

Life Course Analysis with the SOEP

Michaela Kreyenfeld

Version No.1:

03-05-2001

Michaela Kreyenfeld
Max-Planck-Institut für demografische Forschung
Doberaner Str. 114
18057 Rostock
E-mail: kreyenfeld@demogr.mpg.de

Table of Content

1	Introduction	3
2	Description of the SOEP	5
3	Setting up the Basic Data	9
3.1	Censoring	9
3.2	Fertility History	10
3.3	Ethnicity & Region of Residence	14
4	Activity History	18
4.1	Aggregating Episodes	19
4.2	Splitting Episodes	22
5	Educational Attainment	25
6	Marital Status	29
7	Panel Information	32
7.1	Attitudes	32
7.2	Joining two Episode Data-Sets	33
8	Partner Information	36
9	Concluding Remarks	39
	References	40
	Appendix	41
A.1	List of Variables	41
A.2	List of Data Files	45
A.3	List of Programs	47
A.4	The Data Set (Person id 68203)	48
A.5	Programs	49

1 Introduction

In this paper, we explain how to use data from the German Socio-Economic Panel (SOEP) to analyze the *transition to the first child*. We restrict the analysis to first births to keep things simple. This does however not mean that this paper is only of interest for researchers who analyze first parity births. In a very general sense, it is supposed to give an idea how panel data can be used to reconstruct life histories. More specifically, this paper demonstrates how the SOEP can be used to analyze demographic events such as marriage, childbirth, cohabitation or marital disruption.

There are four aspects, which make the SOEP particularly suitable for analyzing demographic events. *First*, the SOEP contains detailed employment histories. Other data sets (such as the Family and Fertility Survey or the Familiensurvey) also survey employment histories. But, in most cases, respondents are requested to recall their entire working life at once. In the SOEP, employment histories are updated each year by asking the respondent to recall what has happened within the previous year. This allows reconstructing very detailed monthly employment histories. *Second*, the SOEP is a household panel, i.e. all household members are surveyed. This also means that it is possible to match partner information and analyze how the “couple’s career” affects fertility decisions. *Third*, the SOEP is a panel data set, which comprises a large set of information on the attitudes of the respondents. Therefore, it is possible to analyze how e.g. the feeling of economic uncertainty influences fertility decisions. Obviously, such issues cannot be analyzed on the basis of cross-sectional data sets. *Fourth*, the SOEP contains a marriage and fertility history, i.e. information on demographic events for the entire life course of individuals. Although it is indispensable to have such information at one’s disposal, other panel data sets (such as in the European Community Household Panel) do not provide this information.

In short, the SOEP is an ideal data set to analyze how the employment situation and expectations towards the future course of it affects fertility decisions (or the formation of marital unions or marital disruption). However, the analysis of data with the SOEP sets some traps for the researchers. First of all, the SOEP only provides a “generated” annual fertility history. (By “generated”, we understood that the SOEP-group provides “processed” variables for the researchers.). But, how does one identify the month of birth? How does one match the employment and fertility histories? There are some

individuals who drop out and re-enter the panel. How does one treat such individuals? When does one censor the cases? How does one link “attitudes” to fertility decisions? How does one add the partner’s characteristics? In the following, we address such issues. It should be noted that we assume that the reader is familiar with some basic event history techniques.

Some words regarding the software: Most of the computations are done with STATA 6.0 (STATA CORPORATION 1999). For readers, who are familiar with the STATA, we included the programs in the Appendix. But any other program (such as SPSS or SAS) can be used instead. For the examples, (where we estimate event history models on the transition to the first child), we use TDA (ROHWER/ PÖTTER 1998). In principle, one could use a different kind other software, which includes event history techniques (such as SAS, aML, RocaNova). But the way, we set up the data (in episode or spell format) is closely related to the logic of TDA. Finally, to “aggregate” (this aspect will be explained later on) the program NEWSPELL will be used (PISCHNER 2000). TDA and NEWSPELL are free-wear and part of the SOEP-packet (they can be copied from the SOEP-CD).

The remainder of the paper is organized as follows. In the first part, we describe some basic features of the SOEP, the sample we select and the procedure of the analysis. In the subsequent parts, we build up the analysis step by step. By the end of each step, we display the data set [■], provide some background information [背景] and an example how to use the data set [✕].

Some final words, regarding the notation:

EDU for variable names

EDU for program names

EDU for data file names

2 Description of the SOEP

It has become common to distinguish the German Socio-Economic Panel (SOEP) by five subsamples (DEUTSCHES INSTITUT FÜR WIRTSCHAFTSFORSCHUNG 2000; WAGNER/ BURKHAUSER/ BEHRINGER 1993):

- The West German Sample (sample A): This sample is a representative sample of households, where the “head of the household” is living in West Germany in 1984, and is not of any nationality surveyed in sample B. It was surveyed first in 1984 and contained roughly 4,500 households then.
- The Foreigner Sample (sample B): This sample is a representative sample of households, where the “head of the household” is either of Turkish, Greek, Italian, Yugoslavian, or Spanish nationality in 1984. It was surveyed first in 1984 and contained roughly 1,500 then.
- The Eastern German Sample (sample C): This sample is a representative sample of households, where the “head of the household” is living in the territories of former East Germany (GDR) in 1990. It was surveyed first in 1990 and contained roughly 2,000 households then (for details, see e.g. SCHUPP/ WAGNER 1991).
- The Immigrant Sample (sample D): The Immigrant Sample contains households, where the “head of the household” has migrated to West Germany since 1984. It was surveyed first in 1995, and contained roughly 500 households then (for details, see e.g. BURKHAUSER/ KREYENFELD/ WAGNER 1997).
- The Refreshment Sample (sample E): In 1998, the SOEP was extended by a refreshment sample, which contains roughly 1,000 households. One major motivation behind introducing the “refreshment sample” was to increase the overall number of cases of the SOEP (for details, see PROJEKTGRUPPE DAS SOZIO-OEKONOMISCHE PANEL 1998).

Panel and Calendar Information

The SOEP is a panel data set, which means that the same individuals are re-interviewed on an annual basis. Although the focus of the SOEP is on its panel

characteristics, it also provides retrospective information. First, it provides retrospective annual calendar information on the activity and fertility history, beginning at age 15. Second, it provides monthly calendar information on employment periods since the entry of individuals into the sample. Each time respondents are interviewed they are asked to recall their activities of the previous year. Moreover, monthly information on demographic events is available, such as the start of a conjugal union, date of disruption, date of divorce and the date of birth of a child. Table 1 gives an overview of the availability of variables in terms of panel information, monthly and annual calendar information. By panel information, we understand information that refers to the date of interview. By calendar information, we understand information constructed from retrospective information given by the respondent.

Table 1: Extract of Variables available in the SOEP

	Panel	Calendar (month)	Calendar (annual)
Labor Market	<ul style="list-style-type: none"> • employment status • position in job • salary • gratification payments • unemployment benefits • social benefits 	<ul style="list-style-type: none"> • activity status • source of income 	<ul style="list-style-type: none"> • activity status
Education	<ul style="list-style-type: none"> • educational attainment 	<ul style="list-style-type: none"> • educational attainment 	
Birth	<ul style="list-style-type: none"> • no. of children in household • Id number of child 	<ul style="list-style-type: none"> • birth of child 	<ul style="list-style-type: none"> • parity of birth • sex of child
Attitudes	<ul style="list-style-type: none"> • security of job • child care availability • economic security 		
Partner	<ul style="list-style-type: none"> • family status • cohabitation status • Id number of partner 	<ul style="list-style-type: none"> • partner moved in/out • divorce • marriage 	<ul style="list-style-type: none"> • family status

Naturally, panel information and monthly calendar information is only available for the time individuals are part of the sample. Because the different subsamples are surveyed first at different points in time, data availability differs by subsamples. As can be seen from Table 2, for the West German subsample panel and monthly

calendar information is available for the period since 1984. For the Eastern German subsample, information is available for the period since 1990.

Table 2: Panel and Calendar Information by Subsamples

	Sample A+B	Sample C	Sample D	Sample E
Panel	since 1984	Since 1990	Since 1995	Since 1998
Calendar (month)	since 1984	Since 1990	Since 1995	Since 1998
Calendar (year)	since age 15	since age 15	since age 15	since age 15

Table 2 highlights two aspects: For the time prior to entry into the panel, we only have annual information for the activity and fertility history. For other variables (such as attitudes of the respondents), no information is available at all for the “pre-panel time”. When analyzing fertility decisions, there are basically three ways to proceed:

- One can limit the analysis to the available time window of the panel. This procedure contains a variety of drawbacks. Most importantly, cases are left-censored.
- One analysis the entire life-course of individuals, but one only uses variables, which are available for it. This restricts the analysis to a few variables, which are the age at birth, activity status and marital status. Furthermore it restricts the analysis to an annual time scale.
- All variables are used for the entire life-course of respondents. An indicator variable is added to the regressions, which controls for the periods, where we only have annual information at our disposal. For variables that were not surveyed retrospectively at all, a time-variant dummy variable for “missing information” is added to the regressions (see e.g. DROBNIČ/ BLOSSFELD/ ROHWER 1999: 138). In the following analysis, this approach is followed.

Selection of the Sample for this Study

In this study, East and West Germans of the birth cohorts 1955-1980 are used. Furthermore, this analysis omits individuals from sample E. The major reason for this is that sample E was surveyed first in 1998 and there are hardly any monthly

information available for this subpopulation. We also omit respondents who report a birth before age 17 and respondents with missing information on their “fertility history” were neither used in the analysis. The logic behind is explained below. Altogether there are 5,618 valid cases in our sample.

Table 1: Sample Size (SOEP)

Total number of women in SOEP	13,547
Birth cohort 1954 and older or 1981 and younger	7,293
Sample E	425
Censoring or first birth before age 17	209
Missing birth biography	2
Total	5,618

3 Setting up the Basic Data

3.1 Censoring

In the analysis of first birth (marriage or divorce) it is important to come to grips with the “observation time”. In other words, before one sets up the data set, one has to decide at which point in time the “clock” is supposed to start “ticking”. For the analysis of first birth, the most often used “clock” is the age of the woman. We follow this procedure, i.e. we use the age of the woman as baseline. The crucial question is now, when we should start the observation time. In general, one would start the “clock” at the date, a woman is at risk of first birth for the first time. This might be the date of first sexual intercourse. Clearly, this information is not available in the SOEP. In the absence of such information, we proceed in a simplified manner. We start our observation time in the year, the woman turns age 17. The logic behind is the following: In the SOEP, respondents age 17 and younger do not receive the regular questionnaire; only “children’s information” is surveyed for them. Clearly, starting the “clock” at age 17, we have to omit all births, which happen before this age. This is however considered of inferior importance, because teenage fertility is very low in Germany. Since we use a monthly time scale, we furthermore have to decide in which month we would like the “clock” start ticking. Ideally, one would use the 17th birthday as the starting point. In the absence of this information, we use the January of the year the woman turns 17 years of age as the starting point.

The second question, which we have to address, is when to censor the cases, i.e. at what point in time to stop observing the respondents. There are basically two alternative ways to proceed. In the first procedure, one censors the cases when respondents drop out of the sample for the *first time*. Even when the respondent reenters the panel at a later stage in time, one does not use this information any longer. The second procedure (which is the one, we are following), one censors the cases at the last date of interview. Following the last procedure, we are able to use as much information as possible. The major drawback of this procedure: we have to consider persons as well who drop out and re-enter the panel.



The Data Set

In the Appendix, the program-file **ZENSOR.do** is displayed, which constructs the data set *XZENSOR*. This data set contains the date of censoring (*DUR_Z*). It also contains some other variables, which will also be used for the subsequent analysis. This is the year of birth of the woman (*BORN*), sample membership (*PSAMPLE*), the year at first interview (*YEAR_1*) the year at last interview (*YEAR_Z*) and the age at January 1990 (*DUR_WEN*). The latter variable is an indicator variable for the time before and after German Unification.

Below, we display the respective variables of the respondent with the person-id 68203. We will “follow” this respondent when we built up the data and add the fertility, employment, education and partner history. This person is born in 1965 and was surveyed in the West German sample (*PSAMPLE*=1). She gave the first interview in 1984 and she was interviewed last in 1999. The baseline variable (*DUR_Z*) indicates that this was 208 months after the January of the year the woman had turned age 17.

XZENSOR.dat

persnr	psample	BORN	YEAR_1	YEAR_Z	DUR_Z
68203	1	1965	1984	1999	208

3.2 Fertility History

In the next step, we construct the fertility history for each woman in the sample.¹ We stop observing the respondent after the birth of her third child or, if she does not give birth to a third child, at the last date of interview. Before, we explain how to generate the date of birth, it is important to be aware of the way the fertility history is surveyed in the SOEP.

1 It is important to note that the “fertility history” on the SOEP-CD 1999 was not “updated” (i.e. it does not contain all births that happened in 1997, 1998 and 1999). The up-dated file can be ordered free of charge from the DIW (botto@diw.de).

In general, when a woman is surveyed for the first time, she is asked to report her “fertility history”. In other words, she is asked about the number of children she has given birth to, the year of birth and the sex of the child. But, the month of birth is *not* surveyed, i.e. it is not available for the time prior to entry into the panel.² For the panel time, the occurrence of a birth and the month of birth is surveyed in the following manner:

Question (1)

Has your family situation changed since the beginning of 1990? Child born _____Month 1990 _____Month 1991
--

Based on this question and the “fertility history”, the SOEP-group provides an updated fertility history for each woman in the sample. This file is usually labeled as *BIOBIRTH* and it contains the year of birth of each child of each woman in the SOEP. Unfortunately, the month of birth is not included in this file.

As explained in Part 3.1, we use the age of the woman as the baseline. The starting point is January of the year she turned age 17. Therefore, we are interested in which months (since the January of the year the woman turned age 17) she had her first (second and third) child. We use the file *BIOBIRTH* as the “basic file” for constructing this variable.³ Since we know the year of birth of the woman, it is straightforward to construct the *age at birth*. The month of birth is gathered from *Question (1)*.⁴ With the month at birth and the age at birth, the requested “baseline variable” (date of birth measured in months since the woman turned age 17) can easily be constructed.

2 This is however not completely right since the month of birth of all children is surveyed in 1985. This means that for all women, who were part of the SOEP in 1985, we also have information on the date of birth of all children who were born before 1984.

3 It should be noted that the parity information is in some few cases not correct. Therefore, before proceeding with the analysis, the order of the births has to be sorted.

4 Additionally, information is drawn from the survey year 1985, when women were asked to report the month of birth for each of their children. This information is now stored in the file *DKIND*.

■ The Data Set

The respective STATA program, which puts together this data set, can be found in the Appendix under **BIR.do**. We label our censoring variable BIR1 indicating if a first birth occurred before censoring (BIR2 for second etc.). Our duration variable is labeled DUR_BIR1 (DUR_BIR2 for the second child etc.). Furthermore, we construct a variable, which indicates whether we imputed the month of birth (BIRMIS). Below, we display the person-id 68203 and the additional variables we constructed. The person has a first child 157 months after the January of the year she turned age 17, i.e. at age 30. We did not impute the month of birth (BIRMIS1=0). She has no further children until censoring (BIR2=0, BIR3=0).

OBIR.dat

persnr	BIR1	BIR2	BIR3	DUR_BIR1	DUR_BIR2	DUR_BIR3	BIRMIS1
68203	1	0	0	157	208	208	0

In the following, we backdate the date of birth by nine months. The main reason for this is that we are building up a data set that allows analyzing how employment and attitudes affect fertility decisions. By backdating the date of birth by nine month, we make sure that changes in our independent variables proceed the decision to have a child.⁵ Since we backdate the date of birth by nine month, we have to omit all cases in the sample, where the birth happens at age 17 (or more precisely before October of the year the women turned age 17). Otherwise, our duration time is negative, which is not sensible. Below, we display the new data set. It should also be noted that in case, a woman does not have a first child, we censor her nine months before the last interview was conducted. We do so, because we are not able to say whether she is pregnant at the date of interview. Below, we display the respective data-set labeled *XBIR.dat*.

5 Another possibility is to “freeze” the activity status nine months before childbirth (see e.g. HOEM/ HOEM 1989: 50).

XBIR.dat

persnr	BIR1	BIR2	BIR3	DUR_BIR1	DUR_BIR2	DUR_BIR3	BIRMIS1
68203	1	0	0	148	199	199	0

Miscellaneous

- The file *BIOBIRTH* contains the fertility history of all women in the SOEP. Women are asked to report the date of birth of their biological children, but not the date of birth of their step or adopted children.⁶
- It is important to note that there are some women who refused to fill in the “fertility history” questionnaire. The SOEP group imputed the fertility history in such cases based on information on the number and age of the (biological) children who live in the household. In any case, it is recommended to cautiously use respondents who were older than age 30 at the date of first interview and did not complete the fertility questionnaire (FRICK/ OTTO 2000). Since we restrict the analysis to the cohorts 1955-1980, this issue is of minor importance in our study.
- In 80 percent of the cases, it is possible to identify the month of birth. There is however strong variation across subsamples. This is obvious, since the availability of the month of birth strongly depends on the date of entry into the panel. For sample A, there are only 7 percent missing cases on the month of birth, for sample D this applies to 57 percent. Another important aspect to note is the following. For cases with missing information on the month of birth, we imputed this information. We used January for imputation. The reason why we chose the first month of the year is basically that we would like to avoid the problem of reversed causation. If e.g. the true month of birth is March and we use June for imputation, we will find a positive impact of “being unemployed” on first birth risks. The major reason for this would then be that the woman withdrew from the labor market in response to the birth of her child.
- Altogether, there are 5,033 births in our sample, out of which 2,860 are first births. In Table 3, we also display the exposure time, i.e. the cumulated months we observe a woman at risk of first, second and third birth.

⁶ They can however be constructed based on information given in *\$KIND*.

Table 3: Number of Births in the Sample

	Occurrences	Exposures
All Births		
First Births	2,860	472,774
Second Births	1,698	170,436
Third Births	475	135,773
Total	5,033	778,983
Multiple Births		
First and Second Birth	29	
Second and Third Birth	29	
First, Second and Third Birth	1	

3.3 Ethnicity & Region of Residence

As discussed in Part 3.3, the SOEP (currently) consists of five subsample. In this analysis, we only use the first four samples, the West German sample, the foreigner sample, the East German sample and the immigrant sample. One can possibly use sample membership (PSAMPLE) as an indicator for cultural background of the respondent. This procedure involves however some major problems of misclassification.

If one uses PSAMPLE to identify East Germans, one wrongly classifies an East German who has moved to West Germany. This might be sensible in some contexts, e.g. if one is interested in the aspect of “being brought up in former East Germany”. However, using PSAMPLE to identify foreign nationals is more problematic. On the one hand, one omits all foreigners who are surveyed in the West German sample. Furthermore, one omits all foreigners, who are part of the immigrant sample. Instead of using sample membership to identify cultural background, one could use “nationality”. But neither this approach is very sensible in the German case. Most importantly, there is a large group of *ethnic German migrants* in the sample, which members are originated in Eastern Europe but in general hold a German passport. To simplify matters, we decided to construct the following three *exclusive* categories (the program, which puts together this data set is **BASIC.do**):

- **Foreigners and Ethnic German Migrants:** This category encompasses all foreigners and ethnic Germans. A foreigner is an individual of “non-German nationality”. This means that we operationalize a foreigner as an individual who held a foreign passport in any given year when being part of the survey. Moreover, all ethnic German migrants, who have migrated after 1984 are also part of this category.
- **East Germans:** We label a woman as East German if she has lived in East Germany in 1990. Therefore also East to West migrants are considered as East German as long they lived in the eastern parts of Germany in 1990. For them, we construct an additional variable for “**East to West migrant**”. There are some few foreigners living in East Germany (24 cases in the entire SOEP and 3 cases in our sample). We label them as foreigners.
- **West Germans:** This category encompasses all individuals who are of German nationality. Ethnic Germans and East Germans are omitted from this category.

Table 4 displays the composition of the sample by subgroups. Our three categories mix nationality, migration status, region of residence and ethnic origin. This classification is surely problematic in many respects. However, if the main interest is e.g. the difference in fertility patterns of East and West Germans, such an approach is straightforward. For other research questions, particularly when one is interested in the fertility patterns of foreigners or ethnic Germans such a classification is too simplified. In the end, it depends on the research question, how to operationalize ethnicity or cultural background. But, given that foreigners are over-sampled in the SOEP, it is of vital importance to control for it in the analysis in one way or the other.

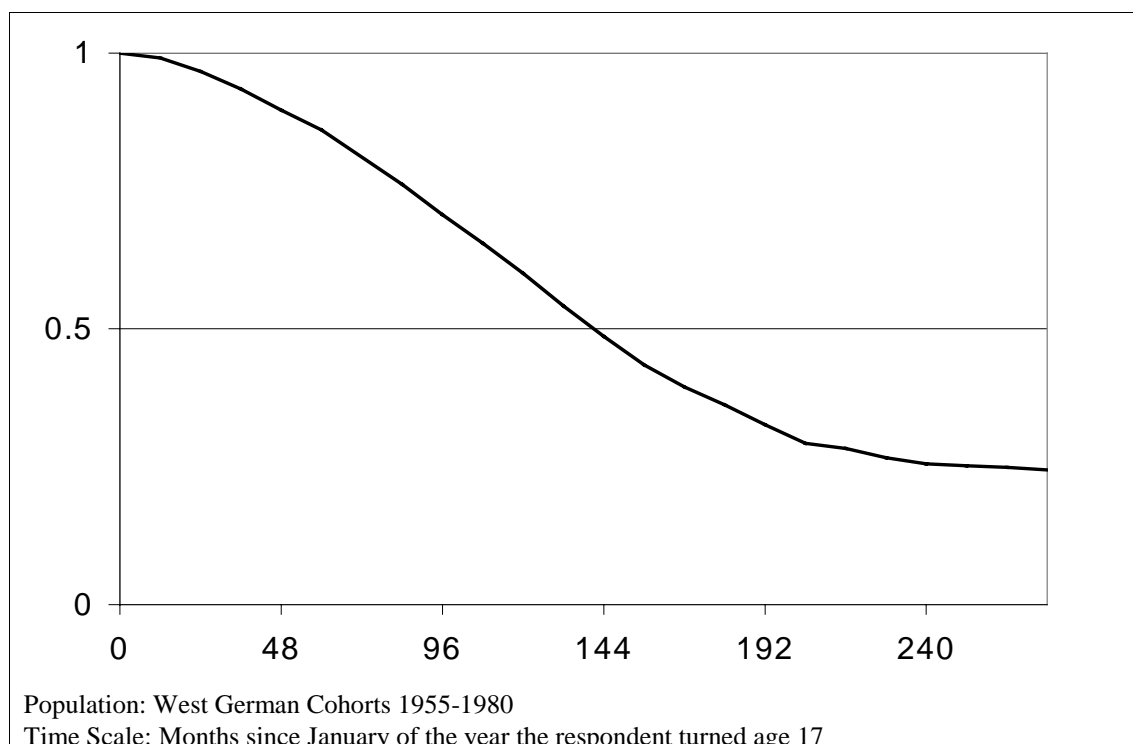
Table 4: Composition of the Sample by Subgroups

	Sample A	Sample B	Sample C	Sample D	Total
Foreigner/ Ethnic German	59	1,210	3	256	1,528
West German	2,563	0	0	51	2,614
East German	0	0	1,380	96	1,476
Total	2,622	1,211	1,383	403	5,618

✂ Example I: Survival Curves

In the following, we demonstrate how one can analyze the data set, we have constructed so far. A simple and straightforward way to describe the sample is the use of survival curves. The most common way to construct survival curves is the Kaplan-Meier technique and the life-table method (e.g. BLOSSFELD/ ROHWER 1995). Below, we use the Kaplan-Meier method. The time variable is the months since January of the year the woman turned age 17. Given that our sample consists of four sub-samples, it is not very sensible to use the entire sample for descriptive purposes (unless one uses weights). In the Figure (and for the subsequent analysis), we only use the 2,614 West German women. As can be seen from the Figure, after roughly 144 month about 50 percent of the sample has experienced a first pregnancy. In other words the median age at first pregnancy is 29 ($144/12+17$) for the West Germans. At age 37 (240 months), there are 25 percent childless.

Figure 1: Transition to First Pregnancy, KM-Survival Curve



The respective program to calculate the survival curve is displayed in the Appendix under **EXAMPLE1.cf**. We use TDA to calculate the survival curve. In the box below, we give a brief description how to use the program (for details, see ROHWER/PÖTTER 1998).

TDA

TDA is a soft-wear written by Götz Rohwer and Uli Pötter and it is particularly suitable for event history analysis. TDA can either be downloaded from the internet (<http://www.stat.ruhr-uni-bochum.de/>) or it can be copied from the SOEP-CD.

In order to estimate the survival curves with TDA, the reader has to proceed as follows:

1. Copy TDA into the directory one is currently working in.
2. Copy the program **EXAMPLE1.cf** from the Appendix into a separate file.
3. On the command prompt submit the program by typing:

```
tda cf=example1.cf > out.txt
```

The output file will be stored in the file *out.txt*.

4 Activity History

In the following we show how to add the activity history to the data-set we have constructed so far. In this part, we also show how to aggregate episodes and how to split episodes.

The “activity history” of each respondent in the SOEP is stored in calendar or episode format. An episode or a spell is the “duration an individual stays in a specific state. The episode begins at the time of entry into that state, and it ends when a new state is entered” (ROHWER/ PÖTTER 1998). For illustrative purposes, we display the first three entries of the monthly activity history of the respondent 68203. Until the end of month 122 (which is 122 months after January 1983) the respondent is in education (SPELLTYP=8) and it then part-time employed (SPELLTYP=5).

ARTKALEN.dat

persnr	begin	end	spelltyp
68203	1	122	8
68203	123	127	5
68203	128	135	3
68203	133	138	10

While *ARTKALEN* contains the monthly activity information, *PBIOSPE* contains the annual activity information. The time variable in *PBIOSPE* is the age of the woman. Person id 68203 is in education until she is 28 and afterwards full-time employed.

PBIOSPE.dat

persnr	begin	end	spelltyp
68203	15	28	1
68203	28	29	5
68203	28	28	6

In order to construct the complete activity history of each respondent, we have to merge the annual and monthly activity history. In order to do so, we have to proceed in three steps:

- 1.) **Synchronize Time-Scale:** In *ARTKALEN* the time scale is months since January 1983, in *PBIOSPE* it is the age of the woman. Our duration variable is however, months since January of the year the woman turned age 17. This means we have to synchronize the time scales.
- 2.) **Synchronize Coding:** The coding of the activity status (SPELLTYP) is different in *ARTKALEN* and *PBIOSPE*. In other words, the coding of SPELLTYP must also be synchronized.
- 3.) **Aggregate Overlapping Activities:** *PBIOSPE* and *ARTKALEN* contain overlapping activities. E.g. person-id 68203 is a housewife (SPELLTYP=10) in “month 134” and also part-time employed (SPELLTYP=3). We therefore have to aggregate overlapping activities. How to do this is explained in the next section.

4.1 Aggregating Episodes

In the event history analysis, it is important that the categories do not overlap. There are various ways one can proceed if they do:

- Assign a hierarchy. If a woman is a housewife and is gainfully employed, we only count that she is gainfully employed.
- Subdivide activities. The woman who is a housewife and is part-time employed at the same time is assigned half a month of being a housewife and half a month of part-time employment.
- Use new combinations: One can introduce a new combination. Apart from the categories “part-time employment” and “housewife”, we introduce a third category, which is “part-time employed and housewife” at the same time.

Which method one chooses surely depends on the research question one has in mind. We decided to use the first method. Furthermore, we aggregated some activities into one category. When there is an overlap of activities, we assign the following hierarchy:

1. schooling, vocational training
2. full-time employment
3. part-time employment, short work
4. unemployment, housewife/ houseman, maternity leave, retirement

In order to “aggregate” (“merge” or “collapse”) episodes or (spells), we use the program NEWSPELL.⁷ How to “aggregate” episodes with NEWPSELL is explained in the following box:

NEWSPELL

Rainer Pischner has written the program NEWSPELL to aggregate episodes. It can be copied from the SOEP-CD. We use this program to aggregate spells from *ARTKALEN* and from *PBIOSPE* according to the hierarchy presented above. The NEWPSELL-programs to aggregate episodes are displayed in the Appendix. The reader has to proceed as follows:

- 1.) Copy NEWSPELL from the SOEP-CD into a directory
- 2.) Copy the programs **SPELL1.cmd** and **SPELL2.cmd** from the Appendix into two separate ASCII files (and of course change the *file specifications*).
- 3.) In the command prompt type: NEWSPELL.exe SPELL1.cmd *password*⁸

NEWSPELL will create an output file labeled as *PBIOSPE1.SPL*. This file contains the aggregated episodes in ASCII-format. In order to construct *ARTKALEN1.SPL*, one has to proceed in the same manner.

Below, we display the two original files *ARTKALEN* and *PBIOSPE*. Furthermore, we display the aggregated files *ARTKALEN1* and *PBIOSPE1*. We also display the complete employment career of the respondent 68203 after merging *ARTKALEN1* and *PBIOSPE* and adding the fertility history. We called the new file *0ACTIV*. As can be depicted from this file, we observe the respondent until she is 33 years old ($17+199/12$). Until $END=12$, we use information from the file *PBIOSPE*. For the rest of the time, we use monthly information from *ARTKALEN*. The respective program (**ACTIV.do**) is displayed in the Appendix.

7 It should be noted that the NEWSPELL version on the SOEP CD1999 does not correctly read in *PBIOSPE* and *BIOMARSY*. This relates to the fact that *PBIOSPE* and *BIOMARSY* on the SOEP CD 1999 contain more variables than in the previous waves. Furthermore, *BIOMARSY* contains negative values for *BEGIN* and *END*. One solution is to omit the redundant variables, adjust the negative values and read in the data as user self-defined spell data (see PISCHNER 2000 for details). Alternatively, one can order the updated version by rpischner@diw.de.

8 The current SOEP password has to be inserted.

PBIOSPE.dat⁹

persnr	spellnr	begin	end	spelltyp
68203	1	15	28	1
68203	2	28	29	5
68203	3	28	28	6
68203	4	29	33	7
68203	5	29	30	9

SPELLTYP

1= in education
2= vocational training
3= military
4= full-time employed
5= part-time employed
6= unemployed
7= housewife/houseman
8= retired
9= others/ maternity leave
Time= age in years

ARTKALEN.dat

persnr	spellnr	begin	end	spelltyp
68203	4	1	122	8
68203	2	123	127	5
68203	1	128	135	3
68203	5	133	138	10
68203	3	139	147	7
68203	6	145	192	10

SPELLTYP

1= full-time employed
2= short work
3= part-time employed
4= vocational training
5= part-time employed
6= retired
7= maternity leave
8= in education
9= military
10= housewife/houseman
11= second job
12= others
Time= months since January 1983

PBIOSPE1.dat

persnr	spellnr	begin	end	spelltyp
68203	1	17	28	1
68203	2	29	29	3
68203	3	30	33	4

SPELLTYP

1= in education (1,2,3)
4= full-time employed (4)
5= part-time employed (5)
7= not employed (6,7,8,9)
Time= age in years

ARTKALEN1.dat

persnr	spellnr	begin	end	spelltyp
68203	1	1	122	1
68203	2	123	127	4
68203	3	128	135	3
68203	4	136	192	4

SPELLTYP

4= in education (4,8,9)
1= full-time employed (1)
3= part-time employed (2,3,11)
10= not employed (5,6,7,10,12)
Time= months since January 1983

OACTIV.dat

persnr	SPELLNR	BEGIN	END	SPELLTYP	ANNUAL
68203	1	0	12	1	1
68203	2	12	134	1	0
68203	3	134	139	4	0
68203	4	139	147	3	0
68203	5	147	199	4	0

SPELLTYP

1=in education
2=full-time
3=part-time
4=not employed
-1=missing
Time= months since January of the year the respondent turned 17

9 Readers, who attempt to reconstruct how we aggregated the two files need to know that persnr-id 68203 was born in 1965. Furthermore, it is necessary to know that for the period, we only have annual information at our disposal, we let SPELLTYP change its value in December.



Miscellaneous

- **Annual Information and Activity Status:** We constructed a binary variable, which indicates whether we are using annual or monthly information (We label this variable ANNUAL). If, we are analyzing e.g. the impact of unemployment on first birth decisions, annual employment spells are of only little value. If a woman is unemployed in 1990 and gives birth to a child in the same year, it is simply not possible to tell if unemployment has triggered the fertility decision or if the woman left the labor market in response to the birth of the child.
- **Continuous Time:** *ARTKALEN* contains information in a manner that BEGIN and END do not overlap. However, most event history models demand continuous time, this also includes that there should not be a “gap” between BEGIN and END. To address this issue, we simply subtract one month from BEGIN.

ARTKALEN.dat

persnr	begin	end	spelltyp
68203	1	122	8
68203	123	127	5
68203	128	135	3

ARTKALEN.dat (continuous time)

persnr	begin	end	spelltyp
68203	0	122	8
68203	122	127	5
68203	127	135	3

4.2 Splitting Episodes

In the next step, we combine the fertility and the activity history. In order to do so, we have to split the activity history using the program TDA. We have to split the episodes whenever a birth (or more precisely a pregnancy) occurs. It should also be noted that if a woman does not have a child, we recode our duration variable (DUR_BIR1, DUR_BIR2 etc). If no first birth occurs DUR_BIR1 is set to 9999. (We could have used any other number instead of 9999, which is greater than the last date of interview.)

Below, we display the data set before and after we performed the episode splitting. Person-id. 68203 gets pregnant after 148 months. Therefore, we split the activity history at this point in time. In order to perform the episode splitting, we have to read in the data set (*OACTIV*) into TDA and submit the “splitting program” (**SPLITACT**.cf, see Appendix).

We introduce two important new variables in this context (and we drop the old variables BIR1, BIR2, BIR3, DUR_BIR1 etc). The first variables indicates the number of children at the start of the episode (BIR0), the second one indicates the number of children at the end of the episode (BIR). In the subsequent examples, we only analyze first births. This basically means we omit all episodes where BIR0 is greater than 0.

OACTIV.dat

persnr	SPELLNR	BEGIN	END	SPELLTYP	DUR_BIR1	DUR_BIR2
68203	1	0	12	1	148	9999
68203	2	12	134	1	148	9999
68203	3	134	139	4	148	9999
68203	4	139	147	3	148	9999
68203	5	147	199	4	148	9999

XACTIV.dat

Persnr	SPELLNR	BEGIN	END	SPELLTYP	BIR0	BIR1
68203	6	0	12	1	0	1
68203	5	12	134	1	0	1
68203	4	134	139	4	0	1
68203	3	139	147	3	0	1
68203	1	147	148	4	1	1
68203	2	148	199	4	1	2

✂ Example II: Activity Status and First Birth

In the following, we estimate an event history model on the transition to the first pregnancy for the West German subgroup (using the data set *XACTIV*). To do so, we use the software TDA (see above). In this example (and all other examples), we use a piecewise constant. We “split” the baseline at age 20, 25 and age 30. As discussed above, our “clock” or “baseline hazard” is the age at first birth (measured in months since the January of the year of woman turned age 17).

We estimate three models. In the first one (Model A), we use the four different activity states as independent variables (in education, full-time, part-time and not employed). In the second specification, we only distinguish between in education and out of education. In the third specification (Model C), we omit all spells where we only have annual information at our disposal. The reason for this is that, given that we do not have the exact date of completion of the activity status and the date of birth, it is not possible to assess whether periods of unemployment proceed or precede fertility decisions. The result, which is most important for the subsequent analysis is a strong and negative impact of “in education” on first birth risks. Receiving education reduces first birth risks by roughly 80 percent. Also in model C (after omitting all “annual episodes”), the results do not change in any substantial manner. The program, which performs this analysis is displayed in the Appendix, titled **EXAMPLE2.cf**.

Table 5: Piecewise Constant Model, First Pregnancy, + Activity Status

	Model A			Model B			Model C		
	b	exp(b)	t	b	exp(b)	t	b	exp(b)	t
Baseline									
Age 17-20	-5.43	0.00	-52.88 ***	-5.28	0.01	-52.44 ***	-5.80	0.00	-32.20 ***
Age 20-25	-5.13	0.01	-87.20 ***	-5.03	0.01	-89.02 ***	-5.08	0.01	-73.16 ***
Age 25-30	-4.73	0.01	-86.94 ***	-4.65	0.01	-89.00 ***	-4.57	0.01	-80.15 ***
Age 30-44	-5.15	0.01	-58.53 ***	-5.03	0.01	-58.95 ***	-5.10	0.01	-54.75 ***
Activity Status									
In Education	-1.40	0.25	-13.68 ***	-1.51	0.22	-14.88 ***	-1.40	0.25	-9.62 ***
Full-Time	0			0			0		
Part-Time	0.38	1.46	2.95 ***	0			0		
Not Employed	0.69	1.98	7.21 ***	0			0		
Activity Status Miss.	-0.75	0.47	-2.94 ***	-0.84	0.43	-3.31 ***	0.23	1.26	1.50
Indicator Variables									
Annual	-0.48	0.62	-6.86 ***	-0.51	0.60	-7.34 ***	0.39	1.48	3.13 ***
Month of Birth Miss.	1.59	4.89	18.40 ***	1.58	4.84	18.35 ***	-0.31	0.74	-0.80

5 Educational Attainment

In the following, we show how to construct educational attainment as a time-variant covariate and add this variable to our data-set (*XACTIV*). There are various decisions to make when constructing the variable “educational attainment”. The most important one is presumably if one wants to measure education as a continuous or categorical variable. Which final decision one takes depends on the theoretical model, one has in mind. If one uses education as a categorical variable, one presumably favors the hypothesis that the German labor market allocates workers based on their educational and vocational certificates. If one uses “years of education” instead, one possibly has a more flexible type of labor market in mind that rewards marginal investments in education. In the US-American context, educational attainment is usually measured as a continuous variable, i.e. in years of education. In the German context, it is more sensible to use binary variables which indicate whether respondents have gathered a vocational certificates or educational degree. In this study, we take the latter approach, i.e. we measure educational attainment as a categorical variable. We distinguish the following three outcomes:

- **College Degree:** This encompasses the German “Fachhochschulabschluß” (technical college) and a university degree received in Germany or another country.
- **Vocational Degree:** This encompasses all German vocational certificates surveyed by the SOEP (“Lehre”, “Berufsfachschule”, “Schule des Gesundheitswesen”, “Fachschule”, “Beamtenausbildung”, other “Ausbildung”) and vocational certificates from a foreign country.
- **No Degree:** This encompasses respondents who do not hold a college degree or a vocational certificate.

Since we are using educational attainment as a time-variant covariate, it is important to have the exact date of completion of education at one’s disposal. In the SOEP, respondents are asked to report each year if they had earned a degree in the previous year. Since 1992, they are also asked to report the exact month of completion of education. This means that for the majority of the respondents who received their educational certificates during the “panel time”, we know the exact date of completion of education. If the degree was however earned before the “panel time” we do not

have this information. For the time prior to entry into the panel, we have (at least) annual information on the activity status of the respondent. We assume that the degree was earned when the respondent left the educational system for the first time. If a respondent leaves education and re-enters within the period of one year, we still count this as continuously receiving education. The program which puts together this data-set is displayed in the Appendix under **EDU.do**.

Miscellaneous

- We distinguish the following five groups in the program **EDU.do**:
 - Group I: Respondents who do not have a degree at the last date of interview. Obviously, we do not have to construct the date when they received their degree.
 - Group II: Respondents who have a college at first interview. We have to construct the date when they received the college degree from *PBIOSPE*.
 - Group III: Respondents who have a vocational degree at first interview. We have to construct the date when they received the degree from *PBIOSPE*.
 - Group IV: Respondents who have no degree at first interview but acquire a vocational training degree during the “panel period”. If it is available, we use the month of completion of education. If it is not available, we assume that the degree was earned in the year before the respondent reports her degree for the first time.
 - Group V: Respondents who have no degree at first interview but acquire a college degree during the “panel period”. If it is available, we use the month of completion of education. If this is not available, we assume that the degree was earned in the year before the respondent reports her degree for the first time.¹⁰
- Constructing the date of completion of education from the annual calendar file (*PBIOSPE*) entails some problems. As explained above, we assume that respondents earn a degree when they leave the educational system for the first time (allowing for an interruption of maximum a year). Respondents might however retrain after having received a degree at an earlier stage and they might finally

10 It should be noted that we also constructed a Group XI, which comprises individuals with missing information on the educational attainment at first interview but with valid information at last interview. We did not construct a date of completion of education for this group. For respondents with missing information at first and last interview, we constructed an indicator variable (EDUMIS=1).

receive a degree after having been in and out of the educational system. Since some respondents are subject to unstable educational careers, we cannot completely take for granted that the date of leaving the educational system always coincides with earning a degree.

- It should be noted that respondents might earn more than one degree. In case a respondent first receives a vocational degree and at a later stage receives a college degree, we no longer count the vocational degree once the college degree is earned. If it is vice versa, we only count the college degree.
- If we are not able to identify the month when a degree was earned (this relates to the majority of cases), we assume that the degree was earned in June of the year.

The Data Set

Below we again display the person number 68203. She receives a college degree after 134 months, i.e. at age 28. She does not receive a vocational degree, we therefore assigned DUR_EDUV the value 9999. In order to combine the educational and the fertility history, we again have to use the method of episode splitting. Below we display the data set before and after episode splitting. We constructed three new time-variant covariates no degree (EDUL), vocational degree (EDUV) and college degree (EDUH). (The reselective program is displayed in the Appendix under **SPLITEDU.cf**).

0EDU.dat

persnr	SPELLNR	BEGIN	END	SPELLTYP	DUR_EDUH	DUR_EDUV
68203	1	0	12	1	134	9999
68203	2	12	134	1	134	9999
68203	3	134	139	4	134	9999
68203	4	139	147	3	134	9999
68203	5	147	148	4	134	9999
68203	6	148	199	4	134	9999

XEDU.dat

Persnr	SPELLNR	BEGIN	END	SPELLTYP	EDUH	EDUV	EDUL
68203	1	0	12	1	0	0	1
68203	2	12	134	1	0	0	1
68203	3	134	139	4	1	0	0
68203	4	139	147	3	1	0	0
68203	5	147	148	4	1	0	0
68203	6	148	199	4	1	0	0

✕ Example III: Activity Status, Education and First Pregnancy

In the following example, we again estimate a piecewise constant model on the first birth pregnancy for the West German sample. We control for educational attainment and for receiving education. Both variables are inserted as time-variant covariates. Again the program, which performs this analysis is displayed in the Appendix (titled **EXAMPLE3**). The impact of “currently receiving education” remains basically unchanged. Being in the educational system reduces first birth risks by roughly 80 percent. There is a negative relationship between educational attainment and first birth risk. Having no post secondary education has a positive impact on second birth risk compared to having a vocational certificate. Having a college degree has a negative but insignificant impact on the transition to the first child.

Table 6: Piecewise Constant Model, First Pregnancy, + Educational Attainment

	Model 1			Model 2 (only with valid education)		
	b	exp(b)	t	b	exp(b)	t
Baseline						
Age 17-20	-5.38	0.00	-49.05 ***	-5.38	0.00	-47.20 ***
Age 20-25	-5.08	0.01	-83.14 ***	-5.08	0.01	-81.78 ***
Age 25-30	-4.67	0.01	-83.74 ***	-4.67	0.01	-82.30 ***
Age 30-44	-5.05	0.01	-56.13 ***	-5.05	0.01	-54.35 ***
Activity Status						
In Education	-1.58	0.21	-14.44 ***	-1.58	0.21	-14.15 ***
Out of Education	0			0		
Activity Status Missing	-0.96	0.38	-3.66 ***	-0.72	0.49	-2.25 **
Education						
No Degree	0.16	1.17	2.01 **	0.16	1.17	1.93 *
Vocational Degree	0			0		
College Degree	-0.09	0.91	-0.74	-0.06	0.94	-0.49
Education Missing	-0.02	0.98	-0.06	-0.51	0.60	-7.09
Indicator Variables						
Annual	-0.51	0.60	-7.27 ***	1.58	4.83	17.79
Month of Birth Missing	1.59	4.92	18.46 ***	0		
Date of Education Mis.	0.19	1.21	1.32	0		

6 Marital Status

In the following, we show how to construct a time-variant covariate for family status (MAR) and how to add it to our data set (called *XEDU*, so far). This variable equals one, when a woman is married, zero when she is divorced, widowed or single.

The SOEP-group provides an annual and a monthly family status history (labeled *BIOMARSY* and *BIOMARSM*). The files are structured in a similar manner as the annual and monthly activity history. This means that we again have to aggregate spells. The respective program is displayed in the Appendix (**SPELL3.cmd** and **SPELL4.cmd**). After having aggregated the spells, we can identify the exact date when a marital union started and when it ended. To add the marriage to the fertility history, we again have to split episodes.



Miscellaneous

- The marriage history from the annual and monthly calendar file does not completely match the information on the family status from the panel. We adjusted this aspect in the program **MAR.do**.



The Data Set

Person 68203 got married after 162 months (after the January of the year she turned age 17). There are two episodes, in which our respondent is single, the first episode is gathered from the annual calendar file, the second one from the monthly calendar file. The file *OMAR* contains the “processed calendar information” for the episode splitting. For the start and end of each episode (of being married or single), we construct a new variable. Since the person is only married once, the indicator variables, which mark the start and end of the second marriage are set to 9999. *XMAR* finally contains the complete file. We split the episodes after 12 and 162 months. The program, which performs the episode splitting is displayed in the Appendix under **SPLITMAR.cf**.

OMAR.dat

persnr	SPELLNR	BEGIN	END	SINB1	SINE1	SINB2	SINE2	MARB1	MARE2
68203	1	0	12	0	12	12	162	162	9999
68203	2	12	108	0	12	12	162	162	9999
68203	3	108	134	0	12	12	162	162	9999
68203	4	134	139	0	12	12	162	162	9999
68203	5	139	147	0	12	12	162	162	9999
68203	6	147	148	0	12	12	162	162	9999
68203	7	148	199	0	12	12	162	162	9999

XMAR.dat

Persnr	SPELLNR	BEGIN	END	MAR	SIN	MARMIS
68203	1	0	12	0	1	0
68203	2	12	108	0	1	0
68203	3	108	134	0	1	0
68203	4	134	139	0	1	0
68203	5	139	147	0	1	0
68203	6	147	148	0	1	0
68203	7	148	162	0	1	0
68203	8	162	199	1	0	0

✕ **Example IV: Marital Status and First Birth Risks**

In our example, we again use a piecewise constant model on the transition to the first pregnancy for the West German subsample. Table 6 displays the results from the model. As expected, being married has a strong positive impact on first birth risks, i.e. it increases them by 700 percent (compared to being single). Inserting marital status to the equation, we would like to control for the fact that only women who have a partner are at risk of having a birth. One could however argue that it is not very sensible to use marital status as an independent variable in a model where one analysis first birth risks. There are some researchers who talk of a “child orientated marriage” in West Germany (NAVE-HERZ 1994). In other words, couples get married because they are planning to have children. Therefore marital status is not an *independent* variable but part of the “fertility process”.

Table 7: Piecewise Constant Model, First Pregnancy, + Marital Status

	b	exp(b)	t
Baseline			
Age 17-20	-5.99	0.00	-49.88 ***
Age 20-25	-5.83	0.00	-75.30 ***
Age 25-30	-5.77	0.00	-70.78 ***
Age 30-44	-6.34	0.00	-56.67 ***
Activity Status			
In Education	-1.35	0.26	-12.05 ***
Out of Education	0		
Missing	-0.75	0.47	-2.86 ***
Education			
No Degree	0.25	1.28	3.06 ***
Vocational Degree	0		
College Degree	0.11	1.12	0.92
Missing	-0.05	0.95	-0.18
Marital Status			
Married	1.91	6.76	24.64 ***
Single	0		
Missing	0.90	2.45	7.66 ***
Indicator Variables			
Annual	-0.64	0.53	-5.99 ***
Month of Birth Missing	1.59	4.88	18.11 ***
Date of Education Mis.	0.13	1.14	0.88

7 Panel Information

7.1 Attitudes

In the following, we show how to add panel information to the data set, which we have constructed so far (called *XMAR*). By panel information, we understand all aspects that are solely available for the date of interview. This particularly applies to the attitudes of the respondents. Each year, a variety of attitudes are surveyed in the SOEP. But for this analysis, it only makes sense to use those questions, which are surveyed every single year. Otherwise, we would have to deal with too many missing values. In order to demonstrate how to proceed with the analysis, we pick the following question, which we use as an indicator for the feeling of *economic uncertainty* of the respondent.

Question (2)

Are you worried about your own financial situation?
____very worried ____somewhat worried ____no worries

The attitudes of the respondent are only surveyed annually. This also means that we only have information for a short period of time (namely the time when the interview was conducted). Therefore, we have to impute the missing information. The most important aspect in this context is that we have to impute the missing information in a manner that we avoid reversed causation, i.e. a woman might get worried after realizing that she is pregnant. We therefore assume that the attitudes of the respondent relate to the last 12 months before the interview was conducted.

The program, which puts together this data-set is displayed in the Appendix under **Panel.do**. Apart from the variable for economic uncertainty (WOR), the data-set also contains other variables: the labor market status of the respondent (POS), her monthly gross wage (WAGE), her employment status (EMP), an indicator variable showing if she has a partner (PAR) and the person-id. of the partner (PNR). We will come back to the partner's characteristics in Part 8.

7.2 Joining two Episode Data-Sets

In the following, we demonstrate how to add the panel characteristics to the data file, we have constructed so far. In principle, we could use the method of episode splitting (see above). However, this method is, in this context, very tedious. For every single variable, we want to add to our data set, we would have to construct 34 new variables, which indicate the start and the end of an episode. (There are 16 single years for which we have to create a starting and ending point plus two additional variables which over the period prior to entry into the panel). Instead of the method of episode splitting, we use another feature of TDA, i.e. the method of joining two episode data sets. Below, we display our panel data set, which contains our indicator variable for “economic uncertainty” (*OPANEL*). We would like to add this data set to *XMAR*.

In order to do so, we have to modify *XMAR*. To save space, we aggregate some binary variables into one single variable (e.g. instead of using four binaries for education, we use only one binary variable with four realizations). Most importantly, we have to remove the indicator variables for the fertility history from the data set (*BIR* and *BIR0*). Instead, we merge on the “old” indicators for the fertility history (*DUR_BIR1*, *DUR_BIR2* etc.). The major reason for doing so is that by joining episode data, the program is not able to treat *BIR* and *BIR0* as if they were *dependent* variables. Instead, it treats them as covariates and “splits them” even if we do not want them to be split. In order to circumvent this problem, we first join the two episode data sets *OPANEL* and *OMARI* and in a second step, we add the fertility history (in the same manner as explained in Part 4.2). The program, which first joins the episode data and then adds the fertility history is displayed in the Appendix under **JOINPAN.cf**.

OPANEL.dat

persnr	SPELLNR	BEGIN	END	WOR
68203	1	0	14	-1
68203	2	14	26	1
68203	3	26	39	1
68203	4	39	51	2
68203	5	51	62	2
68203	6	62	74	2
68203	7	74	86	3
68203	8	86	99	3
68203	9	99	111	2
68203	10	111	122	2
68203	11	122	134	2
68203	12	134	146	2
68203	13	146	159	2
68203	14	159	170	2
68203	15	170	182	2
68203	16	182	194	3
68203	17	194	208	3

OMAR1.dat

persnr	SPELLNR	BEGIN	END	SPELLTYP	DUR_BIR1
68203	1	0	12	1	148
68203	2	12	108	1	148
68203	3	108	134	1	148
68203	4	134	139	4	148
68203	5	139	147	3	148
68203	6	147	148	4	148
68203	7	148	162	4	148
68203	8	162	199	4	148

XPANEL.dat

Persnr	SPELLNR	BEGIN	END	BIR0	BIR	SPELLTYP	WOR
68203	1	0	12	0	0	1	-1
68203	2	12	14	0	0	1	-1
68203	3	14	26	0	0	1	1
68203	4	26	39	0	0	1	1
68203	5	39	51	0	0	1	2
68203	6	51	62	0	0	1	2
68203	7	62	74	0	0	1	2
68203	8	74	86	0	0	1	3
68203	9	86	99	0	0	1	3
68203	10	99	108	0	0	1	2
68203	11	108	111	0	0	1	2
68203	12	111	122	0	0	1	2
68203	13	122	134	0	0	1	2
68203	14	134	139	0	0	4	2
68203	15	139	146	0	0	3	2
68203	16	146	147	0	0	3	2
68203	17	147	148	0	1	4	2
68203	18	148	159	1	1	4	2
68203	19	159	162	1	1	4	2
68203	20	162	170	1	1	4	2
68203	21	170	182	1	1	4	2
68203	22	182	194	1	1	4	3
68203	23	194	199	1	1	4	3

✂ Example V: Economic Uncertainty and First Pregnancy

In the example, we again estimate the same piecewise constant model. Apart from activity status, educational attainment and marital status, we add the indicator variable for “economic uncertainty” to the regression. Unfortunately, there is basically no effect of “being worried about one’s own financial situation” and opting to have a first child.

Table 8: Piecewise Constant Model, First Pregnancy, + Economic Uncertainty

	Model A		
	b	exp(b)	t
Baseline			
Age 17-20	-6.00	0.00	-49.02 ***
Age 20-25	-5.85	0.00	-72.85 ***
Age 25-30	-5.80	0.00	-69.15 ***
Age 30-44	-6.38	0.00	-55.66 ***
Activity Status			
In Education	-1.36	0.26	-12.03 ***
Out of education	0		
Missing	-0.82	0.44	-3.04 ***
Education			
No Degree	0.25	1.28	3.03 ***
Vocational Degree	0		
College Degree	0.11	1.12	0.90
Missing	0.20	1.22	0.71
Marital Status/ Cohabitation			
Married	1.92	6.85	24.53 ***
Single	0		
Missing	0.90	2.47	7.67 ***
Economic Uncertainty			
Very Worried	0.09	1.10	0.85
Somewhat Worried/ not Worr.	0		
Missing	-0.20	0.82	-1.26
Indicator Variables			
Annual	-0.44	0.64	-2.48 **
Month of Birth Missing	1.59	4.92	18.04 ***
Date of Education Missing	0.15	1.16	1.05

8 Partner Information

In a last step, we show how to add the partner's characteristics to the data set *XPANEL*. We only use panel information for the partner's characteristics. The major reason for doing so is that it is rather tedious to add the monthly activity history of the male partner, particularly if one takes into account that respondents can have more than one partner over their life course. Using the partner's characteristics from the panel is a straightforward procedure. We simply construct a file, which contains panel information for all years of all male respondents in the SOEP and merge this information to our data set. As the “merging variable”, we use the partner's id and the year. The respective program is displayed in the Appendix (under **PARTNER.do**).

The Data Set

Below, we display the original data set with the key variable we use for adding the partner's characteristics, i.e. the year (YEAR) and the partner id (PNR). The second file (*OPARTNER*) contains the partner information for each available year. *XPARTNER* finally contains the file after merging *XPANEL* and *OPARTNER* by YEAR and PNR.

OPANEL.dat

Persnr	SPELLNR	BEGIN	END	PAR	PNR
68203	1	0	12	-1	-1
68203	2	12	14	-1	-1
68203	3	14	26	0	0
68203	4	26	39	0	0
68203	5	39	51	0	0
68203	6	51	62	0	0
68203	7	62	74	0	0
68203	8	74	86	0	0
68203	9	86	99	0	0
68203	10	99	108	0	-1
68203	11	108	111	0	-1
68203	12	111	122	0	-1
68203	13	122	134	1	68204
68203	14	134	139	1	-1
68203	15	139	146	1	-1
68203	16	146	147	1	68204
68203	17	147	148	1	68204
68203	18	148	159	1	68204
68203	19	159	162	1	68204
68203	20	162	170	1	68204
68203	21	170	182	1	68204
68203	22	182	194	1	68204
68203	23	194	199	1	68204

OPARTNER.dat

persnr	YEAR	PEMP
68204	93	2
68204	94	2
68204	95	2
68204	96	2
68204	97	2
68204	98	2
68204	99	2

XPARTNER.dat

Persnr	SPELLNR	BEGIN	END	PAR	PEMP
68203	1	0	12	-1	-1
68203	2	12	14	-1	-1
68203	3	14	26	0	-1
68203	4	26	39	0	-1
68203	5	39	51	0	-1
68203	6	51	62	0	-1
68203	7	62	74	0	-1
68203	8	74	86	0	-1
68203	9	86	99	0	-1
68203	10	99	108	0	-1
68203	11	108	111	0	-1
68203	12	111	122	0	-1
68203	13	122	134	1	2
68203	14	134	139	1	-1
68203	15	139	146	1	-1
68203	16	146	147	1	2
68203	17	147	148	1	2
68203	18	148	159	1	2
68203	19	159	162	1	2
68203	20	162	170	1	2
68203	21	170	182	1	2
68203	22	182	194	1	2
68203	23	194	199	1	2

✂ Example VI: Partner's Employment Status and First Pregnancy

In the last example, we again use a piecewise constant model to analyze the transition to the first pregnancy. We only control for the activity status of the respondent and the activity status of her male partner. Some women do not have a partner (or rather there are several episodes where respondents do not have a partner). In order to take this aspect into account, we interact the indicator variable for “having a partner” and the partner's characteristics. After adding the partner's activity status to the regression, the impact of “currently receiving education” (of the respondent) is less strong. In other words, it is not only the woman's participation in the educational system, but the fact that the male partner is receiving education, which has a postponing effect on first birth decisions. Furthermore, it is worth noting that the partner's unemployment has a strong and negative impact on first birth risk. The respective program is displayed in the Appendix under **Example6.cf**.

Table 9: Piecewise Constant Model, First Birth, + Partner's Characteristics

	Model 1			Model 2		
	b	exp(b)	t	b	exp(b)	t
Baseline						
Age 17-20	-5.47	0.00	-52.11 ***	-4.55	0.01	-39.68 ***
Age 20-25	-5.15	0.01	-86.03 ***	-4.36	0.01	-65.72 ***
Age 25-30	-4.75	0.01	-86.40 ***	-4.17	0.02	-70.93 ***
Age 30-44	-5.16	0.01	-58.03 ***	-4.61	0.01	-50.77 ***
Employment Status						
In Education	-1.39	0.25	-13.41 ***	-1.17	0.31	-11.16 ***
Full-time employed	0			0		
Part-time employed	0.38	1.46	2.87 ***	0.22	1.25	1.65 *
Not employed	0.70	2.01	7.16 ***	0.78	2.19	8.05 ***
Missing	-0.80	0.45	-3.05 ***	-0.72	0.49	-2.72 ***
Partner's Employment Status						
In Education				-2.25	0.11	-16.88 ***
Full-time employed				0		
Not employed/ Part-time				-0.42	0.65	-2.42 **
Missing				-0.54	0.58	-2.65 ***
Single				-1.00	0.37	-9.42 ***
Indicator Variables						
Month of Birth Missing	1.60	4.94	18.07 ***	1.63	5.10	18.30 ***
Annual	-0.45	0.64	-6.38 ***	-0.29	0.75	-2.55 **

9 Concluding Remarks

This paper is supposed to give some assistance for the analysis of demographic events with the German Socio-Economic Panel. Large parts of this paper consist of tedious program descriptions. In the Appendix of this paper, we display all programs, all variables we constructed and a list of the preferable order of the programs. Frankly, the programming is rather complex. However, the SOEP provides a unique opportunity for analyzing demographic events, particularly with regards to its detailed employment history, the partner's information and its wide availability of attitudes. To our knowledge, these features of the SOEP have not been exploited in length yet. Comments or suggestions to this paper are very welcome, they can be sent to kreyenfeld@demogr.mpg.de.

References

Blossfeld, Hans-Peter/ **Rohwer**, Götz (1995): Techniques of Event History Modeling: New Approaches to Causal Analysis. Mahwah. New Jersey.

Burkhauser, Richard/ **Kreyenfeld**, Michaela/ **Wagner**, Gert (1997): The German Socio-Economic Panel: A Representative Sample of Reunited Germany and its Parts. In: Vierteljahrshefte zur Wirtschaftsforschung 66(1): 7-16.

Deutsches Institut für Wirtschaftsforschung (2000): Desktop Companion to the German Socio-Economic Panel Study (GSOEP). Berlin.

Drobnič, Sonja/ **Blossfeld**, Hans-Peter/ **Rohwer**, Götz (1999): Dynamics of women's employment patterns over the life course: A comparison of the United States and Germany. In: Journal of Marriage and the Family 61(1): 133-146.

Frick, Joachim/ **Otto**, Birgit (2000): Informationen zur Geburtsbiographie aller Frauen in der Datei BIOBIRTH. In: Frick, J./ Holst, E. (eds.): BIOGRAPHIE-Daten im SOEP. In: SOEP 1984-1999. Berlin. (CD-Rom).

Hoem, Britta/ **Hoem**, Jan M. (1989): The impact of women's employment on second and third births in modern Sweden. In: Population Studies 43(1): 47-67.

Nave-Herz, Rosemarie (1994): Familie heute. Darmstadt.

Pischner, Rainer (2000): Documentation of the Program Newspell (Version 1.2). In: SOEP 1984-1998. (CD-Rom).

Projektgruppe Das Sozio-Ökonomische Panel (1998): Funktion und Design einer Ergänzungsstichprobe für das Sozio-oekonomische Panel (SOEP). DIW Diskussionspapiere, Nr. 163.

Rohwer, Götz / **Pötter**, Ulrich (1998): TDA User's Manual. Ruhr-Universität Bochum.

Schupp, Jürgen/ **Wagner**, Gert (1991): Die Ost-Stichprobe des Sozio-ökonomischen Panels – Konzept und Durchführung der „SOEP-Basiserhebung 1990“ in der DDR. In: Projektgruppe "Das Sozio-oekonomische Panel" (ed.): Lebenslagen im Wandel: Basisdaten und –analysen zur Entwicklung in den neuen Bundesländern. Frankfurt am Main: 25-41.

Stata Corporation (1999): Stata Statistical Software: Release 6. College Station (Texas): Stata Corporation.

Wagner, Gert/ **Burkhauser**, Richard V./ **Behringer**, Friederike (1993): The English Language Public Use File of the German Socio-Economic Panel Study. In: The Journal of Human Resources 28(2): 429-433.

Appendix

A.1 List of Variables

BASIC VARIABLES

Spell Order

Persnr	Person-id
SPELLNR	Number of rows (by Persnr)
BEGIN	Begin of episode
END	End of episode

Fertility History^{tv)}

BIR0	Number of children at start of episode
BIR	Number of children at end of episode
BIRMIS	Month of birth imputed

BORN

Year of birth of respondent

East/ West/Foreigner

BASIC=0	West German
BASIC=1	East German
BASIC=2	Foreigner or ethnic German

MIG^{tv)}

Migration to West Germany (only East to West migrants)

WEN^{tv)}

After January 1991 (indicator for German Unification)

ACTIVITY, EDUCATION, MARITAL STATUS (MONTHLY)

Activity^{tv)}

SPELLTYP=1	In education
SPELLTYP=2	Full-time employed
SPELLTYP=3	Part-time employed
SPELLTYP=4	Not employed
SPELLTYP=-1	Missing

ANNUAL

Only annual activity information available

Education^{tv)}

EDU=0	No degree
EDU=1	Vocational degree
EDU=2	College degree
EDU=-1	Missing

EDUDUR

Date of completion of education missing

Marital Status^{tv)}

MAR=1	Married
MAR=0	Not married (Single, divorced, widowed)
MAR=-1	Missing

PANEL (ANNUAL)

Economic Uncertainty^(tv) p)

WOR=1	Not worried
WOR=2	Somewhat worried
WOR=3	Very worried
WOR=-1	Missing

Partner in Household^(tv) p)

PAR=1	Partner in Household
PAR=0	No Partner in Household
PAR=-1	Missing

Employment Status^(tv) p)

EMP=1	In education
EMP=2	Full-time employed
EMP=3	Part-time employed
EMP=4	Not employed
EMP=-1	Missing

Monthly Gross Wage^(tv) p)

WAGE	Monthly gross wage in DM
WAGE=0	Not employed
WAGE=-1	Missing

Position in Labor Market^(tv) p)

POS=101	Unskilled worker
POS=102	Semi-skilled worker
POS=103	Skilled worker
POS=104	Master craftsmen
POS=201	Employee with routine duties
POS=202	Qualified employee
POS=203	Highly qualified employee
POS=204	Qualified employee in leading position
POS=301	Civil servant (low rank)
POS=302	Civil servant (medium rank)
POS=303	Civil servant (high rank)
POS=304	Civil servant (very high rank)
POS=1000	Self employed
POS=0	Not employed
POS=-1	Missing

PARTNER (PANEL/ANNUAL)

Educational Attainment (Partner)^{tv) p)}

PEDU=0	No degree
PEDU=1	Vocational degree
PEDU=2	College degree
PEDU=-1	Missing

Economic Uncertainty (Partner)^{tv) p)}

PWOR=1	Not worried
PWOR=2	Somewhat worried
PWOR=3	Very worried
PWOR=-1	Missing

Employment Status (Partner)^{tv) p)}

PEMP=1	In education
PEMP=2	Full-time employed
PEMP=3	Part-time employed
PEMP=4	Not employed
PEMP=-1	Missing

Monthly Gross Wage (Partner)^{tv) p)}

PWAGE	Monthly gross wage in DM
PWAGE=0	Not employed
PWAGE=-1	Missing

Position in Labor Market (Partner)^{tv) p)}

PPOS=101	Unskilled worker
PPOS=102	Semi-skilled worker
PPOS=103	Skilled worker
PPOS=104	Master craftsmen
PPOS=201	Employee with routine duties
PPOS=202	Qualified employee
PPOS=203	Highly qualified employee
PPOS=204	Qualified employee in leading position
PPOS=301	Civil servant (low rank)
PPOS=302	Civil servant (medium rank)
PPOS=303	Civil servant (high rank)
PPOS=304	Civil servant (very high rank)
PPOS=1000	Self employed
PPOS=0	Not employed
PPOS=-1	Missing

AUXILIARY VARIABLES

DUR_Z	Duration until censoring
YEAR_1	Year of first interview
YEAR_Z	Year of last interview
DUR_EDUV	Duration until completion of vocational training
DUR_EDUH	Duration until completion of college education
MARB1	Begin first marriage
MARE1	End first marriage
DUR_WEN	Duration since January 1991 (indicator for German Unification)
DUR_MIG	Duration since migration to West Germany (only East to West migrants)

Note: ^(iv) Time-variant ^{p)} Panel information, i.e. changes its value at the date of interview

A.2 List of Data Files

Basics Files

XBIR	Birth History Censoring: Date of 3 rd birth (minus 9 months) Variables: BIR1, BIR2, BIR3 etc.
XBASIC	East/ West/ Foreigners Censoring: Date of 3 rd birth (minus 9 months) Variables: EAST, WEST, FORG etc.
XACTIV	Activity History Censoring: Date of 3 rd birth (minus 9 months) Variables: SPELLTYP etc.
XEDU	Educational History Censoring: Date of 3 rd birth (minus 9 months) Variables: EDUH, EDUV etc.
XMAR	Family Status History Censoring: Date of 3 rd birth (minus 9 months) Variables: MAR etc.
XPANEL	Panel Information Censoring: Date of 3 rd birth (minus 9 months) Variables: WOR, POS, WAGE etc.
XPARTNER	Partner Information Censoring: Date of 3 rd birth (minus 9 months) Variables: PWOR, PPEDU, PPEMP etc.

Auxiliary Files

XZENSOR	Censoring File Censoring: Date of last Interview Variables: YEAR_Z, YEAR_1, DUR_Z etc
0BIR	Birth History Censoring: Date of 3 rd birth Variables: BIR1, DUR_BIR1, MISBIR1, BIR2 etc.
0ACTIV	Activity History Censoring: Date of last Interview Variables: SPELLTYP, ANNUAL etc.
0EDU	Educational History Censoring: Date of last Interview Variables: DUR_EDUH, DUR_EDUV, EDUDUR etc.
0MAR	Family Status History Censoring: Date of last Interview Variables: MARB1, MARE1 etc.
0PANEL	Panel Characteristics Censoring: Date of last Interview Variables: WOR, WAGE, POS etc.

A.3 List of Programs

Order		Type	Description	Data File
1	ZENSOR	.do	Date of censoring	XZENSOR
2	BIR	.do	Date of birth	XBIR
3	BASIC	.do	Basic characteristics (e.g. West, East German)	XBASIC
4a	SPELL1	.cmd	Aggregating PBIOSPE	PBIOSPE1
4b	SPELL2	.cmd	Aggregating ARTKALEN	ARTKALEN1
4c	ACTIV	.do	Activity history	0ACTIV
4d	SPLITBIR	.cf	Splitting by date of first/ second birth	XACTIV
5a	EDU	.do	Educational history	0EDU
5b	SPLITEDU	.cf	Splitting by date of completion of education	XEDU
6a	SPELL3	.cmd	Aggregating BIOMARSY	MARY1
6b	SPELL4	.do	Aggregating BIOMARSM	MARM1
6c	MARY	.do	Marriage history	0MAR
6d	MARY	.cf	Splitting by date of marriage	XMAR
7a	PANEL	.do	Panel history	0PANEL
7b	PANEL	.cf	Joining panel data with XMAR.dat	XPANEL
8	PARTNER	.do	Partner Information	XPARTNER

A.4 The Data Set (Person id 68203)

Time-constant			Basics			Fertility			Activity, Education etc.						Panel				Partner						
Persnr	BORN	BASIC	SPELL NR	BEGIN	END	BIR0	BIR	BIRMIS	SPELL TYP	ANN UAL	EDU	EDU DUR	MAR	WEN	MIG	WOR	POS	EMP	WAGE	PAR	PWOR	PPOS	PEMP	PWAGE	PEDU
68203	1965	0	1	0	12	0	0	0	1	1	0	0	0	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
68203	1965	0	2	12	14	0	0	0	1	0	0	0	0	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
68203	1965	0	3	14	26	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	-1	-1	-1	-1	-1
68203	1965	0	4	26	39	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	-1	-1	-1	-1	-1
68203	1965	0	5	39	51	0	0	0	1	0	0	0	0	0	0	2	0	1	0	0	-1	-1	-1	-1	-1
68203	1965	0	6	51	62	0	0	0	1	0	0	0	0	0	0	2	0	1	0	0	-1	-1	-1	-1	-1
68203	1965	0	7	62	74	0	0	0	1	0	0	0	0	0	0	2	0	1	0	0	-1	-1	-1	-1	-1
68203	1965	0	8	74	86	0	0	0	1	0	0	0	0	0	0	3	0	1	0	0	-1	-1	-1	-1	-1
68203	1965	0	9	86	99	0	0	0	1	0	0	0	0	0	0	3	0	1	0	0	-1	-1	-1	-1	-1
68203	1965	0	10	99	108	0	0	0	1	0	0	0	0	0	0	2	0	1	0	0	-1	-1	-1	-1	-1
68203	1965	0	11	108	111	0	0	0	1	0	0	0	0	1	0	2	0	1	0	0	-1	-1	-1	-1	-1
68203	1965	0	12	111	122	0	0	0	1	0	0	0	0	1	0	2	0	1	0	1	-1	-1	-1	-1	-1
68203	1965	0	13	122	134	0	0	0	1	0	0	0	0	1	0	2	0	1	0	1	2	0	2	5200	1
68203	1965	0	14	134	139	0	0	0	4	0	2	0	0	1	0	2	203	3	1900	1	-1	-1	-1	-1	-1
68203	1965	0	15	139	146	0	0	0	3	0	2	0	0	1	0	2	203	3	1900	1	-1	-1	-1	-1	-1
68203	1965	0	16	146	147	0	0	0	3	0	2	0	0	1	0	2	0	4	0	1	3	0	2	5000	1
68203	1965	0	17	147	148	0	1	0	4	0	2	0	0	1	0	2	0	4	0	1	3	0	2	5000	1
68203	1965	0	18	148	159	1	1	0	4	0	2	0	0	1	0	2	0	4	0	1	3	0	2	5000	1
68203	1965	0	19	159	162	1	1	0	4	0	2	0	0	1	0	2	0	4	0	1	2	0	2	5500	1
68203	1965	0	20	162	170	1	1	0	4	0	2	0	1	1	0	2	0	4	0	1	2	0	2	5500	1
68203	1965	0	21	170	182	1	1	0	4	0	2	0	1	1	0	2	0	4	0	1	3	0	2	5800	1
68203	1965	0	22	182	194	1	1	0	4	0	2	0	1	1	0	3	0	4	0	1	3	0	2	5900	1
68203	1965	0	23	194	199	1	1	0	4	0	2	0	1	1	0	3	0	1	0	1	3	0	2	5500	1

A.5 Programs

A.5.1 STATA Programs

ZENSOR.do

```
#delimit;

**STEP I;
**Merge information on the month the interview was conducted;
use k:\soep\gsoep\stata\apbrutto.dta; keep persnr amonin;
sort persnr; save u:\michaela\fertil\data\test\TEST01A.DTA, replace;
use k:\soep\gsoep\stata\bp.dta; keep persnr bpmmonin;
sort persnr; save u:\michaela\fertil\data\test\TEST01B.DTA, replace;
use k:\soep\gsoep\stata\cp.dta; keep persnr cpmonin;
sort persnr; save u:\michaela\fertil\data\test\TEST01C.DTA, replace;
use k:\soep\gsoep\stata\dp.dta; keep persnr dpmonin;
sort persnr; save u:\michaela\fertil\data\test\TEST01D.DTA, replace;
use k:\soep\gsoep\stata\ep.dta; keep persnr epmonin;
sort persnr; save u:\michaela\fertil\data\test\TEST01E.DTA, replace;
use k:\soep\gsoep\stata\fp.dta; keep persnr fpmonin;
sort persnr; save u:\michaela\fertil\data\test\TEST01F.DTA, replace;
use k:\soep\gsoep\stata\gp.dta; keep persnr gpmonin;
sort persnr; save u:\michaela\fertil\data\test\TEST01G.DTA, replace;
use k:\soep\gsoep\stata\hp.dta; keep persnr hpmonin;
sort persnr; save u:\michaela\fertil\data\test\TEST01H.DTA, replace;
use k:\soep\gsoep\stata\ip.dta; keep persnr ipmonin;
sort persnr; save u:\michaela\fertil\data\test\TEST01I.DTA, replace;
use k:\soep\gsoep\stata\jp.dta; keep persnr jpmonin;
sort persnr; save u:\michaela\fertil\data\test\TEST01J.DTA, replace;
use k:\soep\gsoep\stata\kp.dta; keep persnr kpmonin;
sort persnr; save u:\michaela\fertil\data\test\TEST01K.DTA, replace;
use k:\soep\gsoep\stata\lp.dta; keep persnr lpmonin;
sort persnr; save u:\michaela\fertil\data\test\TEST01L.DTA, replace;
use k:\soep\gsoep\stata\mp.dta; keep persnr mpmonin;
sort persnr; save u:\michaela\fertil\data\test\TEST01M.DTA, replace;
use k:\soep\gsoep\stata\np.dta; keep persnr npmonin;
sort persnr; save u:\michaela\fertil\data\test\TEST01N.DTA, replace;
use k:\soep\gsoep\stata\op.dta; keep persnr opmonin;
sort persnr; save u:\michaela\fertil\data\test\TEST01O.DTA, replace;
use k:\soep\gsoep\stata\pp.dta; keep persnr ppmonin;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST01A.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST01B.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST01C.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST01D.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST01E.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST01F.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST01G.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST01H.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST01I.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST01J.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST01K.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST01L.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST01M.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST01N.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST01O.DTA; drop _merge;
sort persnr; save u:\michaela\fertil\data\test\TEST01.DTA, replace;

**STEP II;
**Construct the date at censoring;
use k:\soep\gsoep\stata\PPFAD.dta;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST01.DTA; drop _merge;
g YEAR_1=erstbefr; g YEAR_Z=letztbefr;
g MON_Z=0; g DUR_Z=0;
replace MON_Z= amonin if YEAR_Z==1984 & amonin !=. & amonin >0;
replace MON_Z= bpmmonin if YEAR_Z==1985 & bpmmonin !=. & bpmmonin >0;
replace MON_Z= cpmonin if YEAR_Z==1986 & cpmonin !=. & cpmonin >0;
replace MON_Z= dpmonin if YEAR_Z==1987 & dpmonin !=. & dpmonin >0;
replace MON_Z= epmonin if YEAR_Z==1988 & epmonin !=. & epmonin >0;
replace MON_Z= fpmonin if YEAR_Z==1989 & fpmonin !=. & fpmonin >0;
replace MON_Z= gpmonin if YEAR_Z==1990 & gpmonin !=. & gpmonin >0;
replace MON_Z= hpmonin if YEAR_Z==1991 & hpmonin !=. & hpmonin >0;
replace MON_Z= ipmonin if YEAR_Z==1992 & ipmonin !=. & ipmonin >0;
replace MON_Z= jpmonin if YEAR_Z==1993 & jpmonin !=. & jpmonin >0;
replace MON_Z= kpmonin if YEAR_Z==1994 & kpmonin !=. & kpmonin >0;
replace MON_Z= lpmonin if YEAR_Z==1995 & lpmonin !=. & lpmonin >0;
replace MON_Z= mpmonin if YEAR_Z==1996 & mpmonin !=. & mpmonin >0;
replace MON_Z= npmonin if YEAR_Z==1997 & npmonin !=. & npmonin >0;
replace MON_Z= opmonin if YEAR_Z==1998 & opmonin !=. & opmonin >0;
replace MON_Z= ppmonin if YEAR_Z==1999 & ppmonin !=. & ppmonin >0;
replace MON_Z=4 if MON_Z==0;
replace DUR_Z=((YEAR_Z-gebjahr)-17)*12+MON_Z;

**STEP IV;
**MISCELLANEOUS;
drop if sex!=2;
g BORN=gebjahr;
g AGE_Z=YEAR_Z-gebjahr;
g AGE_1=(YEAR_1-gebjahr);
g DUR_WEN=0; replace DUR_WEN=((1991-gebjahr)-17)*12;
replace DUR_WEN=9999 if DUR_WEN<1;
keep persnr DUR_Z DUR_WEN AGE_1 AGE_Z YEAR_1 YEAR_Z BORN psample;
```

```

sort persnr; save u:\michaela\fertil\data\test\XZENSOR.DTA, replace;
label variable DUR_Z "duration until last interview" ;
label variable DUR_WEN "duration since since January '91";
label variable AGE_1 "age at first interview";
label variable AGE_Z "age at censoring";
label variable YEAR_1 "year at first interview";
label variable YEAR_Z "year at censoring";
label variable BORN "year of birth";

```

BIR.do

```

#delimit;

**STEP I;
**Reorder the birth parities;
use u:\Michaela\fertil\data\SOEP\biobirth99.dta;
keep persnr kidgeb01 kidgeb02 kidgeb03 kidgeb04 biovalid bioage;
sort persnr;
reshape long kidgeb0, i(persnr) j(SPELL);
recode kidgeb0 -2=9999;
sort persnr kidgeb0; drop SPELL; by persnr: g SPELL=_n;
reshape wide kidgeb0, i(persnr) j(SPELL);
sort persnr; save u:\Michaela\fertil\data\test\TEST01.DTA, replace;
use u:\michaela\fertil\data\test\XZENSOR.DTA;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01; drop _merge;
g AGE_BIR1=0;
g BIR1=0;
replace BIR1=1 if kidgeb01>0 & kidgeb01!=9999;
replace AGE_BIR1=AGE_Z if BIR1==0;
replace AGE_BIR1=kidgeb01-BORN if BIR1==1;
g YEAR1=BORN+AGE_BIR1;
g AGE_BIR2=0;
g BIR2=0;
replace BIR2=1 if kidgeb02>0 & kidgeb02!=9999;
replace AGE_BIR2=AGE_Z if BIR2==0;
replace AGE_BIR2=kidgeb02-BORN if BIR2==1;
g YEAR2=BORN+AGE_BIR2;
g AGE_BIR3=0;
g BIR3=0;
replace BIR3=1 if kidgeb03>0 & kidgeb03!=9999;
replace AGE_BIR3=AGE_Z if BIR3==0;
replace AGE_BIR3=kidgeb03-BORN if BIR3==1;
g YEAR3=BORN+AGE_BIR3;
sort persnr; save u:\Michaela\fertil\data\test\TEST01.DTA, replace;

**STEP II;
**Construct the Month of Birth from Wave 1985;
use k:\soep\gsoep\stata\dkind.dta;
keep persnr dkgmonat; ren persnr kidpnr01;
sort kidpnr01; save u:\Michaela\fertil\data\test\TEST02.DTA, replace;
use k:\soep\gsoep\stata\BIOBIRTH.dta; keep kidpnr01 persnr;
sort kidpnr01; merge kidpnr01 using u:\Michaela\fertil\data\test\TEST02.DTA;
ren dkgmonat KIDM1; drop if _merge==2; drop _merge;
sort persnr; save u:\Michaela\fertil\data\test\TEST03.DTA, replace; drop kidpnr01;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01;
keep if _merge>1; drop _merge;
sort persnr; save u:\Michaela\fertil\data\test\TEST01.DTA, replace;

**STEP III;
**Merge the Month of Birth from Panel;
use k:\soep\gsoep\stata\bp.dta; keep persnr bp8013 bp8014;
sort persnr; save u:\Michaela\fertil\data\test\TEST03B.DTA, replace;
use k:\soep\gsoep\stata\cp.dta; keep persnr cp9113 cp9114;
sort persnr; save u:\Michaela\fertil\data\test\TEST03C.DTA, replace;
use k:\soep\gsoep\stata\dp.dta; keep persnr dp9313 dp9314;
sort persnr; save u:\Michaela\fertil\data\test\TEST03D.DTA, replace;
use k:\soep\gsoep\stata\ep.dta; keep persnr ep8413 ep8414;
sort persnr; save u:\Michaela\fertil\data\test\TEST03E.DTA, replace;
use k:\soep\gsoep\stata\fp.dta; keep persnr fp10313 fp10314;
sort persnr; save u:\Michaela\fertil\data\test\TEST03F.DTA, replace;
use k:\soep\gsoep\stata\gp.dta; keep persnr gp10313 gp10314;
sort persnr; save u:\Michaela\fertil\data\test\TEST03G.DTA, replace;
use k:\soep\gsoep\stata\hp.dta; keep persnr hp10313 hp10314;
sort persnr; save u:\Michaela\fertil\data\test\TEST03H.DTA, replace;
use k:\soep\gsoep\stata\ip.dta; keep persnr ip10313 ip10314;
sort persnr; save u:\Michaela\fertil\data\test\TEST03I.DTA, replace;
use k:\soep\gsoep\stata\jp.dta; keep persnr jp10313 jp10314;
sort persnr; save u:\Michaela\fertil\data\test\TEST03J.DTA, replace;
use k:\soep\gsoep\stata\kp.dta; keep persnr kp10313 kp10314;
sort persnr; save u:\Michaela\fertil\data\test\TEST03K.DTA, replace;
use k:\soep\gsoep\stata\lp.dta; keep persnr lp10313 lp10314;
sort persnr; save u:\Michaela\fertil\data\test\TEST03L.DTA, replace;
use k:\soep\gsoep\stata\mp.dta; keep persnr mp10813 mp10814;
sort persnr; save u:\Michaela\fertil\data\test\TEST03M.DTA, replace;
use k:\soep\gsoep\stata\np.dta; keep persnr np11513 np11514;
sort persnr; save u:\Michaela\fertil\data\test\TEST03N.DTA, replace;
use k:\soep\gsoep\stata\op.dta; keep persnr op12113 op12114;
sort persnr; save u:\Michaela\fertil\data\test\TEST03O.DTA, replace;
use k:\soep\gsoep\stata\pp.dta; keep persnr pp13320 pp13321;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST03O; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST03N; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST03M; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST03L; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST03K; drop _merge;

```

```

sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST03J; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST03I; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST03H; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST03G; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST03F; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST03E; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST03D; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST03C; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST03B; drop _merge;
sort persnr; save u:\Michaela\fertil\data\test\TEST03.DTA, replace;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01.DTA;
drop if _merge==1; drop _merge;

**STEP IV;
**Construct the Date at Birth;
g MONTH1=0;
replace MONTH1=bp8013 if bp8013 >0 & bp8013!=. & (YEAR1==1984);
replace MONTH1=bp8014 if bp8014 >0 & bp8014!=. & (YEAR1==1985);
replace MONTH1=cp9113 if cp9113 >0 & cp9113!=. & (YEAR1==1985);
replace MONTH1=cp9114 if cp9114 >0 & cp9114!=. & (YEAR1==1986);
replace MONTH1=dp9313 if dp9313 >0 & dp9313!=. & (YEAR1==1986);
replace MONTH1=dp9314 if dp9314 >0 & dp9314!=. & (YEAR1==1987);
replace MONTH1=ep8413 if ep8413 >0 & ep8413!=. & (YEAR1==1987);
replace MONTH1=ep8414 if ep8414 >0 & ep8414!=. & (YEAR1==1988);
replace MONTH1=fp10313 if fp10313 >0 & fp10313!=. & (YEAR1==1988);
replace MONTH1=fp10314 if fp10314 >0 & fp10314!=. & (YEAR1==1989);
replace MONTH1=gp10313 if gp10313 >0 & gp10313!=. & (YEAR1==1989);
replace MONTH1=gp10314 if gp10314 >0 & gp10314!=. & (YEAR1==1990);
replace MONTH1=hp10313 if hp10313 >0 & hp10313!=. & (YEAR1==1990);
replace MONTH1=hp10314 if hp10314 >0 & hp10314!=. & (YEAR1==1991);
replace MONTH1=ip10313 if ip10313 >0 & ip10313!=. & (YEAR1==1991);
replace MONTH1=ip10314 if ip10314 >0 & ip10314!=. & (YEAR1==1992);
replace MONTH1=jp10313 if jp10313 >0 & jp10313!=. & (YEAR1==1992);
replace MONTH1=jp10314 if jp10314 >0 & jp10314!=. & (YEAR1==1993);
replace MONTH1=kp10313 if kp10313 >0 & kp10313!=. & (YEAR1==1993);
replace MONTH1=kp10314 if kp10314 >0 & kp10314!=. & (YEAR1==1994);
replace MONTH1=lp10313 if lp10313 >0 & lp10313!=. & (YEAR1==1994);
replace MONTH1=lp10314 if lp10314 >0 & lp10314!=. & (YEAR1==1995);
replace MONTH1=mp10813 if mp10813 >0 & mp10813!=. & (YEAR1==1995);
replace MONTH1=mp10814 if mp10814 >0 & mp10814!=. & (YEAR1==1996);
replace MONTH1=np11513 if np11513 >0 & np11513!=. & (YEAR1==1996);
replace MONTH1=np11514 if np11514 >0 & np11514!=. & (YEAR1==1997);
replace MONTH1=op12113 if op12113 >0 & op12113!=. & (YEAR1==1997);
replace MONTH1=op12114 if op12114 >0 & op12114!=. & (YEAR1==1998);
replace MONTH1=pp13320 if pp13320 >0 & pp13320!=. & (YEAR1==1998);
replace MONTH1=pp13321 if pp13321 >0 & pp13321!=. & (YEAR1==1999);
replace MONTH1=KIDM1 if KIDM1!=. & YEAR1>0 & KIDM1>0;
g DUR_BIR1=0;
g BIRMIS1=1;
replace BIRMIS1=0 if BIR1==1 & MONTH1>0;
replace BIRMIS1=0 if BIR1==0;
replace MONTH1=1 if BIR1==1 & MONTH1==0;
replace DUR_BIR1=(YEAR1-BORN-17)*12+MONTH1 if BIR1==1;
replace DUR_BIR1=DUR_Z if BIR1==0;
g MONTH2=0;
replace MONTH2=bp8013 if bp8013 >0 & bp8013!=. & (YEAR2==1984);
replace MONTH2=bp8014 if bp8014 >0 & bp8014!=. & (YEAR2==1985);
replace MONTH2=cp9113 if cp9113 >0 & cp9113!=. & (YEAR2==1985);
replace MONTH2=cp9114 if cp9114 >0 & cp9114!=. & (YEAR2==1986);
replace MONTH2=dp9313 if dp9313 >0 & dp9313!=. & (YEAR2==1986);
replace MONTH2=dp9314 if dp9314 >0 & dp9314!=. & (YEAR2==1987);
replace MONTH2=ep8413 if ep8413 >0 & ep8413!=. & (YEAR2==1987);
replace MONTH2=ep8414 if ep8414 >0 & ep8414!=. & (YEAR2==1988);
replace MONTH2=fp10313 if fp10313 >0 & fp10313!=. & (YEAR2==1988);
replace MONTH2=fp10314 if fp10314 >0 & fp10314!=. & (YEAR2==1989);
replace MONTH2=gp10313 if gp10313 >0 & gp10313!=. & (YEAR2==1989);
replace MONTH2=gp10314 if gp10314 >0 & gp10314!=. & (YEAR2==1990);
replace MONTH2=hp10313 if hp10313 >0 & hp10313!=. & (YEAR2==1990);
replace MONTH2=hp10314 if hp10314 >0 & hp10314!=. & (YEAR2==1991);
replace MONTH2=ip10313 if ip10313 >0 & ip10313!=. & (YEAR2==1991);
replace MONTH2=ip10314 if ip10314 >0 & ip10314!=. & (YEAR2==1992);
replace MONTH2=jp10313 if jp10313 >0 & jp10313!=. & (YEAR2==1992);
replace MONTH2=jp10314 if jp10314 >0 & jp10314!=. & (YEAR2==1993);
replace MONTH2=kp10313 if kp10313 >0 & kp10313!=. & (YEAR2==1993);
replace MONTH2=kp10314 if kp10314 >0 & kp10314!=. & (YEAR2==1994);
replace MONTH2=lp10313 if lp10313 >0 & lp10313!=. & (YEAR2==1994);
replace MONTH2=lp10314 if lp10314 >0 & lp10314!=. & (YEAR2==1995);
replace MONTH2=mp10813 if mp10813 >0 & mp10813!=. & (YEAR2==1995);
replace MONTH2=mp10814 if mp10814 >0 & mp10814!=. & (YEAR2==1996);
replace MONTH2=np11513 if np11513 >0 & np11513!=. & (YEAR2==1996);
replace MONTH2=np11514 if np11514 >0 & np11514!=. & (YEAR2==1997);
replace MONTH2=op12113 if op12113 >0 & op12113!=. & (YEAR2==1997);
replace MONTH2=op12114 if op12114 >0 & op12114!=. & (YEAR2==1998);
replace MONTH2=pp13320 if pp13320 >0 & pp13320!=. & (YEAR2==1998);
replace MONTH2=pp13321 if pp13321 >0 & pp13321!=. & (YEAR2==1999);
replace MONTH2=KIDM1 if KIDM1!=. & YEAR2>0 & KIDM1>0;
g DUR_BIR2=0;
g BIRMIS2=1;
replace BIRMIS2=0 if BIR2==1 & MONTH2>0;
replace BIRMIS2=0 if BIR2==0;
replace MONTH2=1 if BIR2==1 & MONTH2==0;
replace DUR_BIR2=(YEAR2-BORN-17)*12+MONTH2 if BIR2==1;
replace DUR_BIR2=DUR_Z if BIR2==0;
g MONTH3=0;
replace MONTH3=bp8013 if bp8013 >0 & bp8013!=. & (YEAR3==1984);
replace MONTH3=bp8014 if bp8014 >0 & bp8014!=. & (YEAR3==1985);
replace MONTH3=cp9113 if cp9113 >0 & cp9113!=. & (YEAR3==1985);
replace MONTH3=cp9114 if cp9114 >0 & cp9114!=. & (YEAR3==1986);
replace MONTH3=dp9313 if dp9313 >0 & dp9313!=. & (YEAR3==1986);
replace MONTH3=dp9314 if dp9314 >0 & dp9314!=. & (YEAR3==1987);

```

```

replace MONTH3=ep8413 if ep8413 >0 & ep8413!=. & (YEAR3==1987);
replace MONTH3=ep8414 if ep8414 >0 & ep8414!=. & (YEAR3==1988);
replace MONTH3=fp10313 if fp10313 >0 & fp10313!=. & (YEAR3==1988);
replace MONTH3=fp10314 if fp10314 >0 & fp10314!=. & (YEAR3==1989);
replace MONTH3=gp10313 if gp10313 >0 & gp10313!=. & (YEAR3==1989);
replace MONTH3=gp10314 if gp10314 >0 & gp10314!=. & (YEAR3==1990);
replace MONTH3=hp10313 if hp10313 >0 & hp10313!=. & (YEAR3==1990);
replace MONTH3=hp10314 if hp10314 >0 & hp10314!=. & (YEAR3==1991);
replace MONTH3=ip10313 if ip10313 >0 & ip10313!=. & (YEAR3==1991);
replace MONTH3=ip10314 if ip10314 >0 & ip10314!=. & (YEAR3==1992);
replace MONTH3=jp10313 if jp10313 >0 & jp10313!=. & (YEAR3==1992);
replace MONTH3=jp10314 if jp10314 >0 & jp10314!=. & (YEAR3==1993);
replace MONTH3=kp10313 if kp10313 >0 & kp10313!=. & (YEAR3==1993);
replace MONTH3=kp10314 if kp10314 >0 & kp10314!=. & (YEAR3==1994);
replace MONTH3=lp10313 if lp10313 >0 & lp10313!=. & (YEAR3==1994);
replace MONTH3=lp10314 if lp10314 >0 & lp10314!=. & (YEAR3==1995);
replace MONTH3=mp10813 if mp10813 >0 & mp10813!=. & (YEAR3==1995);
replace MONTH3=mp10814 if mp10814 >0 & mp10814!=. & (YEAR3==1996);
replace MONTH3=np11513 if np11513 >0 & np11513!=. & (YEAR3==1996);
replace MONTH3=np11514 if np11514 >0 & np11514!=. & (YEAR3==1997);
replace MONTH3=op12113 if op12113 >0 & op12113!=. & (YEAR3==1997);
replace MONTH3=op12114 if op12114 >0 & op12114!=. & (YEAR3==1998);
replace MONTH3=pp13320 if pp13320 >0 & pp13320!=. & (YEAR3==1998);
replace MONTH3=pp13321 if pp13321 >0 & pp13321!=. & (YEAR3==1999);
replace MONTH3=KIDM1 if KIDM1!=. & YEAR3>0 & KIDM1>0;
g DUR_BIR3=0;
g BIRMIS3=1;
replace BIRMIS3=0 if BIR3==1 & MONTH3>0;
replace BIRMIS3=0 if BIR3==0;
replace MONTH3=1 if BIR1==1 & MONTH3==0;
replace DUR_BIR3=(YEAR3-BORN-17)*12+MONTH3 if BIR3==1;
replace DUR_BIR3=DUR_Z if BIR3==0;

**STEP V;
**Selection & Recode if Birth after Censoring;
sort persnr; merge persnr using u:\michaela\fertil\data\test\XZENSOR.DTA;
keep if kidgeb01!=.;
keep if BORN>1954 & BORN<1981;
keep if psample<5;
drop if kidgeb01== -1 | biovalid== -1;
drop if persnr==540405; *This person is male in wave C(?);
replace BIR1=0 if DUR_Z< DUR_BIR1;
replace DUR_BIR1=DUR_Z if DUR_Z< DUR_BIR1;
replace BIR2=0 if DUR_Z< DUR_BIR2;
replace DUR_BIR2=DUR_Z if DUR_Z< DUR_BIR2;
replace BIR3=0 if DUR_Z< DUR_BIR3;
replace DUR_BIR3=DUR_Z if DUR_Z< DUR_BIR3;
keep persnr;
BIR1 DUR_BIR1 BIRMIS1
BIR2 DUR_BIR2 BIRMIS2
BIR3 DUR_BIR3 BIRMIS3;
sort persnr; save u:\michaela\fertil\data\test\0BIR.DTA, replace;

**STEP VI;
**Backdate the Date of Birth by 9 months;
sort persnr; merge persnr using u:\michaela\fertil\data\test\XZENSOR.DTA;
drop if _merge==2; drop _merge;
replace DUR_BIR1=DUR_BIR1-9;
replace DUR_BIR2=DUR_BIR2-9;
replace DUR_BIR3=DUR_BIR3-9;
drop if DUR_BIR1<1 | DUR_BIR2<1 | DUR_BIR3<1;
replace DUR_Z=DUR_Z-9;
replace DUR_BIR1=9999 if BIR1==0;
replace DUR_BIR2=9999 if BIR2==0;
replace DUR_BIR3=9999 if BIR3==0;

sort persnr; save u:\michaela\fertil\data\test\XBIR.DTA, replace;
label variable BIR1 "occurrence of 1st birth";
label variable DUR_BIR1 "duration until 1st birth";
label variable BIRMIS1 "monthly info for 1st birth used";

```

BASIC.do

```

**STEP I;
**Merge information on nationality/ ethnic origin;
use k:\soep\gsoep\stata\LPBRUTTO.dta;
keep persnr lggruppe;
sort persnr; save u:\michaela\fertil\data\test\TEST02.DTA, replace;
use k:\soep\gsoep\stata\APGEN.dta; keep persnr nation84;
sort persnr; save u:\michaela\fertil\data\test\TEST01a.DTA, replace;
use k:\soep\gsoep\stata\BPGEN.dta; keep persnr nation85;
sort persnr; save u:\michaela\fertil\data\test\TEST02a.DTA, replace;
use k:\soep\gsoep\stata\CPGEN.dta; keep persnr nation86;
sort persnr; save u:\michaela\fertil\data\test\TEST03a.DTA, replace;
use k:\soep\gsoep\stata\DPGEN.dta; keep persnr nation87;
sort persnr; save u:\michaela\fertil\data\test\TEST04a.DTA, replace;
use k:\soep\gsoep\stata\EPGEN.dta; keep persnr nation88;
sort persnr; save u:\michaela\fertil\data\test\TEST05a.DTA, replace;
use k:\soep\gsoep\stata\FPGEN.dta; keep persnr nation89;
sort persnr; save u:\michaela\fertil\data\test\TEST06a.DTA, replace;
use k:\soep\gsoep\stata\GPGEN.dta; keep persnr nation90;
sort persnr; save u:\michaela\fertil\data\test\TEST07a.DTA, replace;
use k:\soep\gsoep\stata\HPGEN.dta; keep persnr nation91;
sort persnr; save u:\michaela\fertil\data\test\TEST08a.DTA, replace;
use k:\soep\gsoep\stata\IPGEN.dta; keep persnr nation92;
sort persnr; save u:\michaela\fertil\data\test\TEST09a.DTA, replace;

```

```

use k:\soep\gsoep\stata\JPGEN.dta; keep persnr nation93;
sort persnr; save u:\michaela\fertil\data\test\TEST10a.DTA, replace;
use k:\soep\gsoep\stata\KPGEN.dta; keep persnr nation94;
sort persnr; save u:\michaela\fertil\data\test\TEST11a.DTA, replace;
use k:\soep\gsoep\stata\LPGEN.dta; keep persnr nation95;
sort persnr; save u:\michaela\fertil\data\test\TEST12a.DTA, replace;
use k:\soep\gsoep\stata\MPGEN.dta; keep persnr nation96;
sort persnr; save u:\michaela\fertil\data\test\TEST13a.DTA, replace;
use k:\soep\gsoep\stata\NPGEN.dta; keep persnr nation97;
sort persnr; save u:\michaela\fertil\data\test\TEST14a.DTA, replace;
use k:\soep\gsoep\stata\OPGEN.dta; keep persnr nation98;
sort persnr; save u:\michaela\fertil\data\test\TEST15a.DTA, replace;
use k:\soep\gsoep\stata\PPGEN.dta; keep persnr nation99;
sort persnr; save u:\michaela\fertil\data\test\TEST16a.DTA, replace;
use k:\soep\gsoep\stata\MP.dta; sort persnr;
save u:\michaela\fertil\data\test\TEST15.DTA, replace;
use k:\soep\gsoep\stata\ppfad.dta;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST01a; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST02a; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST03a; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST04a; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST05a; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST06a; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST07a; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST08a; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST09a; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST10a; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST11a; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST12a; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST13a; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST14a; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST15a; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST16a; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST15; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST02; drop _merge;
mvencode nation*, mv(-2);

**STEP II;
**Construct EAST WEST FORG;
g EAST=0;
g WEST=0;
g FORG=0;
replace EAST=1 if psample==3;
replace EAST=1 if psample==4 & lpgruppe==1;
replace FORG=1 if psample==4 & lpgruppe==2;
replace WEST=1 if psample==4 & lpgruppe==3;
replace FORG=1 if psample==4 & lpgruppe==4;
replace FORG=1 if psample==4 & lpgruppe==5;
replace FORG=1 if psample==4 & lpgruppe==6;
replace FORG=1 if psample==4 & lpgruppe==7;
replace WEST=1 if psample==4 & lpgruppe==8;
replace FORG=1 if psample==2;
replace FORG=1 if
nation84>1 | nation85>1 | nation86>1 | nation87>1 |
nation88>1 | nation89>1 | nation90>1 | nation91>1 |
nation92>1 | nation93>1 | nation94>1 | nation95>1 |
nation96>1 | nation97>1 | nation98>1 | nation99>1;
replace WEST=1 if FORG==0 & EAST==0;
replace WEST=0 if FORG==1;
replace EAST=0 if FORG==1;

**STEP III;
**Construct Indicator for East to West migrant;
g MIG01=0; g YEAR_MIG=0;
replace MIG01=1 if psample==4 & lpgruppe==1;
replace MIG01=1 if EAST=1 &
(hsampreg==1 | isampreg==1 | jsampreg==1 | ksampreg==1 |
ksampreg==1 | lsampreg==1 | msampreg==1 | nsampreg==1 |
osampreg==1 | psampreg==1);
replace YEAR_MIG=1999 if psampreg==1;
replace YEAR_MIG=1998 if osampreg==1;
replace YEAR_MIG=1997 if nsampreg==1;
replace YEAR_MIG=1996 if msampreg==1;
replace YEAR_MIG=1995 if lsampreg==1;
replace YEAR_MIG=1994 if ksampreg==1;
replace YEAR_MIG=1993 if jsampreg==1;
replace YEAR_MIG=1992 if isampreg==1;
replace YEAR_MIG=1991 if hsampreg==1;
replace YEAR_MIG=immiyear if immiyear>0 & immiyear!=.;
replace WEST=1 if YEAR_MIG<1990 & YEAR_MIG!=0 & EAST==1 & psample!=3;
replace EAST=0 if YEAR_MIG<1990 & YEAR_MIG!=0 & psample!=3;
g DUR_MIG=(YEAR_MIG-gebjahr-17)*12+6 if MIG01==1 & EAST==1;
replace DUR_MIG=0 if DUR_MIG<0;
recode DUR_MIG .=9999;
keep persnr EAST FORG WEST MIG01 DUR_MIG;
sort persnr; merge persnr using u:\michaela\fertil\data\test\XBIR.DTA;
drop if _merge==1; drop _merge;

sort persnr; save u:\michaela\fertil\data\test\XBASIC.DTA, replace;
label variable MIG01 "East German migrated to West after 1990";
label variable DUR_MIG "duration since migration to West Germany";
label variable EAST "East German";
label variable WEST "West German";
label variable FORG "Foreigner or ethnic German migrant";

```

ACTIV.do

```
#delimit;
```

```

**STEP I;
**Read in PBIOSPE1 and ARTKALEN1;
infile JUNK01 persnr SPELLNR SPELLTYP BEGIN END JUNK02 JUNK03 CENSOR
using u:\Michaela\fertil\data\test\PBIOSPE1.SPL;
drop JUNK*;
recode SPELLTYP 1=1 4=2 5=3 6=4;
sort persnr; save u:\Michaela\fertil\data\test\PBIOSPE1, replace; clear;
infile JUNK01 persnr SPELLNR SPELLTYP BEGIN END JUNK02 JUNK03 CENSOR
using u:\Michaela\fertil\data\test\ARTKALEN1.SPL;
drop JUNK*;
recode SPELLTYP 4=1 1=2 3=3 10=4;
sort persnr; save u:\Michaela\fertil\data\test\ARTKALEN1, replace;

**STEP II;
**Change "clock" in PBIOSPE1 and ARTKALEN1;
use u:\Michaela\fertil\data\test\PBIOSPE1;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\XBASIC;
drop if _merge==1;
replace BEGIN=(BEGIN-17)*12;
replace END= (END-17)*12+12;
sort persnr BEGIN;
keep persnr BEGIN END SPELLTYP;
sort persnr; save u:\Michaela\fertil\data\test\PBIOSPE2, replace;
use u:\Michaela\fertil\data\test\ARTKALEN1;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\XBASIC;
drop if _merge==1;
replace BEGIN=((1983-BORN-17)*12)+BEGIN;
replace END =((1983-BORN-17)*12)+END;
replace BEGIN=BEGIN-1;
replace BEGIN=0 if BEGIN<0;
replace END=0 if END<0;
drop if BEGIN=0 & END==0;
sort persnr BEGIN; by persnr: g SPELL=_n;
drop if SPELLTYP=-1 & SPELL==1;
keep persnr BEGIN END SPELLTYP;
sort persnr; save u:\Michaela\fertil\data\test\ARTKALEN2, replace;

**STEP III;
**Identify start of ARTKALEN and adjust PBIOSPE2;
use u:\Michaela\fertil\data\test\ARTKALEN2;
sort persnr BEGIN; by persnr: g SPELL=_n; keep if SPELL==1;
g begin=BEGIN; keep persnr begin;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\PBIOSPE2;
g ANNUAL=1;
drop if BEGIN>=begin & begin!=.;
replace END=begin if begin<END & begin!=.;
drop if END==.;
keep persnr BEGIN END SPELLTYP ANNUAL;
append using u:\Michaela\fertil\data\test\ARTKALEN2;
recode ANNUAL .=0;
sort persnr; save u:\Michaela\fertil\data\test\ACTIV00, replace;

**STEP IV;
**Merge XBASIC;
use u:\Michaela\fertil\data\test\XBASIC; keep persnr DUR_Z;
sort persnr; save u:\Michaela\fertil\data\test\TEST, replace;
use u:\Michaela\fertil\data\test\ACTIV00;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\XBASIC;
drop if BEGIN>DUR_Z;
replace END=DUR_Z if END>DUR_Z;
append using u:\Michaela\fertil\data\test\TEST;
egen DURZ=max(DUR_Z), by (persnr);
replace END=DURZ if END==.;
sort persnr BEGIN; by persnr: g ENDLAG=END[_n-1];
replace BEGIN=ENDLAG if BEGIN==.;
recode BEGIN .=0;
drop if BEGIN>=END;
gsort persnr -END; by persnr: g SPELL=_n;
g LAST=1 if SPELL==1;
recode LAST .= 0;
recode SPELLTYP .=-1;
recode ANNUAL .= 1;
keep persnr BEGIN END SPELLTYP ANNUAL LAST;
sort persnr BEGIN; by persnr: g SPELLNR=_n;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\XBASIC; drop _merge;
drop BIR1 BIR2 BIR3;

sort persnr; save u:\Michaela\fertil\data\test\0ACTIV, replace;
label define SPELLTYP 1 "in education"
2 "full-time employed"
3 "part-time employed"
4 "not employed"
-1 "missing";
label values SPELLTYP SPELLTYP;

```

EDU.do

```

#delimit;

**STEP I;
**Panel info on the educational attainment;
use k:\soep\gsoep\stata\APGEN.dta; keep persnr apbbil01 apbbil02 apbbil03 apbbila;
sort persnr; save u:\Michaela\fertil\data\test\TEST01A.DTA, replace;

```

```

use k:\soep\gsoep\stata\BPGEN.dta; keep persnr bpbbil01 bpbbil02 bpbbil03 bpbbila;
sort persnr; save u:\michaela\fertil\data\test\TEST01B.DTA, replace;
use k:\soep\gsoep\stata\CPGEN.dta; keep persnr cpbbil01 cpbbil02 cpbbil03 cpbbila;
sort persnr; save u:\michaela\fertil\data\test\TEST01C.DTA, replace;
use k:\soep\gsoep\stata\DPGEN.dta; keep persnr dpbbil01 dpbbil02 dpbbil03 dpbbila;
sort persnr; save u:\michaela\fertil\data\test\TEST01D.DTA, replace;
use k:\soep\gsoep\stata\EPGEN.dta; keep persnr epbbil01 epbbil02 epbbil03 epbbila;
sort persnr; save u:\michaela\fertil\data\test\TEST01E.DTA, replace;
use k:\soep\gsoep\stata\FPGEN.dta; keep persnr fpbbil01 fpbbil02 fpbbil03 fpbbila;
sort persnr; save u:\michaela\fertil\data\test\TEST01F.DTA, replace;
use k:\soep\gsoep\stata\GPGEN.dta; keep persnr gpbbil01 gpbbil02 gpbbil03 gpbbila;
sort persnr; save u:\michaela\fertil\data\test\TEST01G.DTA, replace;
use k:\soep\gsoep\stata\HPGEN.dta; keep persnr hpbbil01 hpbbil02 hpbbil03 hpbbila;
sort persnr; save u:\michaela\fertil\data\test\TEST01H.DTA, replace;
use k:\soep\gsoep\stata\IPGEN.dta; keep persnr ipbbil01 ipbbil02 ipbbil03 ipbbila;
sort persnr; save u:\michaela\fertil\data\test\TEST01I.DTA, replace;
use k:\soep\gsoep\stata\JPGEN.dta; keep persnr jpbbil01 jpbbil02 jpbbil03 jpbbila;
sort persnr; save u:\michaela\fertil\data\test\TEST01J.DTA, replace;
use k:\soep\gsoep\stata\KPGEN.dta; keep persnr kpbbil01 kpbbil02 kpbbil03 kpbbila;
sort persnr; save u:\michaela\fertil\data\test\TEST01K.DTA, replace;
use k:\soep\gsoep\stata\LPGEN.dta; keep persnr lpbbil01 lpbbil02 lpbbil03 lpbbila;
sort persnr; save u:\michaela\fertil\data\test\TEST01L.DTA, replace;
use k:\soep\gsoep\stata\MPGEN.dta; keep persnr mpbbil01 mpbbil02 mpbbil03 mpbbila;
sort persnr; save u:\michaela\fertil\data\test\TEST01M.DTA, replace;
use k:\soep\gsoep\stata\NPGEN.dta; keep persnr npbbil01 npbbil02 npbbil03 npbbila;
sort persnr; save u:\michaela\fertil\data\test\TEST01N.DTA, replace;
use k:\soep\gsoep\stata\OPGEN.dta; keep persnr opbbil01 opbbil02 opbbil03 opbbila;
sort persnr; save u:\michaela\fertil\data\test\TEST01O.DTA, replace;
use k:\soep\gsoep\stata\PPGEN.dta; keep persnr ppbbil01 ppbbil02 ppbbil03 ppbbila;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST010; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01N; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01M; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01L; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01K; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01J; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01I; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01H; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01G; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01F; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01E; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01D; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01C; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01B; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01A; drop _merge;
mvencode _all, mv(-999);
sort persnr; merge persnr using u:\michaela\fertil\data\test\XBASIC.DTA;
drop if _merge==1; drop _merge;
g EDUL01=0; g EDUL02=0; g EDUV01=0; g EDUH01=0;
replace EDUH01=1999 if ppbbil02>0 | ppbbila>3;
replace EDUH01=1998 if opbbil02>0 | opbbila>3;
replace EDUH01=1997 if npbbil02>0 | npbbila>3;
replace EDUH01=1996 if mpbbil02>0 | mpbbila>3;
replace EDUH01=1995 if lpbbil02>0 | lpbbila>3;
replace EDUH01=1994 if kpbbil02>0 | kpbbila>3;
replace EDUH01=1993 if jpbbil02>0 | jpbbila>3;
replace EDUH01=1992 if ipbbil02>0 | ipbbila>3;
replace EDUH01=1991 if hpbbil02>0 | hpbbila>3;
replace EDUH01=1990 if gpbbil02>0 | gpbbila>3;
replace EDUH01=1989 if fpbbil02>0 | fpbbila>3;
replace EDUH01=1988 if epbbil02>0 | epbbila>3;
replace EDUH01=1987 if dpbbil02>0 | dpbbila>3;
replace EDUH01=1986 if cpbbil02>0 | cpbbila>3;
replace EDUH01=1985 if bpbbil02>0 | bpbbila>3;
replace EDUH01=1984 if apbbil02>0 | apbbila>3;
replace EDUV01=1999 if ppbbil01>0 | ppbbila==2 | ppbbila==3;
replace EDUV01=1998 if opbbil01>0 | opbbila==2 | opbbila==3;
replace EDUV01=1997 if npbbil01>0 | npbbila==2 | npbbila==3;
replace EDUV01=1996 if mpbbil01>0 | mpbbila==2 | mpbbila==3;
replace EDUV01=1995 if lpbbil01>0 | lpbbila==2 | lpbbila==3;
replace EDUV01=1994 if kpbbil01>0 | kpbbila==2 | kpbbila==3;
replace EDUV01=1993 if jpbbil01>0 | jpbbila==2 | jpbbila==3;
replace EDUV01=1992 if ipbbil01>0 | ipbbila==2 | ipbbila==3;
replace EDUV01=1991 if hpbbil01>0 | hpbbila==2 | hpbbila==3;
replace EDUV01=1990 if gpbbil01>0 | gpbbila==2 | gpbbila==3;
replace EDUV01=1989 if fpbbil01>0 | fpbbila==2 | fpbbila==3;
replace EDUV01=1988 if epbbil01>0 | epbbila==2 | epbbila==3;
replace EDUV01=1987 if dpbbil01>0 | dpbbila==2 | dpbbila==3;
replace EDUV01=1986 if cpbbil01>0 | cpbbila==2 | cpbbila==3;
replace EDUV01=1985 if bpbbil01>0 | bpbbila==2 | bpbbila==3;
replace EDUV01=1984 if apbbil01>0 | apbbila==2 | apbbila==3;
replace EDUL01=1999 if ppbbil03==1 | ppbbila==1;
replace EDUL01=1998 if opbbil03==1 | opbbila==1;
replace EDUL01=1997 if npbbil03==1 | npbbila==1;
replace EDUL01=1996 if mpbbil03==1 | mpbbila==1;
replace EDUL01=1995 if lpbbil03==1 | lpbbila==1;
replace EDUL01=1994 if kpbbil03==1 | kpbbila==1;
replace EDUL01=1993 if jpbbil03==1 | jpbbila==1;
replace EDUL01=1992 if ipbbil03==1 | ipbbila==1;
replace EDUL01=1991 if hpbbil03==1 | hpbbila==1;
replace EDUL01=1990 if gpbbil03==1 | gpbbila==1;
replace EDUL01=1989 if fpbbil03==1 | fpbbila==1;
replace EDUL01=1988 if epbbil03==1 | epbbila==1;
replace EDUL01=1987 if dpbbil03==1 | dpbbila==1;
replace EDUL01=1986 if cpbbil03==1 | cpbbila==1;
replace EDUL01=1985 if bpbbil03==1 | bpbbila==1;
replace EDUL01=1984 if apbbil03==1 | apbbila==1;
replace EDUL02=1984 if apbbil03==1 | apbbila==1;
replace EDUL02=1985 if bpbbil03==1 | bpbbila==1;
replace EDUL02=1986 if cpbbil03==1 | cpbbila==1;
replace EDUL02=1987 if dpbbil03==1 | dpbbila==1;

```

```

replace EDUL02=1988 if epbbil03==1 | epbbila==1;
replace EDUL02=1989 if fpbbil03==1 | fpbbila==1;
replace EDUL02=1990 if gpbbil03==1 | gpbbila==1;
replace EDUL02=1991 if hpbbil03==1 | hpbbila==1;
replace EDUL02=1992 if ipbbil03==1 | ipbbila==1;
replace EDUL02=1993 if jpbbil03==1 | jpbbila==1;
replace EDUL02=1994 if kpbbil03==1 | kpbbila==1;
replace EDUL02=1995 if lpbbil03==1 | lpbbila==1;
replace EDUL02=1996 if mpbbil03==1 | mpbbila==1;
replace EDUL02=1997 if npbbil03==1 | npbbila==1;
replace EDUL02=1998 if opbbil03==1 | opbbila==1;
replace EDUL02=1999 if ppbbil03==1 | ppbbila==1;
keep persnr EDUL01 EDUL02 EDUV01 EDUH01 YEAR_1 YEAR_Z BORN;
sort persnr; save u:\michaela\fertil\data\test\TEST0.DTA, replace;

**STEP II;
**Merge Panel info on date of receiving degree;
use k:\soep\gsoep\stata\BP.dta; keep persnr bp5402 bp5406;
sort persnr; save u:\michaela\fertil\data\test\TESTB2.DTA, replace;
use k:\soep\gsoep\stata\CP.dta; keep persnr cp5402 cp5406;
sort persnr; save u:\michaela\fertil\data\test\TESTC2.DTA, replace;
use k:\soep\gsoep\stata\DP.dta; keep persnr dp5402 dp5406;
sort persnr; save u:\michaela\fertil\data\test\TESTD2.DTA, replace;
use k:\soep\gsoep\stata\EP.dta; keep persnr ep4902 ep4906;
sort persnr; save u:\michaela\fertil\data\test\TESTE2.DTA, replace;
use k:\soep\gsoep\stata\FP.dta; keep persnr fp6702 fp6705;
sort persnr; save u:\michaela\fertil\data\test\TESTF2.DTA, replace;
use k:\soep\gsoep\stata\GP.dta; keep persnr gp6702 gp6705;
sort persnr; save u:\michaela\fertil\data\test\TESTG2.DTA, replace;
use k:\soep\gsoep\stata\HP.dta; keep persnr hp6302 hp6305;
sort persnr; save u:\michaela\fertil\data\test\TESTH2.DTA, replace;
use k:\soep\gsoep\stata\HPOST.dta; keep persnr hp6302 hp6303 hp6304;
sort persnr; save u:\michaela\fertil\data\test\TESTH3.DTA, replace;
use k:\soep\gsoep\stata\IP.dta; keep persnr ip6302 ip6306;
sort persnr; save u:\michaela\fertil\data\test\TESTI2.DTA, replace;
use k:\soep\gsoep\stata\JP.dta; keep persnr jp7302 jp7306 jp7202 jp7203;
sort persnr; save u:\michaela\fertil\data\test\TESTJ2.DTA, replace;
use k:\soep\gsoep\stata\KP.dta; keep persnr kp7302 kp7306 kp7202 kp7203;
sort persnr; save u:\michaela\fertil\data\test\TESTK2.DTA, replace;
use k:\soep\gsoep\stata\LP.dta; keep persnr lp7902 lp7906 lp7802 lp7803;
sort persnr; save u:\michaela\fertil\data\test\TESTL2.DTA, replace;
use k:\soep\gsoep\stata\MP.dta; keep persnr mp6002 mp6006 mp5902 mp5903;
sort persnr; save u:\michaela\fertil\data\test\TESTM2.DTA, replace;
use k:\soep\gsoep\stata\NP.dta; keep persnr np6002 np6006 np5902 np5903;
sort persnr; save u:\michaela\fertil\data\test\TESTN2.DTA, replace;
use k:\soep\gsoep\stata\OP.dta; keep persnr op5002 op5102 op5003 op5106;
sort persnr; save u:\michaela\fertil\data\test\TESTO2.DTA, replace;
use k:\soep\gsoep\stata\PP.dta; keep persnr pp6802 pp6806 pp6702 pp6703;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TESTB2.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TESTC2.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TESTD2.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TESTE2.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TESTF2.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TESTG2.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TESTH3.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TESTH2.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TESTI2.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TESTJ2.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TESTK2.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TESTL2.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TESTM2.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TESTN2.DTA; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TESTO2.DTA; drop _merge;
mvencode _all, mv(-999);
g UNI=0; g AUS=0;
replace UNI=9900 if pp6802>0;
replace UNI=9900+pp6703 if pp6703>0;
replace UNI=9800 if op5102>0;
replace UNI=9800+op5003 if op5102>0;
replace UNI=9800+pp6702 if pp6702>0;
replace UNI=9700 if np6002>0;
replace UNI=9700+np5903 if np5903>0;
replace UNI=9700+op5002 if op5002>0;
replace UNI=9600 if mp6002>0;
replace UNI=9600+mp5903 if mp5903>0;
replace UNI=9600+np5902 if np5902>0;
replace UNI=9500 if lp7902>0;
replace UNI=9500+lp7803 if lp7803>0;
replace UNI=9500+mp5902 if mp5902>0;
replace UNI=9400 if kp7302>0;
replace UNI=9400+kp7203 if kp7203>0;
replace UNI=9400+lp7802 if lp7802>0;
replace UNI=9300 if jp7302>0;
replace UNI=9300+jp7203 if jp7203>0;
replace UNI=9300+kp7202 if kp7202>0;
replace UNI=9200 if ip6302>0;
replace UNI=9200+jp7202 if jp7202>0;
replace UNI=9100 if hp6302>0;
replace UNI=9000 if gp6702>0;
replace UNI=8900 if fp6702>0;
replace UNI=8800 if ep4902>0;
replace UNI=8700 if dp5402>0;
replace UNI=8600 if cp5402>0;
replace UNI=8500 if bp5402>0;
replace AUS=9900 if pp6806>0 & pp6806<6;
replace AUS=9900+pp6703 if pp6703>0;
replace AUS=9800 if op5106>0 & op5106<6;
replace AUS=9800+op5003 if op5106>0;
replace AUS=9800+pp6702 if pp6702>0;
replace AUS=9700 if np6006>0 & np6006<6;

```

```

replace AUS=9700+np5903 if np5903>0;
replace AUS=9700+op5002 if op5002>0;
replace AUS=9600 if mp6006>0 & mp6006<6;
replace AUS=9600+mp5903 if mp5903>0;
replace AUS=9600+np5902 if np5902>0;
replace AUS=9500 if lp7906>0 & lp7906<6;
replace AUS=9500+lp7803 if lp7803>0;
replace AUS=9500+mp5902 if mp5902>0;
replace AUS=9400 if kp7306>0 & kp7306<6;
replace AUS=9400+kp7203 if kp7203>0;
replace AUS=9400+lp7802 if lp7802>0;
replace AUS=9300 if jp7306>0 & jp7306<6;
replace AUS=9300+jp7203 if jp7203>0;
replace AUS=9300+kp7202 if kp7202>0;
replace AUS=9200 if ip6306>0 & ip6306<6;
replace AUS=9200+jp7202 if jp7202>0;
replace AUS=9100 if hp6305>0 & hp6305<6;
replace AUS=9000 if gp6705>0 & gp6705<6;
replace AUS=8900 if fp6705>0 & fp6705<6;
replace AUS=8800 if ep4906>0 & ep4906<6;
replace AUS=8700 if dp5406>0 & dp5406<6;
replace AUS=8600 if cp5406>0 & cp5406<6;
replace AUS=8500 if bp5406>0 & bp5406<6;
keep persnr AUS UNI;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST0;
drop if _merge==1; drop _merge;
sort persnr; save u:\Michaela\fertil\data\test\TEST0, replace;

**STEP IIa;
**GROUP 1: No degree at last interview;
use u:\michaela\fertil\data\test\TEST0.DTA;
g GROUP1=1; keep if EDUL02==YEAR_2; keep persnr GROUP1;
sort persnr; save u:\michaela\fertil\data\test\TEST01.DTA, replace;

**STEP IIb;
**GROUP 2: College at first interview;
use u:\michaela\fertil\data\test\TEST0.DTA;
g GROUP2=1; keep if EDUH01==YEAR_1; keep persnr GROUP2;
sort persnr; save u:\michaela\fertil\data\test\TEST.DTA, replace;
use u:\Michaela\fertil\data\test\XACTIV; ren Persnr persnr;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST; drop if _merge==1;
keep if SPELLTYP==1 | SPELLNR==1;
replace BEGIN=9999 if SPELLNR==1 & SPELLTYP!=1;
drop if END<54 & SPELLNR!=1;
sort persnr BEGIN; by persnr: g TEST=BEGIN[_n+1];
drop if END+12>=TEST & TEST!=.;
sort persnr; by persnr: g SPELL=_n; keep if SPELL==1;
g DUR_G2=END if SPELLTYP==1;
keep persnr GROUP2 DUR_G2;
sort persnr; save u:\Michaela\fertil\data\test\TEST02, replace;

**GROUP 3: Vocational Degree at first interview;
use u:\michaela\fertil\data\test\TEST0.DTA;
g GROUP3=1; keep if EDUV01==YEAR_1; keep persnr GROUP3;
sort persnr; save u:\michaela\fertil\data\test\TEST.DTA, replace;
use u:\Michaela\fertil\data\test\XACTIV; ren Persnr persnr;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST; drop if _merge==1;
keep if SPELLNR ==1 | SPELLTYP==1;
replace BEGIN=9999 if SPELLNR==1 & SPELLTYP!=1;
sort persnr BEGIN; by persnr: g TEST=BEGIN[_n+1];
drop if END+12>=TEST & TEST!=.;
sort persnr BEGIN; by persnr: g SPELL=_n; keep if SPELL==1;
g DUR_G3 =END if SPELLTYP==1;
keep persnr GROUP3 DUR_G3;
sort persnr; save u:\Michaela\fertil\data\test\TEST03, replace;

**STEP IIc;
**GROUP 4: No Degree at first & Voc. Degree at last interview;
use u:\michaela\fertil\data\test\TEST0.DTA;
g GROUP4=1; keep if EDUL01==YEAR_1 & EDUV01>0;
gen TEST=AUS/100; g YEAR=round(TEST,1);
replace YEAR=YEAR+1900 if YEAR!=0;
replace YEAR=EDUV01-1 if YEAR=0;
g MONTH=AUS-((YEAR-1900)*100) if AUS!=0;
recode MONTH .=6;
g DUR_G4 =((YEAR-BORN)-17)*12+MONTH if YEAR>0;
replace DUR_G4=0 if DUR_G4<0;
keep persnr DUR_G4 GROUP4;
sort persnr; save u:\Michaela\fertil\data\test\TEST04, replace;

**STEP IIe;
**GROUP 5: No Degree at first & College Degree at last interview;
use u:\michaela\fertil\data\test\TEST0.DTA;
g GROUP5=1; keep if EDUL01==YEAR_1 & EDUH01>0;
gen TEST=UNI/100; g YEAR=round(TEST,1);
replace YEAR=YEAR+1900 if YEAR!=0;
replace YEAR=EDUH01-1 if YEAR=0;
g MONTH=UNI-((YEAR-1900)*100) if UNI!=0;
recode MONTH .=6;
g DUR_G5=((YEAR-BORN)-17)*12+MONTH if YEAR>0;
keep persnr DUR_G5 GROUP5;
sort persnr; save u:\Michaela\fertil\data\test\TEST05, replace;

**STEP IIf;
**GROUP 6: Missing at first interview & information for last interview;
use u:\michaela\fertil\data\test\TEST0.DTA;
g GROUP6=1; keep if YEAR_1 != EDUL01 & YEAR_1 != EDUV01 & YEAR_1 != EDUH01;
g GROUP6C=1 if EDUH01>0; recode GROUP6C .=0;
g GROUP6V=1 if EDUV01>0; recode GROUP6V .=0;
g GROUP6L=1 if EDUL01>0; recode GROUP6L .=0;

```

```

drop if GROUP6L==0 & GROUP6C==0 & GROUP6V==0;
keep persnr GROUP6C GROUP6V GROUP6L;
sort persnr; save u:\Michaela\fertil\data\test\TEST06, replace;

**STEP III;
**Merge the files;
use u:\Michaela\fertil\data\test\XACTIV; ren Persnr persnr;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST02; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST03; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST04; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST05; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST06; drop _merge;
sort persnr; save u:\Michaela\fertil\data\test\TEST07, replace;
g EDUL01=1 if GROUP1==1 | GROUP6L==1;
g EDUV01=1 if GROUP3==1 | GROUP4==1 | GROUP6V==1;
g EDUH01=1 if GROUP2==1 | GROUP5==1 | GROUP6C==1;
g DUR_EDUH=DUR_G2 if GROUP2==1;
replace DUR_EDUH=DUR_G5 if GROUP5==1;
g DUR_EDUV=DUR_G3 if GROUP3==1;
replace DUR_EDUV=DUR_G4 if GROUP4==1;
recode EDUL01 . =0; recode EDUV01 . =0; recode EDUH01 . =0;
g EDUMIS=0; replace EDUMIS=1 if EDUL01==0 & EDUV01==0 & EDUH01==0;
g EDUDUR=0; replace EDUDUR=1 if
(EDUV==1 & DUR_EDUV==.) | (EDUH==1 & DUR_EDUH==.) | EDUMIS==1;
replace DUR_EDUV=0 if EDUV==1 & DUR_EDUV==.;
replace DUR_EDUH=54 if EDUH==1 & (DUR_EDUH==. | DUR_EDUH<54);
recode DUR_EDUH . =9999;
recode DUR_EDUV . =9999;
drop if SPELLNR==.;
drop DUR_G* GROUP*;

sort persnr; save u:\Michaela\fertil\data\test\0EDU, replace;
label variable EDUL01 "No degree at censoring";
label variable EDUH01 "College degree at censoring ";
label variable EDUV01 "Vocational degree at censoring ";
label variable EDUMIS "Education missing";
label variable EDUDUR "Date of receiving education missing";
label variable DUR_EDUH "Date receiving college degree";
label variable DUR_EDUV "Date receiving vocational degree";

```

MAR.do

```

#delimit;

**STEP I;
**Read in MARM1 and MARY1;
infile JUNK01 persnr SPELLNR MARRY BEGIN END JUNK02 JUNK03 JUNK04
using u:\Michaela\fertil\data\test\MARM1.SPL;
drop JUNK*;
sort persnr; save u:\Michaela\fertil\data\test\MARM1, replace; clear;
infile JUNK01 persnr SPELLNR MARRY BEGIN END JUNK02 JUNK03 JUNK04
using u:\Michaela\fertil\data\test\MARY1.SPL;
drop JUNK*;
sort persnr; save u:\Michaela\fertil\data\test\MARY1, replace; clear;

**STEP II;
**Change "clock" ;
use u:\Michaela\fertil\data\test\MARY1;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\XBASIC;
drop if _merge==1;
replace BEGIN=(BEGIN-17)*12;
replace END= (END-17)*12+12;
sort persnr BEGIN;
keep persnr BEGIN END MARRY;
sort persnr; save u:\Michaela\fertil\data\test\MARY2, replace;
use u:\Michaela\fertil\data\test\MARM1;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\XBASIC;
drop if _merge==1;
replace BEGIN=((1983-BORN-17)*12)+BEGIN;
replace END =((1983-BORN-17)*12)+END;
replace BEGIN=BEGIN-1;
replace BEGIN=0 if BEGIN<0;
replace END=0 if END<0;
drop if BEGIN=0 & END==0;
sort persnr BEGIN; by persnr: g SPELL=_n;
drop if MARRY==1 & SPELL==1;
keep persnr BEGIN END MARRY;
sort persnr; save u:\Michaela\fertil\data\test\MARM2, replace;

**STEP III;
**Identify start of MARY1 and adjust MARM1;
use u:\Michaela\fertil\data\test\MARM2;
sort persnr BEGIN; by persnr: g SPELL=_n; keep if SPELL==1;
g begin=BEGIN; keep persnr begin;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\MARY2;
drop if BEGIN>=begin & begin!=.;
replace END=begin if begin<END & begin!=.;
drop if END==.;
keep persnr BEGIN END MARRY;
append using u:\Michaela\fertil\data\test\MARM2;
sort persnr; save u:\Michaela\fertil\data\test\00MAR, replace;

**STEP IV;
**Construct variables for episode splitting;
use u:\Michaela\fertil\data\test\00MAR;

```

```

keep if MARRY==2;drop MARRY;
sort persnr BEGIN; by persnr: g SPELL=_n;
ren BEGIN MARB;
ren END MARE;
reshape wide MARB MARE, i(persnr) j(SPELL);
sort persnr; save u:\Michaela\fertil\data\test\TEST1, replace;
use u:\Michaela\fertil\data\test\00MAR;
keep if MARRY==1;drop MARRY;
sort persnr BEGIN; by persnr: g SPELL=_n;
ren BEGIN SINB;
ren END SINE;
reshape wide SINB SINE, i(persnr) j(SPELL);
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST1; drop _merge;
mvencode _all, mv(9999);
sort persnr; save u:\Michaela\fertil\data\test\TEST, replace;
use u:\Michaela\fertil\data\test\XEDU; ren Persnr persnr;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST; drop _merge;
sort persnr; save u:\Michaela\fertil\data\test\TEST, replace;

**STEP V;
**Double check with Panel info;
use k:\soep\gsoep\stata\APGEN.dta; keep persnr afamstd;
sort persnr; save u:\Michaela\fertil\data\test\TEST01A.DTA, replace;
use k:\soep\gsoep\stata\BPGEN.dta; keep persnr bfamstd;
sort persnr; save u:\Michaela\fertil\data\test\TEST01B.DTA, replace;
use k:\soep\gsoep\stata\CPGEN.dta; keep persnr cfamstd;
sort persnr; save u:\Michaela\fertil\data\test\TEST01C.DTA, replace;
use k:\soep\gsoep\stata\DPGEN.dta; keep persnr dfamstd;
sort persnr; save u:\Michaela\fertil\data\test\TEST01D.DTA, replace;
use k:\soep\gsoep\stata\EPGEN.dta; keep persnr efamstd;
sort persnr; save u:\Michaela\fertil\data\test\TEST01E.DTA, replace;
use k:\soep\gsoep\stata\FPGEN.dta; keep persnr ffamstd;
sort persnr; save u:\Michaela\fertil\data\test\TEST01F.DTA, replace;
use k:\soep\gsoep\stata\GPGEN.dta; keep persnr gfamstd;
sort persnr; save u:\Michaela\fertil\data\test\TEST01G.DTA, replace;
use k:\soep\gsoep\stata\HPGEN.dta; keep persnr hfamstd;
sort persnr; save u:\Michaela\fertil\data\test\TEST01H.DTA, replace;
use k:\soep\gsoep\stata\IPGEN.dta; keep persnr ifamstd;
sort persnr; save u:\Michaela\fertil\data\test\TEST01I.DTA, replace;
use k:\soep\gsoep\stata\JPGEN.dta; keep persnr jfamstd;
sort persnr; save u:\Michaela\fertil\data\test\TEST01J.DTA, replace;
use k:\soep\gsoep\stata\KPGEN.dta; keep persnr kfamstd;
sort persnr; save u:\Michaela\fertil\data\test\TEST01K.DTA, replace;
use k:\soep\gsoep\stata\LPGEN.dta; keep persnr lfamstd;
sort persnr; save u:\Michaela\fertil\data\test\TEST01L.DTA, replace;
use k:\soep\gsoep\stata\MPGEN.dta; keep persnr mfamstd;
sort persnr; save u:\Michaela\fertil\data\test\TEST01M.DTA, replace;
use k:\soep\gsoep\stata\NPGEN.dta; keep persnr nfamstd;
sort persnr; save u:\Michaela\fertil\data\test\TEST01N.DTA, replace;
use k:\soep\gsoep\stata\OPGEN.dta; keep persnr ofamstd;
sort persnr; save u:\Michaela\fertil\data\test\TEST01O.DTA, replace;
use k:\soep\gsoep\stata\PPGEN.dta; keep persnr pfamstd;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01O; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01N; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01M; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01L; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01K; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01J; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01I; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01H; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01G; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01F; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01E; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01D; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01C; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01B; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST01A; drop _merge;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\XBASIC.DTA;
drop if _merge==1; drop _merge;
g MARDAT=1984 if bfamstd==1 & afamstd==3;
replace MARDAT=1985 if cfamstd==1 & bfamstd==3;
replace MARDAT=1986 if dfamstd==1 & cfamstd==3;
replace MARDAT=1987 if efamstd==1 & dfamstd==3;
replace MARDAT=1988 if ffamstd==1 & efamstd==3;
replace MARDAT=1989 if gfamstd==1 & ffamstd==3;
replace MARDAT=1990 if hfamstd==1 & gfamstd==3;
replace MARDAT=1991 if ifamstd==1 & hfamstd==3;
replace MARDAT=1992 if jfamstd==1 & ifamstd==3;
replace MARDAT=1993 if kfamstd==1 & jfamstd==3;
replace MARDAT=1994 if lfamstd==1 & kfamstd==3;
replace MARDAT=1995 if mfamstd==1 & lfamstd==3;
replace MARDAT=1996 if nfamstd==1 & mfamstd==3;
replace MARDAT=1997 if ofamstd==1 & nfamstd==3;
replace MARDAT=1998 if pfamstd==1 & ofamstd==3;
keep persnr MARDAT;
sort persnr; merge persnr using u:\Michaela\fertil\data\test\TEST; drop _merge;
g MARDATE=(MARDAT-BORN-17)*12+6 if MARDAT!=.;
replace MARB1=MARDATE if MARDATE!=. & MARB1==9999;
replace SINE1=MARDATE if SINE1>MARDATE & SINE1!=9999;
replace SINE2=MARDATE if SINE2>MARDATE & SINE2!=9999;
drop MARDAT;

sort persnr BEGIN; save u:\Michaela\fertil\data\test\0MAR, replace;
label variable MARB1 "begin married";
label variable MARE1 "end married";
label variable SINB1 "begin single";
label variable SINE1 "end single";

```

PANEL.do

```
#delimit;

*STEP I;
* Merge information from Panel;
*WAVE 1984;
use k:\soep\gsoep\stata\AP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\APBRUTTO;
sort persnr; save u:\michaela\fertil\data\test\TEST1, replace;
use k:\soep\gsoep\stata\APGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST1; drop if _merge==2;
keep if ap57==2;
g YEAR=84; g MONTH=4; replace MONTH=amonin if (amonin >0 & amonin!=.);
g WOR =ap5402;
g PAR =partz84; replace PAR=1 if ap59==1; replace PAR=0 if ap59==2;
g PNR =partnr84;
g WAGE=ap3301;
g EMP =ap08; recode EMP 7=4 6=3 5=4 4=2; replace EMP=3 if
    (ap0501>0 | ap0502>0) & (ap0501!=. & ap0502!=.);
g POS01=ap2801;
g POS02=ap2802;
g POS03=ap2803;
g POS04=ap2804;
g POS05=ap2805;
keep persnr YEAR MONTH WOR WAGE EMP PAR PNR POS*;
sort persnr; save u:\michaela\fertil\data\test\TESTA, replace nol;

*WAVE 1985;
use k:\soep\gsoep\stata\BP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\BPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if bp85==2;
g YEAR=85; g MONTH=4; replace MONTH=bpmonin if (bpmonin >0 & bpmonin!=.);
g WOR =bp7702;
g PAR =partz85;
g PNR =partnr85;
g WAGE=bp4301;
g EMP =bp16; recode EMP 7=4 6=3 4=2; replace EMP=3 if
    (bp1501>0 | bp1502>0) & (bp1501!=. & bp1502!=.);
g POS01=bp3801;
g POS02=bp3802;
g POS03=bp3803;
g POS04=bp3804;
g POS05=bp3805;
keep persnr YEAR MONTH WOR WAGE EMP PAR PNR POS*;
sort persnr; save u:\michaela\fertil\data\test\TESTB, replace nol;

*WAVE 1986;
use k:\soep\gsoep\stata\CP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\CPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if cp8801==2;
g YEAR=86; g MONTH=4; replace MONTH=cpmonin if (cpmonin >0 & cpmonin!=.);
g WOR =cp7702;
g PAR =partz86; replace PAR=1 if cp9001==2; replace PAR=0 if cp9001==1;
g PNR =partnr86;
g WAGE=cp5201;
g EMP =cp16; recode EMP 7=4 6=3 4=2; replace EMP=3 if
    (cp1501>0 | cp1502>0) & (cp1501!=. & cp1502!=.);
g POS01=cp4601;
g POS02=cp4602;
g POS03=cp4603;
g POS04=cp4604;
g POS05=cp4605;
keep persnr YEAR MONTH WOR WAGE EMP PAR PNR POS*;
sort persnr; save u:\michaela\fertil\data\test\TESTC, replace;

*WAVE 1987;
use k:\soep\gsoep\stata\DP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\DPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if dp9001==2;
g YEAR=87; g MONTH=4; replace MONTH=dpmonin if (dpmonin >0 & dpmonin!=.);
g WOR =dp8902;
g PAR =partz87; replace PAR=1 if dp9201==2;
g PNR =partnr87;
g WAGE=dp4401;
g EMP =dp12; recode EMP 7=4 6=3 4=2; replace EMP=3 if
    (dp1101>0 | dp1102>0) & (dp1101!=. & dp1102!=.);
g POS01=dp3801;
g POS02=dp3802;
g POS03=dp3803;
g POS04=dp3804;
g POS05=dp3805;
keep persnr YEAR MONTH WOR WAGE EMP POS* PAR PNR;
sort persnr; save u:\michaela\fertil\data\test\TESTD, replace;

*WAVE 1988;
use k:\soep\gsoep\stata\EP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\EPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if ep8101==2;
```

```

g YEAR=88; g MONTH=4; replace MONTH=epmonin if (epmonin >0 & epmonin!=.);
g WOR =ep7802;
g PAR =partz88; replace PAR=1 if ep8301==2; replace PAR=0 if ep8301==1;
g PNR =partnr88;
g WAGE=ep4401;
g EMP =ep12; recode EMP 7=4 6=3 4=2; replace EMP=3 if
      (ep1101>0 | ep1102>0) & (ep1101!=. & ep1102!=.);
g POS01=ep3801;
g POS02=ep3802;
g POS03=ep3803;
g POS04=ep3804;
g POS05=ep3805;
keep persnr YEAR MONTH WOR WAGE EMP POS* PAR PNR;
sort persnr; save u:\michaela\fertil\data\test\TESTE, replace;

*WAVE 1989;
use k:\soep\gsoep\stata\FP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\FPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if fp10001==2;
g YEAR=89; g MONTH=4; replace MONTH=fpmonin if (fpmonin >0 & fpmonin!=.);
g WOR =fp9402;
g PAR =partz89; replace PAR=1 if fp10201==2; replace PAR=0 if fp10201==1;
g PNR =partnr89;
g WAGE=fp4501;
g EMP =fp10; recode EMP 7=4 6=3 4=2; replace EMP=3 if
      (fp0901>0 | fp0902>0) & (fp0901!=. & fp0902!=.);
g POS01=fp3801;
g POS02=fp3802;
g POS03=fp3803;
g POS04=fp3804;
g POS05=fp3805;
keep persnr YEAR MONTH WOR WAGE EMP POS* PAR PNR;
sort persnr; save u:\michaela\fertil\data\test\TESTF, replace;

*WAVE 1990;
use k:\soep\gsoep\stata\GP; append using k:\soep\gsoep\stata\GPOST;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\GPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if gp10001==2 | zp5901==2;
g YEAR=90; g MONTH=4; replace MONTH=gpmonin if (gpmonin >0 & gpmonin!=.);
g WOR =gp8602; replace WOR=zp5802 if WOR>10 | WOR<0;
g PAR =partz90; replace PAR=1 if gp10201==2 | zp61==1;
      replace PAR=0 if gp10201==1 | zp61==2;
g PNR =partnr90;
g WAGE=gp4301; replace WAGE=zp4101 if gp4301<0 | gp4301!=.;
g EMP =gp12; replace EMP=zp16 if EMP==. | EMP<0; recode EMP 7=4 6=3 4=2 5=4;
replace EMP=3 if (zp1202>0 | zp1202>0 | zp1208>0 | zp1201>0) &
      (zp1202!=. & zp1202!=. & zp1208!=. & zp1201!=.);
replace EMP=3 if (gp1101>0 | gp1102>0) & (gp1101!=. & gp1102!=.);
g POS01=gp3701;
g POS02=gp3702;
g POS03=gp3703;
g POS04=gp3704;
g POS05=gp3705;
keep persnr YEAR MONTH WOR WAGE EMP POS* PAR PNR;
sort persnr; save u:\michaela\fertil\data\test\TESTG, replace;

*WAVE 1991;
use k:\soep\gsoep\stata\HP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\HPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if hp10001==2;
g YEAR=91; g MONTH=4; replace MONTH=hpmonin if (hpmonin >0 & hpmonin!=.);
g WOR =hp9102;
g PAR =partz91; replace PAR=1 if hp10202==1 | hp10201==1;
      replace PAR=0 if hp10201==2;
g PNR =partnr91;
g WAGE=hp5401;
g EMP=hp15; recode EMP 9=4 8=3 7=4 6=2 5=3 4=2 3=2; replace EMP=3 if
      (hp0601>0 | hp0602>0) & (hp0601!=. & hp0602!=.);
g POS01=hp4801;
g POS02=hp4802;
g POS03=hp4803;
g POS04=hp4804;
g POS05=hp4805;
keep persnr YEAR MONTH WOR WAGE EMP POS* PAR PNR;
sort persnr; save u:\michaela\fertil\data\test\TESTH, replace;

*WAVE 1992;
use k:\soep\gsoep\stata\IP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\IPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if ip10001==2;
g YEAR=92; g MONTH=4; replace MONTH=ipmonin if (ipmonin >0 & ipmonin!=.);
g WOR =ip9102;
g PAR =partz92; replace PAR=1 if ip10202==1 | ip10201==1;
      replace PAR=0 if ip10201==2;
g PNR =partnr92;
g WAGE=ip5401;
g EMP =ip15; recode EMP 9=4 8=3 7=4 6=2 5=3 4=2 3=2;
      replace EMP=3 if (ip1401>0 | ip1402>0) & (ip1401!=. & ip1402!=.);
g POS01=ip4801;
g POS02=ip4802;
g POS03=ip4803;
g POS04=ip4804;

```

```

g POS05=ip4805;
keep persnr YEAR MONTH WOR WAGE EMP POS* PAR PNR;
sort persnr; save u:\michaela\fertil\data\test\TESTI, replace;

*WAVE 1993;
use k:\soep\gsoep\stata\JP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\JPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if jpl0001==2;
g YEAR=93; g MONTH=4; replace MONTH=jpmonin if (jpmonin >0 & jpmonin!=.);
g WOR=jp9102;
g PAR=partz93; replace PAR=1 if jpl0202==1 | jpl0201==1;
replace PAR=0 if jpl0201==2;
g PNR=partnr93;
g WAGE=jp5401;
g EMP=jp15; recode EMP 9=4 8=3 7=4 6=2 5=3 4=2 3=2;
replace EMP=3 if (jpl401>0 | jpl402>0) & (jpl401!=. & jpl402!=.);
g POS01=jp4801;
g POS02=jp4802;
g POS03=jp4803;
g POS04=jp4804;
g POS05=jp4805;
keep persnr YEAR MONTH WOR WAGE EMP POS* PAR PNR;
sort persnr; save u:\michaela\fertil\data\test\TESTJ, replace;

*WAVE 1994;
use k:\soep\gsoep\stata\KP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\KPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if kp10001==2;
g YEAR=94; g MONTH=4; replace MONTH=kpmonin if (kpmonin >0 & kpmonin!=.);
g WOR=kp9302;
g PAR=partz94; replace PAR=1 if kp10202==1 | kp10201==1;
replace PAR=0 if kp10201==2;
g PNR=partnr94;
g WAGE=kp6401;
g EMP=kp25; recode EMP 9=4 8=3 7=4 6=2 5=3 4=2 3=2;
replace EMP=3 if (kp1901>0 | kp1902>0) & (kp1901!=. & kp1902!=.);
g POS01=kp5101;
g POS02=kp5102;
g POS03=kp5103;
g POS04=kp5104;
g POS05=kp5105;
keep persnr YEAR MONTH WOR WAGE EMP POS* PAR PNR;
sort persnr; save u:\michaela\fertil\data\test\TESTK, replace;

*WAVE 1995;
use k:\soep\gsoep\stata\LP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\LPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if lp10001==2;
g YEAR=95; g MONTH=4; replace MONTH=lpmonin if (lpmonin >0 & lpmonin!=.);
g WOR=lp9902;
g PAR=partz95; replace PAR=1 if lp10202==1 | lp10201==1;
replace PAR=0 if lp10201==2;
g PNR=partnr95;
g WAGE=lp5301;
g EMP=lp21; recode EMP 9=4 8=3 7=4 6=2 5=3 4=2 3=2;
replace EMP=3 if (lp1501>0 | lp1502>0) & (lp1501!=. & lp1502!=.);
g POS01=lp4301;
g POS02=lp4302;
g POS03=lp4303;
g POS04=lp4304;
g POS05=lp4305;
keep persnr YEAR MONTH WOR WAGE EMP POS* PAR PNR;
sort persnr; save u:\michaela\fertil\data\test\TESTL, replace;

*WAVE 1996;
use k:\soep\gsoep\stata\MP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\MPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if mp10501==2;
g YEAR=96; g MONTH=4; replace MONTH=mpmonin if (mpmonin >0 & mpmonin!=.);
g WOR=mp10902;
g PAR=partz96; replace PAR=1 if mp10702==1 | mp10701;
replace PAR=0 if mp10701==2;
g PNR=partnr96;
g WAGE=mp4701;
g EMP=mp15; recode EMP 7=4 6=3 5=4 4=2; replace EMP=3 if
(mp1401>0 | mp1402>0) & (mp1401!=. & mp1402!=.);
g POS01=mp4101;
g POS02=mp4102;
g POS03=mp4103;
g POS04=mp4104;
g POS05=mp4105;
keep persnr YEAR MONTH WOR WAGE EMP POS* PAR PNR;
sort persnr; save u:\michaela\fertil\data\test\TESTM, replace;

*WAVE 1997;
use k:\soep\gsoep\stata\NP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\NPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if np11201==2;
g YEAR=97; g MONTH=4; replace MONTH=npmonin if (npmonin >0 & npmonin!=.);
g WOR=np9502;

```

```

g PAR=partz97; replace PAR=1 if np11402==1 | np11401==1;
      replace PAR=0 if np11401==2;
g PNR=partnr97;
g WAGE=np5401;
g EMP =np11; recode EMP 7=4 6=3 5=4 4=2; replace EMP=3 if
      (np1001>0 | np1002>0) & (np1001!=. & np1002!=.);
g POS01=np3501;
g POS02=np3502;
g POS03=np3503;
g POS04=np3504;
g POS05=np3505;
keep persnr YEAR MONTH WOR WAGE EMP POS* PAR PNR;
sort persnr; save u:\michaela\fertil\data\test\TESTN, replace;

*WAVE 1998;
use k:\soep\gsoep\stata\OP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\OPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if opl1801==2;
g YEAR=98; g MONTH=4; replace MONTH=opmonin if (opmonin >0 & opmonin!=.);
g WOR=op9802;
g PAR=partz98; replace PAR=1 if opl2002==1 | opl2001==1;
      replace PAR=0 if opl2001==1;
g PNR=partnr98;
g WAGE=op4501;
g EMP =op09; recode EMP 7=4 6=3 5=4 4=2 8=1; replace EMP=3 if
      (op0301>0 | op0302>0) & (op0301!=. & op0302!=.);
g POS01=op3501;
g POS02=op3502;
g POS03=op3503;
g POS04=op3504;
g POS05=op3505;
keep persnr YEAR MONTH WOR WAGE EMP POS* PAR PNR;
sort persnr; save u:\michaela\fertil\data\test\TESTO, replace;

*WAVE 1999;
use k:\soep\gsoep\stata\PP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\PPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if pp13001==2;
g YEAR=99; g MONTH=4; replace MONTH=ppmonin if (ppmonin >0 & ppmonin!=.);
g WOR=pp10902;
g PAR=partz99; replace PAR=1 if pp13202==1 | pp13201==1;
      replace PAR=0 if pp13201==2;
g PNR=partnr99;
g WAGE=pp6001;
g EMP =pp10; recode EMP 7=4 6=3 5=4 4=2 8=1; replace EMP=3 if
      (pp0901>0 | pp0902>0) & (pp0901!=. & pp0902!=.);
g POS01=pp3801;
g POS02=pp3802;
g POS03=pp3803;
g POS04=pp3804;
g POS05=pp3805;
keep persnr YEAR MONTH WOR WAGE EMP PAR PNR POS*;
sort persnr; save u:\michaela\fertil\data\test\TESTP, replace;

* STEP II;
* Merge information from Panel;
use u:\michaela\fertil\data\test\XBIR; keep persnr; g YEAR=0;
append using u:\michaela\fertil\data\test\TESTA.dta;
append using u:\michaela\fertil\data\test\TESTB.dta;
append using u:\michaela\fertil\data\test\TESTC.dta;
append using u:\michaela\fertil\data\test\TESTD.dta;
append using u:\michaela\fertil\data\test\TESTE.dta;
append using u:\michaela\fertil\data\test\TESTF.dta;
append using u:\michaela\fertil\data\test\TESTG.dta;
append using u:\michaela\fertil\data\test\TESTH.dta;
append using u:\michaela\fertil\data\test\TESTI.dta;
append using u:\michaela\fertil\data\test\TESTJ.dta;
append using u:\michaela\fertil\data\test\TESTK.dta;
append using u:\michaela\fertil\data\test\TESTL.dta;
append using u:\michaela\fertil\data\test\TESTM.dta;
append using u:\michaela\fertil\data\test\TESTN.dta;
append using u:\michaela\fertil\data\test\TESTO.dta;
append using u:\michaela\fertil\data\test\TESTP.dta;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use u:\michaela\fertil\data\test\XBIR.DTA; keep persnr BORN DUR_Z;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST.DTA;
drop if _merge==2; sort persnr YEAR;
replace WOR =-1 if WOR<0 | WOR==.;
replace EMP =-1 if EMP<0 | EMP==.;
replace PNR =-1 if PNR<0 | PNR==.;
replace WAGE=0 if EMP==4 | EMP==3;
replace WAGE=-1 if WAGE<0 | WAGE==.;
replace PAR=-1 if PAR<0 | PAR==.;
recode PAR 9=1 4=1 3=1 2=1;
g POS=-1;
replace POS=101 if POS01==1;
replace POS=102 if POS01==2;
replace POS=103 if POS01==3 | POS01==4 | POS04==1;
replace POS=104 if POS01==5;
replace POS=201 if POS04==2 | POS04==3;
replace POS=202 if POS04==4;
replace POS=203 if POS04==5;
replace POS=204 if POS04==7;
replace POS=301 if POS05==1;
replace POS=302 if POS05==2;
replace POS=303 if POS05==3;

```

```

replace POS=304 if POS05==4;
replace POS=0 if POS03>0 & POS03<10;
replace POS=0 if EMP==4 | EMP==3;
replace POS=1000 if POS02>0 & POS02<10;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;

* STEP III;
* Change Clock;
use u:\michaela\fertil\data\test\TEST;
g BEGIN=0; g END=0;
replace END=(YEAR+1900-BORN-17)*12+MONTH if YEAR!=0;
g TEST1=END[_n+1];
replace END=TEST-12 if YEAR==0;
gen TEST2=END[_n-1];
replace BEGIN=TEST2 if YEAR!=0;
replace BEGIN=0 if BEGIN<0;
replace END=0 if END<0;
drop if BEGIN==END;
replace END=DUR_2 if BEGIN ==END;
sort persnr YEAR; replace MONTH=MONTH[_n+1] if MONTH==.;
recode YEAR 0=-1;
sort persnr; by persnr: g SPELLNR=_n;
recode EMP 3=1 1=2 2=3; *adjust coding to SPELLTYP;
keep persnr SPELLNR BEGIN END TEST WOR POS EMP WAGE PAR PNR YEAR;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;

*STEP IV;
* Prepare Panel-data for Episode-Joining;
use u:\michaela\fertil\data\test\TEST;
sort persnr; egen RECORD=max(SPELL), by (persnr); g TEST=2;
order persnr RECORD SPELL BEGIN END TEST WOR POS EMP WAGE PAR PNR YEAR;
keep persnr RECORD SPELL BEGIN END TEST WOR POS EMP WAGE PAR PNR YEAR;
sort persnr; save u:\michaela\fertil\data\test\0PANEL,replace;

*STEP V;
* Prepare XMAR-data for Episode-Joining;
use u:\michaela\fertil\data\test\XMAR; ren Persnr persnr;
sort persnr; merge persnr using u:\michaela\fertil\data\test\XBIR;
replace DUR_BIR1=99999 if BIR1==0;
replace DUR_BIR2=99999 if BIR2==0;
replace DUR_BIR3=99999 if BIR3==0;
egen RECORD=max(SPELLNR), by (persnr);
g BASIC=0 if WEST==1;
replace BASIC=1 if EAST==1;
replace BASIC=2 if FORG==1;
replace MAR=-1 if MARMIS==1;
g EDU=0 if EDUL==1;
replace EDU=1 if EDUV==1;
replace EDU=2 if EDUH==1;
replace EDU=-1 if EDUMIS==1;
g TEST=1;
keep
persnr RECORD SPELLNR BEGIN END TEST
SPELLTYP ANNUAL BASIC BORN WEN MIG EDU EDUDUR MAR
DUR_BIR1 DUR_BIR2 DUR_BIR3 BIRMIS1 BIRMIS2 BIRMIS3;
order
persnr RECORD SPELLNR BEGIN END TEST
SPELLTYP ANNUAL BASIC BORN WEN MIG EDU EDUDUR MAR
DUR_BIR1 DUR_BIR2 DUR_BIR3 BIRMIS1 BIRMIS2 BIRMIS3;
sort persnr; save u:\michaela\fertil\data\test\0MAR1,replace;

label variable PAR "Partner in household";
label variable WOR "Economic uncertainty 1=very worried
2=somewhat worried
3=not worried";

label variable WAGE "Monthly gross wage";
label variable POS "Labor market position";
label variable EMP "Employment status";

```

PARTNER.do

```

#delimit;

* Merge information from Panel;
* WAVE 1984;
use k:\soep\gsoep\stata\AP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\APBRUTTO;
sort persnr; save u:\michaela\fertil\data\test\TEST1, replace;
use k:\soep\gsoep\stata\APGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST; drop _merge;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST1; drop if _merge==2;
keep if ap57==1;
g YEAR=84;
g WOR =ap5402;
g WAGE=ap3301;
g EMP =ap08; recode EMP 7=4 6=3 5=4 4=2; replace EMP=3 if (ap0501>0 | ap0502>0) & (ap0501!=. & ap0502!=.);
g POS01=ap2801;
g POS02=ap2802;
g POS03=ap2803;
g POS04=ap2804;
g POS05=ap2805;
g EDU=0 if apbbil03==1 | apbbila==1;
replace EDU=1 if apbbil01>0 | apbbila==2 | apbbila==3;
replace EDU=2 if apbbil02>0 | apbbila>3;
keep persnr YEAR WOR WAGE EMP POS* EDU;
sort persnr; save u:\michaela\fertil\data\test\TESTA, replace nol;

```

```

*WAVE 1985;
use k:\soep\gsoep\stata\BP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\BPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if bp85==1;
g YEAR=85;
g WOR =bp7702;
g WAGE=bp4301;
g EMP =bp16; recode EMP 7=4 6=3 4=2; replace EMP=3 if (bp1501>0 | bp1502>0) & (bp1501!=. &
bp1502!=.);
g POS01=bp3801;
g POS02=bp3802;
g POS03=bp3803;
g POS04=bp3804;
g POS05=bp3805;
g EDU=0 if bpbbil03==1 | bpbbila==1;
replace EDU=1 if bpbbil01>0 | bpbbila==2 | bpbbila==3;
replace EDU=2 if bpbbil02>0 | bpbbila>3;
keep persnr YEAR WOR WAGE EMP POS* EDU;
sort persnr; save u:\michaela\fertil\data\test\TESTB, replace nol;

*WAVE 1986;
use k:\soep\gsoep\stata\CP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\CPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if cp8801==1;
g YEAR=86;
g WOR =cp7702;
g WAGE=cp5201;
g EMP =cp16; recode EMP 7=4 6=3 4=2; replace EMP=3 if (cp1501>0 | cp1502>0) & (cp1501!=. &
cp1502!=.);
g POS01=cp4601;
g POS02=cp4602;
g POS03=cp4603;
g POS04=cp4604;
g POS05=cp4605;
g EDU=0 if cpbbil03==1 | cpbbila==1;
replace EDU=1 if cpbbil01>0 | cpbbila==2 | cpbbila==3;
replace EDU=2 if cpbbil02>0 | cpbbila>3;
keep persnr YEAR WOR WAGE EMP POS* EDU;
sort persnr; save u:\michaela\fertil\data\test\TESTC, replace;

*WAVE 1987;
use k:\soep\gsoep\stata\DP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\DPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if dp9001==1;
g YEAR=87;
g WOR =dp8902;
g WAGE=dp4401;
g EMP =dp12; recode EMP 7=4 6=3 4=2; replace EMP=3 if (dp1101>0 | dp1102>0) & (dp1101!=. &
dp1102!=.);
g POS01=dp3801;
g POS02=dp3802;
g POS03=dp3803;
g POS04=dp3804;
g POS05=dp3805;
g EDU=0 if dpbbil03==1 | dpbbila==1;
replace EDU=1 if dpbbil01>0 | dpbbila==2 | dpbbila==3;
replace EDU=2 if dpbbil02>0 | dpbbila>3;
keep persnr YEAR WOR WAGE EMP POS* EDU;
sort persnr; save u:\michaela\fertil\data\test\TESTD, replace;

*WAVE 1988;
use k:\soep\gsoep\stata\EP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\EPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if ep8101==1;
g YEAR=88;
g WOR =ep7802;
g WAGE=ep4401;
g EMP =ep12; recode EMP 7=4 6=3 4=2; replace EMP=3 if (ep1101>0 | ep1102>0) & (ep1101!=. &
ep1102!=.);
g POS01=ep3801;
g POS02=ep3802;
g POS03=ep3803;
g POS04=ep3804;
g POS05=ep3805;
g EDU=0 if epbbil03==1 | epbbila==1;
replace EDU=1 if epbbil01>0 | epbbila==2 | epbbila==3;
replace EDU=2 if epbbil02>0 | epbbila>3;
keep persnr YEAR WOR WAGE EMP POS* EDU;
sort persnr; save u:\michaela\fertil\data\test\TESTE, replace;

*WAVE 1989;
use k:\soep\gsoep\stata\FP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\FPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if fp10001==1;
g YEAR=89;
g WOR =fp9402;
g WAGE=fp4501;
g EMP =fp10; recode EMP 7=4 6=3 4=2; replace EMP=3 if (fp0901>0 | fp0902>0) & (fp0901!=. &
fp0902!=.);

```

```

g POS01=fp3801;
g POS02=fp3802;
g POS03=fp3803;
g POS04=fp3804;
g POS05=fp3805;
g EDU=0 if fpbbil03==1 | fpbbila==1;
replace EDU=1 if fpbbil01>0 | fpbbila==2 | fpbbila==3;
replace EDU=2 if fpbbil02>0 | fpbbila>3;
keep persnr YEAR WOR WAGE EMP POS* EDU;
sort persnr; save u:\michaela\fertil\data\test\TESTF, replace;

*WAVE 1990;
use k:\soep\gsoep\stata\GP; append using k:\soep\gsoep\stata\GPOST;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\GPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if gp10001==1 | zp5901==1;
g YEAR=90;
g WOR =gp8602; replace WOR=zp5802 if WOR>10 | WOR<0;
g WAGE=gp4301; replace WAGE=zp4101 if gp4301<0 | gp4301==.;
g EMP =gp12; replace EMP=zp16 if EMP==. | EMP<0; recode EMP 7=4 6=3 4=2 5=4;
replace EMP=3 if (zp1202>0 | zp1202>0 | zp1208>0 | zp1201>0) & (zp1202!=. & zp1202!=. & zp1208!=. & zp1201!=.);
replace EMP=3 if (gp1101>0 | gp1102>0) & (gp1101!=. & gp1102!=.);
g POS01=gp3701;
g POS02=gp3702;
g POS03=gp3703;
g POS04=gp3704;
g POS05=gp3705;
g EDU=0 if gpbbil03==1 | gpbbila==1;
replace EDU=1 if gpbbil01>0 | gpbbila==2 | gpbbila==3;
replace EDU=2 if gpbbil02>0 | gpbbila>3;
keep persnr YEAR WOR WAGE EMP POS* EDU;
sort persnr; save u:\michaela\fertil\data\test\TESTG, replace;

*WAVE 1991;
use k:\soep\gsoep\stata\HP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\HPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if hp10001==1;
g YEAR=91; g MONTH=4; replace MONTH=hpmonin if (hpmonin >0 & hpmonin!=.);
g WOR=hp9102;
g WAGE=hp5401;
g EMP=hp15; recode EMP 9=4 8=3 7=4 6=2 5=3 4=2 3=2; replace EMP=3 if (hp0601>0 | hp0602>0) & (hp0601!=. & hp0602!=.);
g POS01=hp4801;
g POS02=hp4802;
g POS03=hp4803;
g POS04=hp4804;
g POS05=hp4805;
g EDU=0 if hpbbil03==1 | hpbbila==1;
replace EDU=1 if hpbbil01>0 | hpbbila==2 | hpbbila==3;
replace EDU=2 if hpbbil02>0 | hpbbila>3;
keep persnr YEAR WOR WAGE EMP POS* EDU;
sort persnr; save u:\michaela\fertil\data\test\TESTH, replace;

*WAVE 1992;
use k:\soep\gsoep\stata\IP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\IPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if ip10001==1;
g YEAR=92; g MONTH=4; replace MONTH=ipmonin if (ipmonin >0 & ipmonin!=.);
g WOR =ip9102;
g WAGE=ip5401;
g EMP =ip15; recode EMP 9=4 8=3 7=4 6=2 5=3 4=2 3=2; replace EMP=3 if (ip1401>0 | ip1402>0) & (ip1401!=. & ip1402!=.);
g POS01=ip4801;
g POS02=ip4802;
g POS03=ip4803;
g POS04=ip4804;
g POS05=ip4805;
g EDU=0 if ipbbil03==1 | ipbbila==1;
replace EDU=1 if ipbbil01>0 | ipbbila==2 | ipbbila==3;
replace EDU=2 if ipbbil02>0 | ipbbila>3;
keep persnr YEAR WOR WAGE EMP POS* EDU;
sort persnr; save u:\michaela\fertil\data\test\TESTI, replace;

*WAVE 1993;
use k:\soep\gsoep\stata\JP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\JPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if jp10001==1;
g YEAR=93; g MONTH=4; replace MONTH=jpmonin if (jpmonin >0 & jpmonin!=.);
g WOR=jp9102;
g WAGE=jp5401;
g EMP=jp15; recode EMP 9=4 8=3 7=4 6=2 5=3 4=2 3=2; replace EMP=3 if (jp1401>0 | jp1402>0) & (jp1401!=. & jp1402!=.);
g POS01=jp4801;
g POS02=jp4802;
g POS03=jp4803;
g POS04=jp4804;
g POS05=jp4805;
g EDU=0 if jpbbil03==1 | jpbbila==1;
replace EDU=1 if jpbbil01>0 | jpbbila==2 | jpbbila==3;
replace EDU=2 if jpbbil02>0 | jpbbila>3;
keep persnr YEAR WOR WAGE EMP POS* EDU;
sort persnr; save u:\michaela\fertil\data\test\TESTJ, replace;

```

```

*WAVE 1994;
use k:\soep\gsoep\stata\KP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\KPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if kp10001==1;
g YEAR=94; g MONTH=4; replace MONTH=kpmonin if (kpmonin >0 & kpmonin!=.);
g WOR =kp9302;
g WAGE=kp6401;
g EMP =kp25; recode EMP 9=4 8=3 7=4 6=2 5=3 4=2 3=2; replace EMP=3 if (kp1901>0 | kp1902>0) &
(kp1901!=. & kp1902!=.);
g POS01=kp5101;
g POS02=kp5102;
g POS03=kp5103;
g POS04=kp5104;
g POS05=kp5105;
g EDU=0 if kpbbil03==1 | kpbbila==1;
replace EDU=1 if kpbbil01>0 | kpbbila==2 | kpbbila==3;
replace EDU=2 if kpbbil02>0 | kpbbila>3;
keep persnr YEAR WOR WAGE EMP POS* EDU;
sort persnr; save u:\michaela\fertil\data\test\TESTK, replace;

*WAVE 1995;
use k:\soep\gsoep\stata\LP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\LPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if lp10001==1;
g YEAR=95; g MONTH=4; replace MONTH=lpmonin if (lpmonin >0 & lpmonin!=.);
g WOR=lp9902;
g WAGE=lp5301;
g EMP =lp21; recode EMP 9=4 8=3 7=4 6=2 5=3 4=2 3=2; replace EMP=3 if (lp1501>0 | lp1502>0) &
(lp1501!=. & lp1502!=.);
g POS01=lp4301;
g POS02=lp4302;
g POS03=lp4303;
g POS04=lp4304;
g POS05=lp4305;
g EDU=0 if lpbbil03==1 | lpbbila==1;
replace EDU=1 if lpbbil01>0 | lpbbila==2 | lpbbila==3;
replace EDU=2 if lpbbil02>0 | lpbbila>3;
keep persnr YEAR WOR WAGE EMP POS* EDU;
sort persnr; save u:\michaela\fertil\data\test\TESTL, replace;

*WAVE 1996;
use k:\soep\gsoep\stata\MP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\MPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if mp10501==1;
g YEAR=96; g MONTH=4; replace MONTH=mpmonin if (mpmonin >0 & mpmonin!=.);
g WOR=mp10902;
g WAGE=mp4701;
g EMP =mp15; recode EMP 7=4 6=3 5=4 4=2; replace EMP=3 if (mp1401>0 | mp1402>0) & (mp1401!=. &
mp1402!=.);
g POS01=mp4101;
g POS02=mp4102;
g POS03=mp4103;
g POS04=mp4104;
g POS05=mp4105;
g EDU=0 if mpbbil03==1 | mpbbila==1;
replace EDU=1 if mpbbil01>0 | mpbbila==2 | mpbbila==3;
replace EDU=2 if mpbbil02>0 | mpbbila>3;
keep persnr YEAR WOR WAGE EMP POS* EDU;
sort persnr; save u:\michaela\fertil\data\test\TESTM, replace;

*WAVE 1997;
use k:\soep\gsoep\stata\NP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\NPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if np11201==1;
g YEAR=97; g MONTH=4; replace MONTH=npmonin if (npmonin >0 & npmonin!=.);
g WOR=np9502;
g WAGE=np5401;
g EMP =np11; recode EMP 7=4 6=3 5=4 4=2; replace EMP=3 if (np1001>0 | np1002>0) & (np1001!=. &
np1002!=.);
g POS01=np3501;
g POS02=np3502;
g POS03=np3503;
g POS04=np3504;
g POS05=np3505;
g EDU=0 if npbbil03==1 | npbbila==1;
replace EDU=1 if npbbil01>0 | npbbila==2 | npbbila==3;
replace EDU=2 if npbbil02>0 | npbbila>3;
keep persnr YEAR WOR WAGE EMP POS* EDU;
sort persnr; save u:\michaela\fertil\data\test\TESTN, replace;

*WAVE 1998;
use k:\soep\gsoep\stata\OP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
use k:\soep\gsoep\stata\OPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if opl1801==1;
g YEAR=98; g MONTH=4; replace MONTH=opmonin if (opmonin >0 & opmonin!=.);
g WOR=op9802;
g WAGE=op4501;
g EMP =op09; recode EMP 7=4 6=3 5=4 4=2 8=1; replace EMP=3 if (op0301>0 | op0302>0) &
(op0301!=. & op0302!=.);

```

```

g POS01=op3501;
g POS02=op3502;
g POS03=op3503;
g POS04=op3504;
g POS05=op3505;
g
    EDU=0 if opbbil03==1 | opbbila==1;
replace EDU=1 if opbbil01>0 | opbbila==2 | opbbila==3;
replace EDU=2 if opbbil02>0 | opbbila>3;
keep persnr YEAR WOR WAGE EMP POS* EDU;
sort persnr; save u:\michaela\fertil\data\test\TESTO, replace;

*WAVE 1999;
    use k:\soep\gsoep\stata\PP;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
    use k:\soep\gsoep\stata\PPGEN;
sort persnr; merge persnr using u:\michaela\fertil\data\test\TEST;
keep if ppl3001==1;
g YEAR=99; g MONTH=4; replace MONTH=ppmonin if (ppmonin >0 & ppmonin!=.);
g WOR=pp10902;
g WAGE=pp6001;
g EMP =pp10; recode EMP 7=4 6=3 5=4 4=2 8=1; replace EMP=3 if (pp0901>0 | pp0902>0) &
(pp0901!=. & pp0902!=.);
g POS01=pp3801;
g POS02=pp3802;
g POS03=pp3803;
g POS04=pp3804;
g POS05=pp3805;
g
    EDU=0 if ppbbil03==1 | ppbbila==1;
replace EDU=1 if ppbbil01>0 | ppbbila==2 | ppbbila==3;
replace EDU=2 if ppbbil02>0 | ppbbila>3;
keep persnr YEAR WOR WAGE EMP POS* EDU;
sort persnr; save u:\michaela\fertil\data\test\TESTP, replace;

* STEP II;
* Merge information from Panel;
use u:\michaela\fertil\data\test\TESTP;
append using u:\michaela\fertil\data\test\TESTA.dta;
append using u:\michaela\fertil\data\test\TESTB.dta;
append using u:\michaela\fertil\data\test\TESTC.dta;
append using u:\michaela\fertil\data\test\TESTD.dta;
append using u:\michaela\fertil\data\test\TESTE.dta;
append using u:\michaela\fertil\data\test\TESTF.dta;
append using u:\michaela\fertil\data\test\TESTG.dta;
append using u:\michaela\fertil\data\test\TESTH.dta;
append using u:\michaela\fertil\data\test\TESTI.dta;
append using u:\michaela\fertil\data\test\TESTJ.dta;
append using u:\michaela\fertil\data\test\TESTK.dta;
append using u:\michaela\fertil\data\test\TESTL.dta;
append using u:\michaela\fertil\data\test\TESTM.dta;
append using u:\michaela\fertil\data\test\TESTN.dta;
append using u:\michaela\fertil\data\test\TESTO.dta;
sort persnr; save u:\michaela\fertil\data\test\TEST, replace;
replace WOR =-1 if WOR<0 | WOR==.;
replace EMP =-1 if EMP<0 | EMP==.;
replace EDU =-1 if EDU<0 | EDU==.;
replace WAGE=0 if EMP==4 | EMP==3;
replace WAGE=-1 if WAGE<0 | WAGE==.;
g POS=-1;
replace POS=101 if POS01==1;
replace POS=102 if POS01==2;
replace POS=103 if POS01==3 | POS01==4 | POS04==1;
replace POS=104 if POS01==5;
replace POS=201 if POS04==2 | POS04==3;
replace POS=202 if POS04==4;
replace POS=203 if POS04==5;
replace POS=204 if POS04==7;
replace POS=301 if POS05==1;
replace POS=302 if POS05==2;
replace POS=303 if POS05==3;
replace POS=304 if POS05==4;
replace POS=0 if POS03>0 & POS03<10;
replace POS=0 if EMP==4 | EMP==1;
replace POS=1000 if POS02>0 & POS02<10;
sort persnr; save u:\michaela\fertil\data\test\0PARTNER, replace;

*STEP III;
* Rename variables and merge them with XPANEL;
use u:\michaela\fertil\data\test\0PARTNER;
recode EMP 3=1 1=2 2=3; *adjust coding to SPELLTYP;
ren WOR PWOR;
ren EMP PEMP;
ren EDU PEDU;
ren POS PPOS;
ren WAGE PWAGE;
ren persnr PNR;
keep PNR PWOR PEMP PEDU PEMP PPOS PWAGE YEAR;
sort PNR YEAR; save u:\michaela\fertil\data\test\TEST, replace;
use u:\michaela\fertil\data\test\XPANEL;
sort PNR YEAR; merge PNR YEAR using u:\michaela\fertil\data\test\TEST;
drop if _merge==2; drop _merge PNR YEAR;
recode PWOR .=-1;
recode PEMP .=-1;
recode PEDU .=-1;
recode PPOS .=-1;
recode PWAGE .=-1;

sort Persnr BEGIN;
order Persnr BORN BASIC
SPELLNR BEGIN END BIRO BIR BIRMIS
SPELLTYP ANNUAL

```

```
EDU MAR
WEN MIG
WOR POS EMP WAGE PAR
PWOR PPOS PEMP PWAGE PEDU;

save u:\michaela\fertil\data\test\XPARTNER, replace;
label variable PWOR "Partner's economic uncertainty";
label variable PWAGE "Partner's wage";
label variable PPOS "Partner's labor market position";
label variable PEMP "Partner's employment status";
label variable PEDU "Partner's educational attainment";
```

A.5.2 NEWSPELL Programs

SPELL1. cmd

```
/*Note: read in PBIOSPE new, new name P BIO.dat
PI=u:\Michaela\fertil\data\test\
FM=Blank
NI=P BIO.DAT
PO=u:\Michaela\fertil\data\test\
NS=PBIOSPE1.SPL
NL=PBIOSPE1.LOG
l=1 or 2 or 3
4=4
5=5
6=6 or 7 or 8 or 9
nb=17
ne=45
/*1 vocational training, education, military
/*4 full-time
/*5 part-time
/*6 unemployed, housewife, retired, maternity leave/others
```

SPELL2. cmd

```
PI=u:\Michaela\fertil\data\test\
FM=Blank
NI=ARTKALEN.DAT
PO=u:\Michaela\fertil\data\test\
NS=ARTKALEN1.SPL
NL=ARTKALEN1.LOG
4=4 or 8 or 9
l=1
3=3 or 2 or 11
10=10 or 6 or 5 or 12 or 7
nb=1
ne=192
/*4 education, vocational training, military
/*1 full-time
/*3 part-time, short work, second job
/*10, housewife, retired, unemployed, others, maternity leave
```

SPELL3. cmd

```
/*Note: read in BIOMARY new, new name MARR.dat
/*negative values on end and begin were omitted

PI=u:\Michaela\fertil\data\test
FM=Blank
NI=MARR.DAT
PO=u:\Michaela\fertil\data\test
NT=MARY1.TIM
NS=MARY1.SPL
NL=MARY1.LOG
2=2
l=1 or 3 or 4 or 5
nb=17
ne=45

/*2 married
/*1 single, divorced, widowed, widowed or divorced
```

SPELL4.cmd

```
PI=u:\Michaela\fertil\data\test\
NI=BIOMARSM.DAT
PO=u:\Michaela\fertil\data\test\
NS=MARM1.SPL
NL=MARM1.LOG
2=2
l=1 or 3 or 4 or 5
nb=1
ne=192

/*2 married
/*1 single, divorced, widowed, widowed or divorced
```

A.5.3 TDA Programs

SPLITACT.cf

```
rstata(
noc=500000,
)=u:\michaela\fertil\data\test\0ACTIV.dta;
edef(
org=0,
des=LAST,
ts=BEGIN,
tf=END,
BIR    =if gt(DUR_BIR1,tf) then 0 else
        if gt(DUR_BIR2,tf) then 1 else
        if gt(DUR_BIR3,tf) then 2 else 3,
BIR0   =if ge(DUR_BIR1,tf) then 0 else
        if ge(DUR_BIR2,tf) then 1 else
        if ge(DUR_BIR3,tf) then 2 else 3,
split= DUR_BIR1,DUR_BIR2,DUR_BIR3);
epdat
(v=
Persnr, BIR0, BIR, SPELLTYP,ANNUAL,
EAST,WEST,FORG,BIRMIS1,BIRMIS2,BIRMIS3,
BORN,DUR_WEN,DUR_MIG)
=u:\michaela\fertil\data\test\TEST.dat;
clear;

nvar(
noc=50000,
dfile=u:\michaela\fertil\data\test\TEST.dat,
isel=ne(3,c10),
#JUNK1  =c1,
#JUNK2  =c2,
#JUNK2  =c3,
#JUNK4  =c4,
#JUNK4  =c5,
#JUNK4  =c6,
BEGIN   =c7,
END      =c8,
Persnr  =c9,
BIR0    =c10,
BIR      =c11,
SPELLTYP=c12,
ANNUAL   =c13,
EAST     =c14,
WEST     =c15,
FORG     =c16,
BIRMIS1  =c17,
BIRMIS2  =c18,
BIRMIS3  =c19,
BORN     =c20,
DUR_WEN  =c21,
DUR_MIG  =c22,
BIRMIS   =if (eq(BIRMIS1,1) & eq(BIR0,0)) |
              (eq(BIRMIS2,1) & eq(BIR0,1)) |
              (eq(BIRMIS3,1) & eq(BIR0,2)) then 1 else 0,
SPELLNR=grec(Persnr),);

wstata
(drop=BIRMIS1,BIRMIS2,BIRMIS3,)=
u:\michaela\fertil\data\test\XACTIV.DTA;
```

SPLITEDU.cf

```
rstata(
noc=50000,
)=u:\michaela\fertil\data\test\0EDU.dta;
edef(
org=BIR0,
des=BIR,
ts=BEGIN,
tf=END,
MIG     =if gt(DUR_MIG,ts) then 0 else 1,
EDUH    =if gt(DUR_EDUH,ts) then 0 else 1,
EDUV    =if gt(DUR_EDUV,ts) | eq(EDUH,1) then 0 else 1,
EDUL    =if eq(EDUV,0) & eq(EDUH,0) then 1 else 0,
WEN     =if gt(DUR_WEN,ts) then 0 else 1,
split   =DUR_MIG,DUR_WEN, DUR_EDUV, DUR_EDUH, );

epdat(v=Persnr,BIRMIS,SPELLTYP,ANNUAL,
EAST,WEST,FORG,BORN,WEN,MIG,EDUL,EDUV,EDUH,EDUMIS,EDUDUR,)
=u:\michaela\fertil\data\test\TEST.dat;
clear;
nvar(
noc=50000,
dfile=u:\michaela\fertil\data\test\TEST.dat,
#JUNK1=c1,
#JUNK2=c2,
#JUNK3=c3,
#JUNK4=c4,
BIR0   =c5,
BIR     =c6,
```

```

BEGIN      =c7,
END        =c8,
Persnr     =c9,
BIRMIS     =c10,
SPELLTYP=c11,
ANNUAL     =c12,
EAST       =c13,
WEST       =c14,
FORG       =c15,
BORN       =c16,
WEN        =c17,
MIG        =c18,
EDUL       =c19,
EDUV       =c20,
EDUH       =c21,
EDUMIS     =c22,
EDUDUR     =c23,
SPELLNR=grec(Persnr),
);
wstata( )=
u:\michaela\fertil\data\test\XEDU.DTA;

```

SPLITMAR.cf

```

rstata(
noc=50000,
)=u:\michaela\fertil\data\test\0MAR.dta;
edef(
org=BIR0,
des=BIR,
ts=BEGIN,
tf=END,
MAR      =if
    lt(MARB1,tf) & gt(MARE1,ts) |
    lt(MARB2,tf) & gt(MARE2,ts) |
    lt(MARB3,tf) & gt(MARE3,ts) |
    lt(MARB4,tf) & gt(MARE4,ts) then 1 else 0,
SIN      =if
    lt(SINB1,tf) & gt(SINE1,ts) |
    lt(SINB2,tf) & gt(SINE2,ts) |
    lt(SINB3,tf) & gt(SINE3,ts) |
    lt(SINB4,tf) & gt(SINE4,ts) then 1 else 0,
split= MARB1,MARB2,MARB3,MARB4,
MARE1,MARE2,MARE3,MARE4,SINB1,SINB2,SINB3,SINB4,
SINE1,SINE2,SINE3,SINE4,);

epdat(v=Persnr,SPELLTYP,ANNUAL,
EAST,WEST,FORG,BIRMIS,BORN,WEN,MIG,EDUL,EDUV,EDUH,
EDUMIS,EDUDUR,MAR,SIN, )
=u:\michaela\fertil\data\test\TEST.dat;
clear;
nvar(
noc=50000,
dfile=u:\michaela\fertil\data\test\TEST.dat,
#JUNK1 =c1,
#JUNK2 =c2,
#JUNK3 =c3,
#JUNK4 =c4,
BIR0   =c5,
BIR    =c6,
BEGIN  =c7,
END    =c8,
Persnr =c9,
SPELLTYP=c10,
ANNUAL =c11,
EAST   =c12,
WEST   =c13,
FORG   =c14,
BIRMIS =c15,
BORN   =c16,
WEN    =c17,
MIG    =c18,
EDUL   =c19,
EDUV   =c20,
EDUH   =c21,
EDUMIS =c22,
EDUDUR =c23,
MAR    =c24,
SIN    =c25,
SPELLNR=grec(Persnr),
MARMIS =if eq(SIN,0) & eq(MAR,0) then 1 else 0,
);
wstata( )=
u:\michaela\fertil\data\test\XMAR.DTA;

```

JOINPAN.cf

```

#STEP 1: Join the two episode data sets;
rstata(
noc=40000,
)=u:\michaela\fertil\data\test\0MAR1.dta;
pdata( )=u:\michaela\fertil\data\test\TEST01.dat;
clear;
rstata(
noc=50000,

```

```

)=u:\michaela\fertil\data\test\OPANEL.dta;
pdata( )=u:\michaela\fertil\data\test\TEST02.dat;
clear;
ejoin(
if1=u:\michaela\fertil\data\test\TEST01.dat,
if2=u:\michaela\fertil\data\test\TEST02.dat,
fmt0=6,
fmt1=4.0,
fmt2=4.0,)=u:\michaela\fertil\data\test\TEST1.dat;

#STEP 2: Read in data;
nvar(
noc=800000,
dfile=u:\michaela\fertil\data\test\TEST1.dat,
isels= ne(c7,-3),
Persnr =c1,
RECORD =c2,
SPELLNR =c3,
LEVEL =c4,
BEGIN =c5,
END =c6,
TEST1 =c7,
TEST2 =c8,
SPELLTYP=c9,
ANNUAL =c10,
BASIC =c11,
BORN =c12,
WEN =c13,
MIG =c14,
EDU =c15,
EDUDUR =c16,
MAR =c17,
DUR_BIR1=c18,
DUR_BIR2=c19,
DUR_BIR3=c20,
BIRMIS1 =c21,
BIRMIS2 =c22,
BIRMIS3 =c23,
WOR =c24,
POS =c25,
EMP =c26,
WAGE =c27,
PAR =c28,
PNR =c29,
YEAR =c30,
LAST=glst(Persnr));
wstata( )= u:\michaela\fertil\data\test\TEST01.DTA;
clear;

#STEP 3: Split Episodes;
rstata(
noc=100000,
)=u:\michaela\fertil\data\test\TEST01.DTA;
edef(
org=0,
des=LAST,
ts=BEGIN,
tf=END,
BIR =if gt(DUR_BIR1,tf) then 0 else
if gt(DUR_BIR2,tf) then 1 else
if gt(DUR_BIR3,tf) then 2 else 3,
BIR0 =if ge(DUR_BIR1,tf) then 0 else
if ge(DUR_BIR2,tf) then 1 else
if ge(DUR_BIR3,tf) then 2 else 3,
split=DUR_BIR1,DUR_BIR2,DUR_BIR3,
);
epdat
(v=Persnr,BIR0, BIR, SPELLTYP,ANNUAL,
BASIC,BORN,WEN,MIG,EDU,EDUDUR,MAR,
BIRMIS1,BIRMIS2,BIRMIS3,
WOR,POS,EMP,WAGE,PAR,PNR,YEAR)
=u:\michaela\fertil\data\test\TEST2.dat;
clear;

#STEP 4: Write Episode Data;
nvar(
noc=100000,
dfile=u:\michaela\fertil\data\test\TEST2.dat,
#JUNK1 =c1,
#JUNK2 =c2,
#JUNK3 =c3,
#JUNK4 =c4,
#JUNK5 =c5,
#JUNK6 =c6,
BEGIN =c7,
END =c8,
Persnr =c9,
BIR0 =c10,
BIR =c11,
SPELLTYP=c12,
ANNUAL =c13,
BASIC =c14,
BORN =c15,
WEN =c16,
MIG =c17,
EDU =c18,
EDUDUR =c19,
MAR =c20,
BIRMIS1 =c21,

```

```

BIRMIS2 =c22,
BIRMIS3 =c23,
WOR      =c24,
POS      =c25,
EMP      =c26,
WAGE     =c27,
PAR      =c28,
PNR      =c29,
YEAR     =c30,
BIRMIS   =if (eq(BIRMIS1,1) & eq(BIR0,0)) |
            (eq(BIRMIS2,1) & eq(BIR0,1)) |
            (eq(BIRMIS3,1) & eq(BIR0,2)) then 1 else 0,
SPELLNR  =grec(Persnr),);

wstata(drop=BIRMIS1,BIRMIS2,BIRMIS3)=
u:\michaela\fertil\data\test\XPANEL.DTA;

```

A.5.4 Examples

EXAMPLE1.cf

```
rstata(
noc=50000,
)=u:\michaela\fertil\data\test\XBASIC.dta;
nvar(
DUR_BIR=if eq(BIR1,0) then DUR_Z else DUR_BIR1;
tsel= eq(WEST,1);
edef(
org=0,
des=BIR1,
ts=0,
tf=DUR_BIR,);
ple(qt=1,12(12)500,)=PLE.TXT;
```

EXAMPLE2.cf

```
rstata(
noc=50000,
)=u:\michaela\fertil\data\test\XACTIV.dta;
nvar(
BIR1=if ne(BIR,0) then 1 else 0;
tsel= eq(WEST,1) & eq(BIR0,0);
edef(
org=0,
des=BIR1,
ts=BEGIN,
tf=END,
EMP_EDU=if eq(SPELLTYP,1) then 1 else 0,
EMP_FUT=if eq(SPELLTYP,2) then 1 else 0,
EMP_PAT=if eq(SPELLTYP,3) then 1 else 0,
EMP_NOT=if eq(SPELLTYP,4) then 1 else 0,
EMP_MIS=if eq(SPELLTYP,-1) then 1 else 0,);
rate(
tp= 0, 36,96,156,
xa(0,1)=
EMP_EDU, EMP_MIS,
ANNUAL, BIRMIS,)=3;
rate(
tp= 0, 36,96,156,
xa(0,1)=
EMP_EDU, EMP_PAT, EMP_NOT, EMP_MIS,
ANNUAL, BIRMIS,)=3;
```

EXAMPLE3.cf

```
rstata(
noc=50000,
)=u:\michaela\fertil\data\test\XEDU.dta;
nvar(
BIR1=if ne(BIR,0) then 1 else 0;
tsel= eq(WEST,1) & eq(BIR0,0);
edef(
org=0,
des=BIR1,
ts=BEGIN,
tf=END,
EMP_EDU=if eq(SPELLTYP,1) then 1 else 0,
EMP_MIS=if eq(SPELLTYP,-1) then 1 else 0,);
rate(
tp= 0, 36,96,156,
xa(0,1)=
EMP_EDU, EMP_MIS,
EDUL, EDUH, EDUMIS,
ANNUAL, BIRMIS,EDUDUR,)=3;
```

EXAMPLE4.cf

```
rstata(
noc=1000000,
)=u:\michaela\fertil\data\test\XMAR.dta;
nvar(
BIR1=if ne(BIR,0) then 1 else 0;
tsel= eq(WEST,1) & eq(BIR0,0);
edef(
org=0,
des=BIR1,
ts=BEGIN,
tf=END,
EMP_EDU=if eq(SPELLTYP,1) then 1 else 0,
EMP_MIS=if eq(SPELLTYP,-1) then 1 else 0,);
rate(
```

```

tp= 0, 36,96,156,
xa(0,1)=
EMP_EDU, EMP_MIS,
EDUL, EDUH, EDUMIS,
MAR, MARMIS,
ANNUAL, BIRMIS,EDUDUR,)=3;

```

EXAMPLE5.cf

```

rstata(
noc=1000000,
)=u:\michaela\fertil\data\test\XPANEL.dta;
nvar(
BIR1=if eq(BIR,1) then 1 else 0);
tsel= eq(BASIC,0) & eq(BIR0,0);
edef(
org=0,
des=BIR1,
ts=BEGIN,
tf=END,
EMP_EDU=if eq(SPELLTYP,1) then 1 else 0,
EMP_MIS=if eq(SPELLTYP,-1) then 1 else 0,
EDUL =if eq(EDU,0) then 1 else 0,
EDUH =if eq(EDU,2) then 1 else 0,
EDUMIS =if eq(EDU,-1) then 1 else 0,
MARR =if eq(MAR,1) then 1 else 0,
MARMIS =if eq(MAR,-1) then 1 else 0,
WORR =if eq(WOR,1) then 1 else 0,
WORMIS =if eq(WOR,-1) then 1 else 0,);
rate(
tp= 0, 36,96,156,
xa(0,1)=
EMP_EDU, EMP_MIS,
EDUL, EDUH, EDUMIS,
MARR, MARMIS,
WORR, WORMIS,
ANNUAL, BIRMIS,EDUDUR,)=3;

```

EXAMPLE6.cf

```

rstata(
noc=1000000,
)=u:\michaela\fertil\data\test\XPARTNER.dta;
nvar(
BIR1=if eq(BIR,1) then 1 else 0);
tsel=eq(BASIC,0) & eq(BIR0,0);
edef(
org=0,
des=BIR1,
ts =BEGIN,
tf =END,
EMP_EDU =if eq(SPELLTYP,1) then 1 else 0,
EMP_PAR =if eq(SPELLTYP,3) then 1 else 0,
EMP_NOT =if eq(SPELLTYP,4) then 1 else 0,
EMP_MIS =if eq(SPELLTYP,-1) then 1 else 0,

SINGLE =if eq(PAR,0) then 1 else 0,
PAR_EDU =if eq(PAR,1) & eq(PEMP,1) then 1 else 0,
PAR_NOT =if eq(PAR,1) & (eq(PEMP,3) | eq(PEMP,4)) then 1 else 0,
PARMISS =if eq(PAR,-1) |
(eq(PAR,1) & eq(PEMP,-1)) then 1 else 0,);
rate(
tp= 0, 36,96,156,
xa(0,1)=
EMP_EDU, EMP_PAR, EMP_NOT, EMP_MIS,
BIRMIS,ANNUAL,)=3;
rate(
tp= 0, 36,96,156,
xa(0,1)=
EMP_EDU, EMP_PAR, EMP_NOT, EMP_MIS,
SINGLE, PAR_EDU, PAR_NOT,PARMISS,
BIRMIS,ANNUAL)=3;

```