited to whether the respondent has attended school beyond the high school level in the past four months. Those who have been enrolled are further queried as to benefits received from educational assistance programs and the costs of schooling.

Detailed educational information in the SIPP is collected as part of the topical modules in the third, sixth and ninth waves. In wave 3 respondents are asked to summarize their educational history. Those who attended four years of high school are questioned as to the type of high school program they were enrolled in and whether or not they graduated. Those who went on to col-

lege are asked when they began college, when they received their degree and their principle field of study. Those who have attended vocational education and training programs are asked to identify the setting (e.g. business school, the military or correspondence courses), when the most recent training began, who paid for it and how long it lasted. These persons were also asked whether this training was of use for their most recent job. Further questions are asked of those who have participated in CETA, WIN, Job Corps or Trade Adjustment Assistance Act programs since 1982.

A shorter series of questions concerning education are part of the wave 6 and wave 9 topical modules. These questions focus on school enrollment during the preceding twelve months, including the level of school attended, the costs involved and any educational benefits received including scholarships. The wave 6 topical module also updates the vocational educational information gathered in wave 3.

Health and Disability

On the whole, collecting longitudinal data concerning health and disability play a more important role in SOEP than SIPP. Apart from the wave 3 topical module, the data on health and disability collected in SIPP concentrates on program participation, including private health insurance, and the receipt of benefits. In SEP, on the other hand, none of the topical modules focuses on health and disability, but a considerable amount of information, including whether an individual is disabled or suffers from chronic illnesses, health insurance and utilization of the health care system, is gathered on a regular basis as part of the core questionnaire.

The SOEP core questionnaire section on health begins with a self-assessment of the extent one's physical condition limits daily activities and whether one suffers from chronic ailments or illnesses. Respondents are then asked how often they have seen a physician in the past three months -- with the answers broken down according to the type of specialist involved. Respondents are to report the number of hospital stays and the total number of nights they spent in a hospital during the past calendar year. They are also asked to indicate how many days they were unable to work in the past year due to health reasons. Additionally, whether a person is officially labeled as disabled and the degree of disability is determined each year. Respondents are further queried as to the type of health insurance they have, the monthly contributions they pay and the number of co-insured persons.

In the context of other questions SOEP panel members are also asked how satisfied they are with the state of their health (0 to 10 scale). Persons out of work are further questioned as to whether disability or health reasons played a part in the

termination of their most recent employment spell. Finally, as part of the household questionnaire, reference persons are asked whether someone in their household needs regular personal care. If this is the case, further information concerning the type of care required, and whether or not the caregiver is a relative or household member is collected. Additional questions regarding the resulting burden on the household, financial and otherwise, were asked in wave 4.

As part of the core questionnaire all SIPP respondents are asked whether they have a physical, mental or other health condition that limits the amount or kind of employment they may pursue. Unemployed SIPP respondents are further asked whether they are not working or looking for work due to a physical disability or other health reasons. Information on Medicare, Medicaid and health insurance coverage is also collected during each interview.

The wave 3 topical module looks more broadly at health. Individuals are asked to evaluate their overall health and if they would have difficulty with several tasks (e.g., such as climbing stairs or walking three blocks). Persons who need help with housework, personal hygiene or getting around the house are asked who provides this assistance and who pays for it. Individuals are asked about the number of visits to the doctor and hospital stays in the past twelve months. Specific information about respondents' health insurance coverage is also collected.

The data collected by SIPP and SOEP regarding health and disability converge quite closely at several points. To begin with both panels pay careful attention to health insurance or public programs as a means to cover the costs of health care. A simple comparison between the two countries concerning the extent of coverage would provide very little new information. However, combined with other data collected by the two panels these data are potentially quite valuable.

For example, though it is widely accepted that universal comprehensive health insurance should mitigate the socio-economic consequences of illness, there is little microdata to support this contention. With these two data sets one has the opportunity to consider the impact of illness or hospitalization on employment and the extent to which insurance coverage facilitates reintegration in the labor force. Moreover, both panels provide the means to measure illness subjectively (self-assessments of impairment) and objectively (number of doctor visits and hospital stays). The data provided by both studies concerning semi-professional and non-professional care looks at a long-neglected component of the health care system. A comparative approach may reveal what determines how care of this type is provided and, in particular, what role financial incentives play in determining whether care is provided by family members.

Retirement and Pensions

Certainly there are alternate data sources in the US and the FRG that focus more closely on the retirement system and employ a larger sample. These data may better serve some researchers, particularly those interested in descriptive analyses. However, they lack the longitudinal perspective offered by SIPP and SOEP and the detailed information concerning other areas of respondents' lives and the household context in which they live. Each panel offers researchers the opportunity to study the transition into retirement in relationship to an individual's life course and the activities of other household members. Moreover, the overall similarity between the two data sets extends to the information they collect regarding retirement and pensions.

Researchers familiar with the SIPP data collected on retirement benefits and pensions may be misled by the relatively small number of SEP variables connected with this topic. The difference, however, lies with the subject matter itself: the system of retirement benefits in the FRG is far less complex than in the US. Less information is needed in the FRG to determine, the contributions paid by those currently in the work force, as well as the benefits received by those who have retired.¹⁵

To begin with, the SOEP data include a continuous record of the timing of retirement. The retrospective life history data collected during wave 1 includes the years of retirement before 1983. This calendar is then updated at each interview and involvement in a number of activities, including retirement, is dated on a monthly basis. Likewise, beginning with 1983 there is a continuous record of the months in which respondents received income from a pension or retirement fund as well as the average monthly amount of the payments received. This information is separately available for widow(er)'s and orphan's benefits.

In addition, persons not employed at the start of the panel are asked if this is due to retirement from their most recent job. All persons not working at the time of the first interview, including retirees, are asked a number of questions about their last job, including type of employment, firm size and the length of employment. Individuals receiving retirement benefits or pensions are asked about the source of the pension, so that those

¹⁵ The vast majority of German employees, white collar (Angestellte) and blue collar (Arbeiter), contribute to and later receive retirement benefits (eine Rente) from the state obligatory retirement insurance system. The major exception are state officials (Beamte) who receive a pension (eine Pension) through their own pension system. Company pension plans, in contrast to the US, are only of minor significance.

who do receive company pensions may be identified. However, if an individual receives a company pension, there is no way to tell whether the pension derives from the most recent employment spell. Finally, employed persons are asked whether they were required to make contributions to the obligatory retirement insurance system.¹⁶ Respondents are also asked if they made additional voluntary contributions to this system and the amount of these contributions is recorded.

Along with updating the retirement and benefit calendars and information concerning contributions, additional information concerning retirement and pension benefits was collected in subsequent waves. Each year new retirees are identified and persons who begin to receive benefits are asked about the source of their benefits. In waves 2 and 4 currently employed persons were asked whether they were or had been involved in a company pension plan. Beginning with wave 3 persons receiving benefits are asked to provide the amount received from each type of retirement or pension benefit. Finally, as part of the wave 4 topical module, respondents aged 50 or older were asked about their future retirement plans, while all respondents were asked about their attitudes toward different aspects of social insurance including retirement benefits.

Looking at the SIPP data, information collected as part of the core questionnaire provides a highly comparable source of data for the analysis of retirement benefits during the panel. Persons receiving retirement benefits are identified and reciprocity in each month is broken down by the type of benefit. As is the case with earned income, the amounts received are reported for each month and not as a monthly average as in SEP. Reciprocity and amounts of survivor's benefits can easily be distinguished.

Useful data for comparative analyses of retirement benefits and pensions is also collected in the topical modules. Persons not working at the time of the wave 3 interview provide information about their most recent job, including when they stopped working, type of job and type of firm. Further detail is obtained from those who stop working in 1983 or 1984, including firm size, tenure, earnings, and the reason for ending employment. Individuals who worked their most recent job for fewer than ten years are asked about the job before the most recent.

¹⁶ The amount contributed can be easily estimated since it is a function of monthly earnings. These earnings are reported during the panel period and can be imputed for the time before the panel began.

Section 4, Part A of the wave 4 topical module (Assets and Liabilities) collects information on IRA and Keough accounts, including how long an individual has contributed and their current value. Respondents are also to report the current face value of any life insurance they hold. Section 4, Part B looks specifically at retirement and pension coverage for persons aged 25 and older. AS in SEP employed respondents are asked when they expect to retire; SIPP asks this question of persons aged 40 to 65, while SEP asks those age 50 or older. These respondents are further asked about future social security eligibility and the number of years employed in jobs covered by social security.

A series of questions then follow for all employed persons aged 25 or older. For first and second jobs, respondents are asked about the size of the firm, whether there is a retirement plan, if they are a member and if not, why not. Persons covered by company retirement plans are asked about the type of plan, the basis for benefits, the amount of contributions and how long they have been in the plan. Persons aged 40 to 65 years are then asked about benefits from a previous job.

Persons already receiving benefits are queried about how these benefits were acquired. They report on the type of firm and its size, the amount of work the benefits are based upon (number of years, weeks per year and hours per week), as well as when they left the job, what they were earning when they left, and when they began receiving benefits. They are further asked about the basis for the benefits received (years of service and pay or contributions) and whether or not the benefits are adjusted for the cost of living.

Part B of the wave 6 topical module reviews property income and taxes for the calendar year 1984 and includes information on IRAs and Keough accounts: the amounts of contributions, withdrawals, earnings and the types of assets involved. Respondents are further queried as to participation in salary reduction plans (401K). Similar information for the calendar year 1985 is obtained in the wave 9 topical module. The wave 7 topical module updates wave 4 information on IRAs and Keough accounts, including how long they have been held, their current market value and the types of assets involved. The wave 7 topical module also updates data collected in wave 4 on the type of pension plan coverage, contributions paid and benefits received. If a respondent has changed employers since wave 4, information is collected concerning the new firm, including firm size, availability of a company pension plan and whether or not the respondent is covered by such a plan.

These data are adequate to conduct a number of interesting comparative analyses of retirement and pension benefits. First, one could look at differences in the timing of retirement between the two countries. One could go beyond chronological age and

consider how timing is related to previous work history, including the amount of time work and the type of work performed. Or, one could look at persons currently receiving benefits and consider characteristics of the previous life course that predict the level of benefits received. Analyses of this type for women would be particularly interesting, since the explanatory factors could include marital and fertility histories, as well as labor force participation. Or, one could compare persons currently employed in the two countries and consider their expectations for retirement and their current sacrifices towards this end. These suggestions are by no means exhaustive but should demonstrate the breadth of comparative analyses concerning retirement benefits and pensions that are possible using SIPP and SOEP.

Appendix 1: Variable List for German Socio-Economic Panel

	Wave 1 1984		Wave 2 1985		Wave 3 1986		Wave 4 1987		Wave 5 1988	
			G	B	G	B	G	B	G	B
<u>HOUSEHOLD QUESTIONNAIRE</u>										
<u>(Respondent: head of household)</u>										
<u>Reference group: all respondents</u>										
<u>Household composition</u>										
Each household member by first name										
birth year, sex, relationship to head										
of household, reason for temporary										
absence from household										
	1*	AP*	AP*	AP*	AP*	AP*	AP*	AP*	AP*	AP*
Total number of persons in household	AP*	AP*	AP*	AP*	AP*	AP*	AP*	AP*	AP*	AP*
Change in household composition										
since the last interview (Wave 1:										
since January 1 of prior year)										
	2*	AP*		AP*		AP*		AP*		AP*
Date of formation of household										
(in wave 1 only for new households										
since January 1 of the prior year)										
	3*		AP-		AP-		AP*			AP*
Household members who joined										
since the prior interview										
(month and year joined)										
	4*	AP*	AP-	AP*	AP-	AP*	AP*	AP*	AP*	AP*
Household members who have left										
the household since the prior										
interview (month and year)										
	5*	AP*		AP*		AP*	AP*	AP*	AP*	AP*
Whether children under 16 years										
of age in household										
	6*	1*	1*	1*	1*	1*	1*	1/2*	1/2*	
Birth month of children under 16										
						2*	2*			
Type of school attended, for										
children under 16 years of age										
	7A*	2+	2+	2*	2*	3*	3*	3*	3*	
Sponsor of school/day care facility										
						4*	4*			
Monthly cost of school/day care facility										
						5*	5*			
Persons outside the household who										
care for children										
						6*	6*			
Nationality of children under 16 years of										
age for households with non-German heads										
	7B*								3A+	3A+
Whether any household member re-										
quires care by someone else										
	8*	3*	3*	3*	3*	7/8*	7/8*	4*	4*	
Type of care required										
		4A*	4A*	4A*	4B*	9+	9+	5A*	5A*	
Relationship of person providing care										
		4B*	4B*	4B*	4B*	10+	10+	5B*	5B*	

	Wave 1 1984	Wave 2 1985		Wave 3 1986		Wave 4 1987		Wave 5 1988	
		G	B	G	B	G	B	G	B
Burden on the household						11*	11*		
If extra help is needed, who should provide the care						12*	12*		
Special costs associated with care						13*	13*		
Level of monthly costs and who pays them						14*	14*		
<u>Housing</u>									
Type of building	AP*	(2)	AP*	(2)	AP*	(2)	AP*	(2)	AP*
Type of institution	AP*	(2)	AP*	(2)	AP*	(2)	AP*	(2)	AP*
Type of neighborhood	AP*	(2)	AP*	(2)	AP*	(2)	AP*	(2)	AP*
Whether plans to move within the next 12 months	12/13*	5-	5-						
in which house was built	9*	(2)	9*	(2)	18*	(2)	18*	(2)	9*
Whether dwelling needs repairs	10*	(2)	10*	(2)	19*	(2)	19*	(2)	10*
Year in which occupancy of dwelling began (month is also coded for 'dwellings first occupied after wave 1')	11*	(2)	6*	(2)	15*	(2)	15*	(2)	6*
Main reason for moving			7*		16*		16*		7*
Comparison of new dwelling with prior dwelling			8*		17*		17*		8*
Size of housing unit in square meters	14*	7*	12*	15/16*	21*	15/16*	21*	6/7*	12*

	Wave 1	Wave 2		Wave 3		Wave 4		Wave 5	
	1984	1985		1986		1987		1988	
		G	B	G	B	G	B	G	B
Number of rooms	15*	(2)	13*	(2)	22*	(2)	22*	(2)	13*
Adequacy of living space in housing unit	16*	6*	14*	17*	23*	17*	23*	8*	14*
Characteristics of housing unit	17*	(2)	11*	(2)	20*	(2)	20*	(2)	11*
Type of remodeling within the last year		8*							
Who paid for remodeling		9*							
Whether remodeling was done by the individual or a company		10*							
Housing status: owner or renter	18*	20*	15*	24*	24*	18*	24	9*	15*

Neighborhood

Distance to center of nearest city				5*	5*				
Accessibility of school, shops, public transportation etc.				6*	6*				
Whether bothersome noise level in neighborhood				7*	7*				
Whether bothersome air pollution				8*	8*				
Social status of the household in comparison with neighbors				9*	9*				
Degree of segregation: How many other non-Germans live in neighborhood				10*	10*				
Nationality of other non-German neighborhood residents (4)				108*	108*				
Degree of contact with neighbors				11*	11*				
Whether visits with neighbors socially				12*	12*				
Frequency of social visits				13*	13*				
Degree of satisfaction with neighborhood				14*	14*				

Reference group: renters

Monthly rent including all utilities except heat and hot water	19*	21*	16*	26*	26*	19*	26*	10*	17*
Monthly costs of heat and hot water				27*	27*	20*	27*	11*	18*
Whether rent is reduced by landlord (e.g., employer or relatives)				25*	25*	(2)	25*	(2)	16*

	Wave 1	Wave 2		Wave 3		Wave 4		Wave 5	
	1984	1985		1986		1987		1988	
		G	B	G	B	G	B	G	B
Whether rent is too high	20*	22*	17*	28*	28*	21*	28*	12*	19*
Whether remodeling done by anyone in the household	21*	(2)	19*	(2)	30*	(2)	30*	(2)	21*
Whether any improvements were purchased from prior tenant	22*	(2)	20*	(2)	31*	(2)	31*	(2)	22*
Whether government subsidized housing	23*	(2)	18*	(2)	29*	(2)	29*	(2)	20*
<u>Reference group: owners</u>									
Means of acquisition of dwelling	24*	(2)	21*	(2)	32*	(2)	32*	(2)	23*
Whether government subsidized housing payments	25*	(2)	22*	(2)	33*	(2)	33*	(2)	24*
Monthly housing costs or principal/ interest for utilities except heat	26*	23*	23*	34*	34*	34*	34*	25*	25*
Costs for water, garbage removal, street cleaning etc.		24*	24*	35*	35*	35*	35*	26*	26*
Maintenance costs for prior year		25*	25*	36*	36*	36*	36*	27*	27*
Heat and hot water costs for the prior year				37*	37*	37*	37*	28*	28*
Whether housing costs are too high	27*	26*	26*	38*	38*	38*	38*	29*	29*
Imputed rent		27*	27*	39*	39*	39*	39*	30*	30*

	Wave 1 1984	Wave 2 1985		Wave 3 1986		Wave 4 1987		Wave 5 1988	
		G	B	G	B	G	B	G	B
<u>Reference group: all respondents</u>									
<u>Transfer payments, income and assets of the household in the prior calendar year</u>									
Government housing subsidies: (Number of months received and monthly amount)	28/30*	28*	28*	40*	40*	40*	40*	31*	31*
Number of children for whom governmental child allowance received	31*	33*	33*	45*	45*	45*	45*	36*	36*
Monthly amount of governmental child allowance		33*	33*	45*	45*	45*	45*	36*	36*
Whether social welfare assistance received	32*	29*	29*	41*	41*	41*	41*	32*	32*
Regular subsistence assistance: Number of months received (monthly amount)	33/35*	30*	30*	42*	42*	42*	42*	33*	33*
Special circumstances assistance: (Number of months received and monthly amount)	36/37*	31*	31*	43*	43*	43*	43*	34*	34*
Whether lump sum assistance	38*	32*	32*	44*	44*	44*	44*	35*	35*
Owner of real estate other than primary dwelling	39*								
Annual gross income from rent received	40/41*	34/35*	34/35*	46/47*	46/47*	46/47*	46/47*	37/38*	37/38*
Annual expenses (mortgage and maintenance) on property from which rents are received	42*	36*	36*	48*	48*	48*	48*	39*	39*
Whether assets other than real estate	43*	37*	37*	49*	49*	49*	49*	40*	40*
Annual gross income from interest and dividends	44/45*	38*	38*	50*	50*	50*	50*	41*	41*
Monthly net income of the household at time of interview	46*	39*	39*	51*	51*	51*	51*	42*	42*

	Wave 1 1984	Wave 2 1985	Wave 3 1986	Wave 4 1987	Wave 5 1988
		G B	G B	G B	AI
<u>Asset Inventory</u>					
Ownership of dwelling in which one lives					1
Book value of dwelling					1A
Market value of dwelling					1B
Ownership of other dwellings or land					2
Type of dwelling or land owned					2A
Type of dwelling or land owned in country of origin (4)					2A
Market value of dwelling or land					2B
Market value of dwelling or land country of origin (4)					2B
Owner of agricultural business					3
Size of agricultural business and type of ownership					3A
Type of agricultural business					3B
Business ownership					4
Type of business					4A
Market value of business					4B
Amount of savings					5/5A
Home ownership savings plan					6/6A
Ownership of stocks and bonds					7/7A
Private life insurance for persons in the household (up to 3 policies)					8/8A
Year in which life insurance policy taken out					8B
Original amount of policy					8C
Size of monthly premium					8D
Age of payment in the event of survival					8E
Credit obligations to banks, savings and loan associations, employer or private persons (amount of outstanding debt)					9

	Wave 1 1984	Wave 2 1985	Wave 3 1986	Wave 4 1987	Wave 5 1988
		G B	G B	G B	A1
Total value of net assets					10
Total value of net assets in country of origin (4)					10
Inheritance since 1960, person in household receiving the inheritance (up to 3 inheritances)					11/11A
Year of the inheritance					11B
Type of property inherited					11C
Value of inheritance at time received					11D
Type of property ownership between spouses (3)					12A
Contractual arrangement of property ownership between unmarried persons living together (3)					12B
Type of property in country of origin (4)					12

Wave 1 1984	Wave 2 1985		Wave 3 1986		Wave 4 1987		Wave 5 1988	
	G	B	G	B	G	B	G	B

INDIVIDUAL QUESTIONNAIRE

(Respondents: all household members
16 years and older)

Reference group: all respondents

Labor force participation

Present employment status	8*	9/16*	9/16*	5/16*	5/16*	5/12*	5/12*	5/12*	5/12*
Employment during prior calendar year	36*	55*	55*	55*	55*	55*	55*	50*	50*
Characteristics of extra jobs		3*	3*	3*	3*	3*	3*	3*	3*
Time spent on extra jobs		4*	4*	4*	4*	4*	4*	4*	4*
Type of work done around the house				6*	6*	7*	7*	6*	6*
Estimated value of work done around the house				7*	7*			7*	7*
Estimated cost of materials for work done around the house				8*	8*			8*	8*

Reference group: Those employed
at time of interview

Current job

Month and year hired by present employer	23*	44*	44*	(1)	35*	(1)	33*	33*	33*
Occupation (ISCO code)	24*	(1)	30*	(1)	30*	(1)	28*	(1)	28*
Whether the present job is the one for which you are specially trained (European job training system)	25*	(1)	31*	(1)	31*	(1)	29*	(1)	29*
Industry (3-digit code)	26*	(1)	33*	(1)	33*	(1)	31*	(1)	31*
Number of employees of the whole firm	27*	(1)	34*	(1)	34*	(1)	32*	(1)	32*
Type of occupation (white-collar, blue collar, self-employed, etc.)	28*	38*	38*	46*	46*	38*	38*	38*	38*
Type of training required for the job	29*	(1)	32*	(1)	32*	(1)	30*	(1)	30*
Regularly scheduled weekly work hours, not including overtime	30*	40*	40*	47*	47*	40*	40*	39*	39*
Average actual weekly work hours, including overtime (overtime pay or comp-time)	31*	41*	41*	48*	48*	41*	41*	40*	40*
Reasons for part-time employment						42*	42*		

	Wave 1	Wave 2		Wave 3		Wave 4		Wave 5	
	1984	1985		1986		1987		1988	
		G	B	G	B	G	B	G	B
Preferences regarding overtime								43*	43*
Actual overtime hours worked in the last month				49*	49*			41*	41*
Type of compensation for overtime	32*	42*	42*	50*	50*			42*	42*
Overtime allowance, percent				51*	51*				
Preferred weekly work hours		36*	36*	41*	41*	45*	45*	47*	47*
Gross and net wages/salaries in the last month	33*	43*	43*	52*	52*	44*	44*	44*	44*
Personal commitment to employment		35*	35*	40*	40*			46*	46*
Expectations about future employment		37*	37*			46*	46*		
Chance of finding equivalent employment						47*	47*	45*	45*
Working conditions (13 indicators)		39*	39*			39*	39*		
Duration of employment contract		45*	45*	(1)	36*	(1)	34*	34*	34*

	Wave 1 1984		Wave 2 1985		Wave 3 1986		Wave 4 1987		Wave 5 1988	
			G	B	G	B	G	B	G	B
Whether company retirement plan available	46*	46*	(2)	37*	(2)	35*	35*	35*	35*	
Whether currently covered by company retirement plan with present employer	47*	47*	(2)	38*	(2)	36*	35*	35*	35*	
Whether covered by company retirement plan with a prior employer	48*	48*	(2)	39*	(2)	37*	35*	35*	35*	
Number of kilometers to present job (one way)	49*	49*								
Mode of transportation	50*	50*								
Length of time of commute to work (hours, minutes)	51*	51*								
Satisfaction level with commute to work	52*	52*								

Reference group: Those out of labor force/
unemployed and looking for work at
the time of the interview

Most recent job

Whether ever employed	9*	21·	21·	21·	21·	19*	19*	19*	19*	
Reason for leaving most recent job	10*	(1)		(1)		(1)		(1)		
Whether previously employed full time, part time or less	11*	(2)	22*	(2)	22*	(2)	20*	(2)	20*	
Beginning/ending years of last job	12*	(2)	21·	(2)	21·	(2)	19*	(2)	19*	
Past occupation (ISCO Code)	13*	(2)		(2)		(2)		(2)		
Industry (3-digit code)	14*	(2)	23·	(2)	23·	(2)	21*	(2)	21*	
Number of employees of the whole firm	15*	(2)		(2)		(2)		(2)		
Type of occupation (white collar, blue collar, self-employed etc.)	16*	(2)	24*	(2)	24*	(2)	22*	(2)	22*	
Type of training and qualifications required for the job	17*	(2)		(2)		(2)		(2)		
<u>Future employment plans</u>										
Whether plans to be employed	18*	17*	17*	17*	17*	14*	14*	14*	14*	
When do you plan to be employed	19*	18*	18*	18*	18*	15*	15*	15*	15*	
Whether desires full time, part time, etc.	20*	19*	19*	19*	19*	16*	16*	16*	16*	
Whether immediately available for work	21*	20*	20*	20*	20*	18*	18*	18*	18*	

	Wave 1 1984	Wave 2 1985	Wave 3 1986	Wave 4 1987	Wave 5 1988
		G B	G B	G B	G B
Chance of finding an appropriate position				13* 13*	13* 13*
Desired net income				17* 17*	17* 17*
<u>Reference group: Continuing respondents with job changes since the beginning of prior calendar year</u>					
<u>Job change</u>					
Type, month and year of job/position change		22*	22*	20*	20*
Month and year last job ended		23*	23*	21*	21*
Length of time spent on last job (years and months)		24*	24*	22*	22*
Mode of termination of job		25*	25*	23*	23*
Reason for leaving most recent job		26*	26*	24*	24*
Past vs. present job comparisons		27*	27*	25*	25*
Whether present job better uses skills		28*	28*	26*	26*
Way in which present job was found		29*	29*	27*	27*

	Wave 1 1984	Wave 2 1985		Wave 3 1986		Wave 4 1987		Wave 5 1988	
		G	B	G	B	G	B	G	B
<u>Reference group: employed persons</u>									
<u>50 years of age and older</u>									
<u>Transition to retirement</u>									
Expected retirement age						48*	48*		
Subjective reasons for retirement						49*	49*		
Would work part-time if compensated for lower wages through early payment of retirement benefits						50*	50*		
If so at what age						51*	51*		
And at what age would you retire fully						52*	52*		
<u>Reference group: all respondents</u>									
<u>Employment history</u>									
Whether registered with unemployment bureau within the last ten years (Frequency and total months)	34*	(2)		(2)		(2)		(2)	
Number of employers within the last ten years	35*	(2)		(2)		(2)		(2)	
Employment history since age 15	62*	(2)	NB(1)	(2)	NB(1)	(2)	NB(1)	(2)	NB(1)
<u>First job</u>									
Age began first job				10*	10*	(2)	NB(16)	(2)	NB(16)
Occupation - first job (ISCO Code)				11*	11*	(2)	NB(18)	(2)	NB(18)
Type of occupation (white collar, blue collar, self-employed etc.)				12*	12*	(2)	NB(17)	(2)	NB(17)
Whether changed occupation (once/more than once)				13*	13*	(2)	NB(19)	(2)	NB(19)
Age at which began working in most recent occupation				13*	13*	(2)	NB(19)	(2)	NB(19)

	Wave 1 1984		Wave 2 1985		Wave 3 1986		Wave 4 1987		Wave 5 1988	
			G	B	G	B	G	B	G	B
<u>Labor income and transfer payments</u>										
<u>in prior calendar year</u>										
Months received and average										
monthly gross amount of:	37/38	57/58	57/58	57/58	57/58	57/58	57/58	57/58	52/53	52/53
- wages and salaries										
- self-employment income										
- income from extra job										
- retirement income from own work										
- retirement income through survivors' rights										
- student grant										
- maternity grant (including private insurance payments)										
- unemployment compensation										
- unemployment benefit extension										
- occupation readjustment/retraining benefit										
- financial help from private individuals										
Bonuses for employees, monthly amount of	39*	59*	59*		59*	59*	59*	59*	54*	54*
- extra (13th) month bonus										
- extra (14th) month bonus										
- additional Christmas bonus										
- vacation bonus										
- commissions, profit-sharing										
- other such income										
Short-time work payment/ Bad weather compensation (number of weeks)	40*	60*	60*		60*	60*	60*	60*	55*	55*

	Wave 1 1984	Wave 2 1985		Wave 3 1986		Wave 4 1987		Wave 5 1988	
		G	B	G	B	G	B	G	B
<u>Retirement and pensions</u>									
Whether receives retirement/pension		10*	10*						
Type of retirement income/pension	41*	11*	11*	61·	61·	61*	61*	56*	56*
Year first received such income		12*	12*	(2)					
Institution from which retirement income/pension is received	41*	13*	13*	61·	61·	61*	61*	56*	56*
Monthly gross amount of retirement income/pension				61*	61*	61*	61*	56*	56*
Whether has voluntarily contributed to retirement/pension fund in prior year (Number of months and monthly amount)	44*	64*	64*	64*	64*	64*	64*	59*	59*
Employer payments to retirement fund ... less than 35 hours/week worked						43*	43*		
<u>Health insurance in prior year</u>									
Type of membership	42*	62*	62*	62*	62*	62*	62*	57*	57*
Type of health insurance company or organization (For private coverage: monthly premium and number of persons covered)	43*	63*	63*	63*	63*	63*	63*	58*	58*
<u>Taxes</u>									
Whether taxable income received	45*								
Amount of adjustment to tax withholding	46A*	61*	61*						
Total amount of income tax in previous year	46B*								
Whether taxable income received two years before the year of the interview		66*	66*	66*	66*	66*	66*	61*	61*
Filing status two years before the year of the interview		67*	67*	67*	67*	67*	67*	62*	62*
Total amount of income tax two years before the year of the interview		68*	68*	68*	68*	68*	68*	63*	63*
<u>Support payments</u>									
Support of other persons outside the household (3)	47*	65*	65*	65*	65*	65*	65*	60*	60*

	Wave 1	Wave 2		Wave 3		Wave 4		Wave 5		
	1984	1985		1986		1987		1988		
		G	B	G	B	G	B	G	B	
<u>Education</u>										
Whether receiving schooling or training	4*	14*	14*	14*	14*	10*	10*	10*	10*	
Type of schooling or training	5*	15*	15*	15*	15*	11*	11*	11*	11*	
Highest grade completed (3)	6*	(2)	91*	(2)	94*	(2)	96*	(2)	85*	
Type of training received (3)	7*	(2)	92*	(2)	95*	(2)	97*	(2)	86*	
Whether qualifying exam or graduation in prior year		53*	53*	53*	53*	53*	53*	48*	48*	
Type of qualifying exam or graduation in prior year		54*	54*	54*	54*	54*	54*	49*	49*	
<u>Time use</u>										
In hours during weekdays/Sundays for various activities	1*	2*	2*	2*	2*	2*	2*	2*	2*	
Frequency of recreational activities	2*	7-	7-	9-	9-			9*	9*	

	Wave 1 1984	Wave 2 1985		Wave 3 1986		Wave 4 1987		Wave 5 1988	
		G	B	G	B	G	B	G	B
Vacation days used in prior year		56*	56*	56*	56*	56*	56*	51*	51*
<u>Health</u>									
Degree to which health hinders daily activities	48*	69*	69*	69*	69*	69*	69*		
Whether chronic health condition	49*	70*	70*	70*	70*	70*	70*	67*	67*
Frequency of doctor visits and type of doctor	50*	71*	71*	71*	71*	71*	71*	71*	71*
Amount of time spent in hospital in prior year	51*	72*	72*	72*	72*	72*	72*	69*	69*
Days not worked due to illness		73*	73*	73*	73*	73*	73*	70*	70*
Days in treatment of hospital due to occupational accident in last year						74*	74*	71*	71*
Date of visit to rehabilitative spa and who paid for the stay						75*	75*	72*	72*
Percent disability	52*	74*	74*	(2)	74*	6*	6*	66*	66*
<u>Satisfaction</u>									
... with a selection of life circumstances	3*	1*	1*	1*	1*	1*	1*	1*	1*
... with life as a whole (present, past, future)									
. German questionnaire	63*	93*	93*	96*	96*	98*	98*	89*	89*
. Non-German questionnaire	63*	104*	104*	104*	104*				
<u>Politics</u>									
Degree of interest in politics		75*	75*	75*	75*	84*	84*	73*	73*
Worries	54*	77*	77*	77*	77*	89*	89*	78*	78*
Intrusiveness of state	53*	76*	76*	76*	76*				
Degree of government expenditures (3)						85*	85*	74*	74*
Perceived degree of fairness in personal life (3)						82*	82*	79*	79*
Perceived degree of fairness in FRG in general (3)						83*	83*	80*	80*
Agreement with idea of democracy in general (3)						86*	86*	75*	75*

	Wave 1 1984	Wave 2 1985		Wave 3 1986		Wave 4 1987		Wave 5 1988	
		G	B	G	B	G	B	G	B
Satisfaction with idea of democracy in FRG (3)						87*	87*	76*	76*
Inglehart scale preference ordering of various political goals	55*	78*	78*	78*	78*				
Party preference	56*	79*	79*	79*	79*	88*	88*	77*	77*
<u>Opinions concerning social security</u>									
Judgement of personal financial security in case of illness, unemployment or old age						76*	76*		
Judgement of financial security of surviving household members in event of death of head of household						77*	77*		
Judgement of burden imposed by health insurance premiums						78*	78*		
Judgement of burden imposed by contributions to retirement funds						79*	79*		
Preferred social security system (3)						80*	80*		
Preferred arrangement for providing old age benefits for spouses (3)						81*	81*		
<u>Social origins</u>									
Whether parents living in household (3)				80*	80*		NB(8)		NB(8)
Birth and death years of parents (3)				80*	80*		NB(8)		NB(8)
Completed education of parents (3)				81*	81*		NB(9)		NB(9)
Type of occupational training of parents (3)				82*	82*		NB(10)		NB(10)

	Wave 1	Wave 2		Wave 3		Wave 4		Wave 5		
	1984	1985		1986		1987		1988		
		G	B	G	B	G	B	G	B	
Whether grew up with one or both parents or other guardian (3)				83*	83*			NB(11)	NB(11)	
Labor force participation of parents (3)				84*	84*			NB(12)	NB(12)	
Labor force participation of father when respondent was 15 (3)				85*	85*			NB(13)	NB(13)	
Type of occupation (father) (white collar blue collar, self-employed etc.) (3)				86*	86*			NB(14)	NB(14)	
Father's occupation (ISCO Code) (3)				87*	87*			NB(15)	NB(15)	
<u>Demographic characteristics</u>										
Sex	57*	85*	85*	88*	88*	90*	90*	81*	81*	
Birth year	62*	81*	81*	88*	88*	90*	90*	81*	81*	
Marital status	58*	(2)	(2)	89*	89*	91*	91*	82*	82*	
Changes in marital status and other personal events in prior calendar year		80*	80*	91*	91*	93*	93*	84*	84*	
Marital history		87/88*	87/88*	(2)	NB(4)			NB(4)	NB(4)	
Whether living with partner (not married) (3)	59*	(2)		90*	90*	92*	92*	83*	83*	
Year began living together with partner				90*	90*	92*	92*	83*	83*	
Type of area lived in as a child		82*	82*			NB(5)		NB(5)	NB(5)	
Whether still living in area lived in as a child (3)		83*	83*			NB(6)		NB(6)	NB(6)	
Year left parental household		84*	84*			NB(7)		NB(7)	NB(7)	
Fertility history of women		86*	86*			NB(2)		NB(2)	NB(2)	
Second home in West-Germany										
. German questionnaire	60*	90*	90*	93*	93*	95*	95*		88*	
. Non-German questionnaire	60*	97*	97*	97*	97*					
Citizenship										
. German questionnaire	61*	89*	89*	92*	92*	94*	94*	88*	87*	
. Non-German questionnaire	61*	89*	89*	80*	80*					
<u>Other questions</u>										
Type of driver's licence		5*	5*							
Availability of car		6*	6*							

	Wave 1 1984	Wave 2 1985		Wave 3 1986		Wave 4 1987		Wave 5 1988	
		G	B	G	B	G	B	G	B
Membership in labor union or professional organization		8*	8*						
Savings plan								64*	64*
Security in old age based on cash or property assets								65*	65*
<u>Subgroup: Non-Germans</u>									
<u>Education</u>									
Whether attended school in Germany and grade completed	6A*	(2)	100*	(2)	100*	(2)	97*	(2)	90*
Whether attended school in another country and grade completed	6B*	(2)	101*	(2)	101*	(2)	98*	(2)	91*
Type of training or qualification received in Germany	7A*	(2)	102*	(2)	102*	(2)	99*	(2)	92*
Type of training received in another country	7B*	(2)	103*	(2)	103*	(2)	100*	(2)	93*
<u>Transfer payments in prior calendar year</u>									
Money sent to native country	47A*	65A*	65A*	65A*	65A*	65A*	65A*	60A*	60A*
Support given to relatives living in Germany but not in household	47B*	65B*	65B*	65B*	65B*	65B*	65B*	60B*	60B*
<u>Demographic characteristics</u>									
Residence of spouse	58*			90*	90*	92*	92*	85*	85*
Land of birth	62*	(2)	98*	(2)	98*	(2)	95*	(2)	88*
Year moved to Germany	63*	(2)	99*	(2)	99*	(2)	96*	(2)	89*
Number and age of children in native country	66*	95*	95*	86*	86*	88*	88*		
Intended length of stay in Germany	67*	96*	96*	87*	87*	89*	89*	77*	77*

	Wave 1 1984	Wave 2 1985		Wave 3 1986		Wave 4 1987		Wave 5 1988	
		G	B	G	B	G	B	G	B
<u>Social origins</u>									
Whether parents living in household				93*	93*		NB		NB
Residence of parents				94*	94*		NB		NB
Year of birth of parents				95*	95*		NB		NB
Completed education of parents				96*	96*		NB		NB
Planned end of employment in Germany						49*	49*		
Plans to return to native country						50*	50*		
Will you be entitled to a pension from the FRG						51*	51*		
<u>Subjective questions</u>									
National identification	64*	90-	90-	81-	81-	83*	83*	76/82-	76/82-
Own judgement of language skills	65*	91*	91*	82*	82*	84*	84*		
Whether contact with Germans		92*	92*	83*	83*	85*	85*		
Whether visited Germans in their homes within the last 12 months		93*	93*	84*	84*	86*	86*		
Whether visited at home by Germans within the last 12 months		94*	94*	85*	85*	87*	87*		
Nationality of cooking practices in the household								78*	78*
Nationality of newspapers read								79*	79*
Nationality of music listened to								80*	80*
Gender of persons in circle of friends								81*	81*
Family ties to circle of friends								81*	81*
Nationality of circle of friends								81*	81*

Legend

- A Coversheet for "old" households, household questionnaire for households that didn't move since the last interview, or individual questionnaire for reinterviewed persons.
- B Coversheet for "new" households, household questionnaire for households that moved or split off, or individual questionnaire for new respondents.
- AP Coversheet.
- VB Household questionnaire 'Asset Inventory'.
- NB Biographical data obtained for persons who entered the sample after the wave in which the data was originally collected.
- Question wording is virtually identical. Slight changes were made for technical reasons.
 - ♦ Question wording is somewhat different; although variables are still comparable.
 - The question was altered conceptually; comparability is restricted.
- (1) These questions were asked only of those individuals with job changes in the prior year. For individuals without job changes, identical variables are available from the previous year's data.
- (2) The variables are available in the previous waves.
- (3) Not asked in non-German questionnaire.
- (4) Not asked in German questionnaire.