

FDZ-Datenreport

Documentation of labour market data

02/2013

EN

Linked-Employer-Employee Data from the IAB: LIAB Cross-sectional Model 2 1993-2010 (LIAB QM2 9310)

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LIAB Cross-sectional Model 2 1993-2010 (LIAB QM2 9310)

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Data: LIAB QM2 9310 v1

Documentation: LIAB QM2 9310 v1 dok1

Die FDZ-Datenreporte beschreiben die Daten des FDZ im Detail. Diese Reihe hat somit eine doppelte Funktion: zum einen stellen Nutzerinnen und Nutzer fest, ob die angebotenen Daten für das Forschungsvorhaben geeignet sind, zum anderen dienen sie zur Vorbereitung der Auswertungen.

FDZ-Datenreporte (FDZ data reports) describe FDZ data in detail. As a result, this series of reports has a dual function: on the one hand, those using the reports can ascertain whether the data provided is suitable for their research task; on the other hand, the data can be used to prepare evaluations.

Content

1	Introduction and outline	8
1.1	Introduction	8
1.2	Data use	9
1.2.1	Data access	9
1.2.2	Data management	10
1.2.3	File name of LIAB QM2 9310	12
1.3	Developments compared to former versions	12
1.4	Outline	13
1.5	List of Variables	16
1.6	Volume structure	20
2	Data sources	21
2.1	Employee History (BeH)	22
2.2	Benefit Recipient History (LeH)	23
2.3	Unemployment Benefit II Recipient History (LHG / XLHG)	24
2.4	Jobseeker History (ASU / XASU)	25
3	Data preparation and sampling procedure	26
3.1	Corrections and validation procedures	26
3.1.1	Employee History (BeH)	26
3.1.2	Benefit Recipient History (LeH)	26
3.1.3	Unemployment Benefit II Recipient History (LHG / XLHG)	27
3.1.4	Jobseeker History (ASU / XASU)	27
3.1.5	SGB II anonymisation	28
3.2	Sampling procedure	28
3.3	Missing values	29
4	Data quality and problems	29
4.1	Entire IEB	29
4.2	Employee History (BeH)	31
4.3	Benefit Recipient History (LeH)	32
4.4	Unemployment Benefit II Recipient History (LHG / XLHG)	33
4.5	Jobseeker History (ASU / XASU)	33
4.5.1	ASU	33
4.5.2	XASU	34
5	Description of variables	35
5.1	Identifiers	35
5.1.1	Artificial individual ID (persnr)	35
5.1.2	Artificial establishment number (betnr)	35
5.1.3	Establishment-ID acc. to Survey (idnum)	36
5.2	Period of validity	37
5.2.1	Original start date of observation (begorig)	37
5.2.2	Original end date of observation (endorig)	37
5.3	Personal information	38
5.3.1	Gender (frau)	38

5.3.2	Year of birth (gebjahr)	38
5.3.3	Nationality (nation)	38
5.3.4	Nationality, aggregated (nation_gr)	38
5.3.5	Marital status (famst)	39
5.3.6	Number of children (kind).....	39
5.3.7	School education and vocational training (bild)	40
5.3.8	School-leaving qualification (schbild).....	42
5.3.9	Skills level (quali)	42
5.3.10	Severe disability status (schweb).....	42
5.3.11	Health problems (gesund_ein).....	43
5.4	<i>Information on employment, benefit receipt and job search</i>	43
5.4.1	Reason for notification / reason for end of benefit receipt / reason for discontinuation of unemployment benefit II / reason for deregistration (grund).....	43
5.4.2	Daily wage, daily benefit rate (tengtelt).....	45
5.4.3	Transition zone (gleitz).....	46
5.4.4	Occupation – activity performed / last activity (beruf)	46
5.4.5	Occupational status and working hours (stib).....	47
5.4.6	Employment status (erwstat)	48
5.4.7	Employment status prior to job search (estator)	49
5.4.8	Type of benefit (lart).....	49
5.4.9	BA Client group (kundengr)	50
5.4.10	Type of termination of last job (art_kuend)	50
5.4.11	Desired working hours of the job sought (arbeitszeit)	50
5.4.12	Duration of remaining entitlement to unemployment benefit (restanspruch).....	51
5.4.13	Type of institution (traeger).....	51
5.5	<i>Establishment variables</i>	52
5.5.1	Economic activity 73 (w73_3)	52
5.5.2	Economic activity 93, 5-digit code (w93_5)	52
5.5.3	Economic activity 93, 3-digit code (w93_3)	53
5.5.4	Economic activity 03, 5-digit code (w03_5)	53
5.5.5	Economic activity 03, 3-digit code (w03_3)	54
5.5.6	Economic activity 08, 5-digit code (w08_5)	54
5.5.7	Economic activity 08, 3-digit code (w08_3)	55
5.5.8	Economic activity 73 generated – completed by extrapolation / imputation (w73_3_gen)	55
5.5.9	Economic activity 73 generated – type of completion (group_w73_3)	56
5.5.10	Economic activity 93 generated – completed by extrapolation / imputation (w93_3_gen)	56
5.5.11	Economic activity 93 generated – type of completion (group_w93_3)	56
5.5.12	Year of first appearance of establishment number (grd_jahr)	57
5.5.13	First appearance of establishment number (grd_dat).....	57
5.5.14	Year of last appearance of establishment number (lzt_jahr)	58
5.5.15	Last appearance of establishment number (lzt_dat).....	58
5.5.16	Total number of employees (az_ges)	58
5.5.17	Number of full-time employees (az_ges_vz)	59
5.5.18	Number of employees in marginal part-time employment (az_gf).....	59
5.5.19	Median gross wage of all full-time employees (te_med)	59
5.6	<i>Location data</i>	60
5.6.1	Place of residence: district (Kreis) (wo_kreis).....	60
5.6.2	Place of residence: employment agency (wo_aa).....	61
5.6.3	Place of residence: regional directorate (wo_rd)	61
5.6.4	Place of residence: federal state (Bundesland) (wo_bula)	62
5.6.5	Place of work: district (Kreis) (ao_kreis)	62
5.6.6	Place of work: employment agency (ao_aa).....	63
5.6.7	Place of work: regional directorate (ao_rd).....	63
5.6.8	Place of work: federal state (Bundesland) (ao_bula).....	64
5.7	<i>Generated technical variables</i>	64

5.7.1	Source of observation (quelle)	64
5.7.2	Observation counter per person (spell)	64
5.7.3	Year (jahr)	64
5.7.4	Status of establishment number (betr_st).....	65
5.8	<i>Generated biographical variables</i>	66
5.8.1	First day in employment (ein_erw).....	66
5.8.2	Number of days in employment (tage_erw)	66
5.8.3	First day in establishment (ein_bet).....	66
5.8.4	Number of days in establishment (tage_bet)	67
5.8.5	First day in job (ein_job).....	68
5.8.6	Number of days in job (tage_job).....	68
5.8.7	Number of benefit receipts (anz_lst).....	69
5.8.8	Number of days with benefit receipt (tage_lst)	69
5.8.9	Number of days with benefit receipt 2 (tage_lst2)	70
5.8.10	Daily wage 8 days before first day in establishment (lohn8tv).....	70
5.8.11	Employment status 8 days before first day in establishment (estat8tv).....	71
5.8.12	Employment status 2, eight days before first day in establishment (estat2_8tv).....	72
5.8.13	Number of days in previous job or unemployment (tage_estat2_8tv)	72
5.8.14	Employment status 5 years after reference day (estat5jn)	72
5.8.15	Daily wage 5 years after reference day (lohn5jn)	73
6	References	74
7	Appendix	75
7.1	<i>Frequency tables</i>	75
8	List of abbreviations	76

Abstract

This data report describes the LIAB Cross-sectional Model 2 1993-2010 of the Linked Employer-Employee Data from the IAB (LIAB QM2 9310).

Keywords: German administrative micro data, labour market data, linked employer-employee data, data manual

We would like to thank the employees of the Research Data Centre (FDZ), the Research Department Establishments and Employment (D1) as well as the members of the Service Department IT Services and Information Management (ITM) of the Institute of Employment Research (IAB) for their collaboration and assistance.

Data availability

The dataset described in this document is available for use by professional researchers. Further information can be found on the website <http://fdz.iab.de/>.

1 Introduction and outline

1.1 Introduction

This data report describes the LIAB Cross-sectional Model 2 1993-2010 (LIAB QM2 9310). The LIAB QM2 9310 is one of the Linked Employer-Employee datasets from the Institute for Employment Research (IAB) provided for research analyses by the Research Data Centre (FDZ) of the Federal Employment Agency (BA) at the IAB. The Linked Employer-Employee Data from the IAB (LIAB) contain both establishment data from the annual waves of the IAB Establishment Panel and information on individuals from the process-generated data of the BA. The LIAB data are generated by linking these two data sources.

The data report focuses on the description of data on individuals in the LIAB QM2 9310. Information on the operating page of the LIAB data, the IAB Establishment Panel, as well as the different LIAB data sets, can be found on the FDZ homepage: <http://fdz.iab.de>.

Data on Individuals were taken from the Integrated Employment Biographies (IEB) of the Institute for Employment Research (Institut für Arbeitsmarkt- und Berufsforschung - IAB). The IEB comprises all individuals who showed one of the following statuses at least once during the observation period:

- employment subject to social security (recorded from 1975 onwards)
- marginal part-time employment (recorded from 1999 onwards)
- receipt of benefits in accordance with Social Code Book III (recorded from 1975 onwards) or Social Code Book II (recorded from 2005 onwards)
- registered with the Federal Employment Agency (Bundesagentur für Arbeit - BA) as a jobseeker (recorded from 2000 onwards)
- participation in an employment or training measure (recorded from 2000 onwards)

These data, which come from different sources, are merged in the IEB and the statuses are depicted exact to the day.

Whilst the Employee History (Beschäftigtenhistorik - BeH) is the origin of the information on employment subject to social security and marginal part-time employment, the receipt of benefits in accordance with Social Code Book III (SGB III) and Social Code Book II (SGB II) is recorded in the Benefit Recipient History (Leistungsempfängerhistorik - LeH) and the Unemployment Benefit II Recipient History (Leistungshistoriken Grundsicherung - LHG and

XLHG). The Jobseeker Histories (Arbeitsuchenden-Historiken - ASU and XASU) are the data source for the periods of job search recorded by the BA, whilst participation in employment and training measures is recorded in the Participation-in-Measures History File (Maßnahmeteilnahmehistorik - MTH).

With the exception of participation in employment and training measures from the MTH, all of the data sources included in the IEB are also contained in the LIAB QM2 9310.

The data report on the LIAB QM2 9310 is structured as follows. Besides the introduction, Chapter 1 contains information on data access, as well as, an outline of the data, the volume structure and a list of variables. A description of the individual data sources can be found in Chapter 2. Data preparation and data quality are discussed in Chapters 3 and 4, whilst the individual variables are described in Chapter 5.

1.2 Data use

1.2.1 Data access

The LIAB data in the weakly anonymous version may only be analysed in the context of an on-site use at the FDZ and subsequent remote data access.

In order to be able to use the data, it is first necessary to submit an application to the Research Data Centre (FDZ). The Federal Ministry of Labour and Social Affairs (Bundesministerium für Arbeit und Soziales – BMAS) makes the decision regarding the approval of the research project. When approval has been granted, a data use agreement is concluded with the researcher's institution. Details on applying for the dataset and possibilities for data processing can be found on the FDZ homepage.

Certain variables which make it possible to identify individuals or establishments are only disclosed in their original form if this is necessary for the analysis objective and is justified explicitly in the application for data access. The variables which are particularly sensitive from the viewpoint of data protection legislation are:

Individual data:

- nationality (nation)
- health problems (gesund_ein)
- severe disability status (schweb)
- place of residence: employment agency area (wo_aa)
- place of residence: district (Kreis) (wo_kreis)
- place of work: employment agency (ao_aa)

Basis Establishment File:

- place of work: district (Kreis) (ao_kreis)
- economic activity 93 – sub-class of economic activity (five-digit code) (w93_5)
- economic activity 03 - sub-class of economic activity (five-digit code) (w03_5)
- economic activity 08 - sub-class of economic activity (five-digit code) (w08_5)
- Date of first appearance (grd_dat)
- Date of last appearance (lzt_dat)

IAB Establishment Panel:

- type of local authority (BIK-Gemeindetyp, since 1998)
- district key number (Kreiskennziffer, since 1998)
- economic activity – sub-class of economic activity (wz93)
sub-class of economic activity for 2000, 2001, 2003; economic group for 2002
- economic activity – sub-class of economic activity (wz03)
- economic activity – sub-class of economic activity (wz08)

1.2.2 Data management

The LIAB data have a modular structure and are stored in several files. The first module contains the waves of the IAB Establishment Panel. The individual data are stored annually in the second module. These files contain identifiers (artificial individual IDs and artificial establishment numbers), the personal variables, the information on employment, benefit receipt and job-search activity, the variables regarding place of residence, and technical variables. A further module, the Establishment File, contains the establishment number, the year, and variables regarding the place of work and economic activities in aggregate form as well as other non-sensitive establishment information as of the reference date of 30 June. The Establishment File is provided by the Establishment History Panel and is not stored annually. The variables (p.16 ff.), which are marked with a “*” in the list of variables are contained in the Establishment File. Extension modules from the Establishment History Panel (BHP) can be linked to the Establishment File. Further information on the BHP can be found on the FDZ homepage.

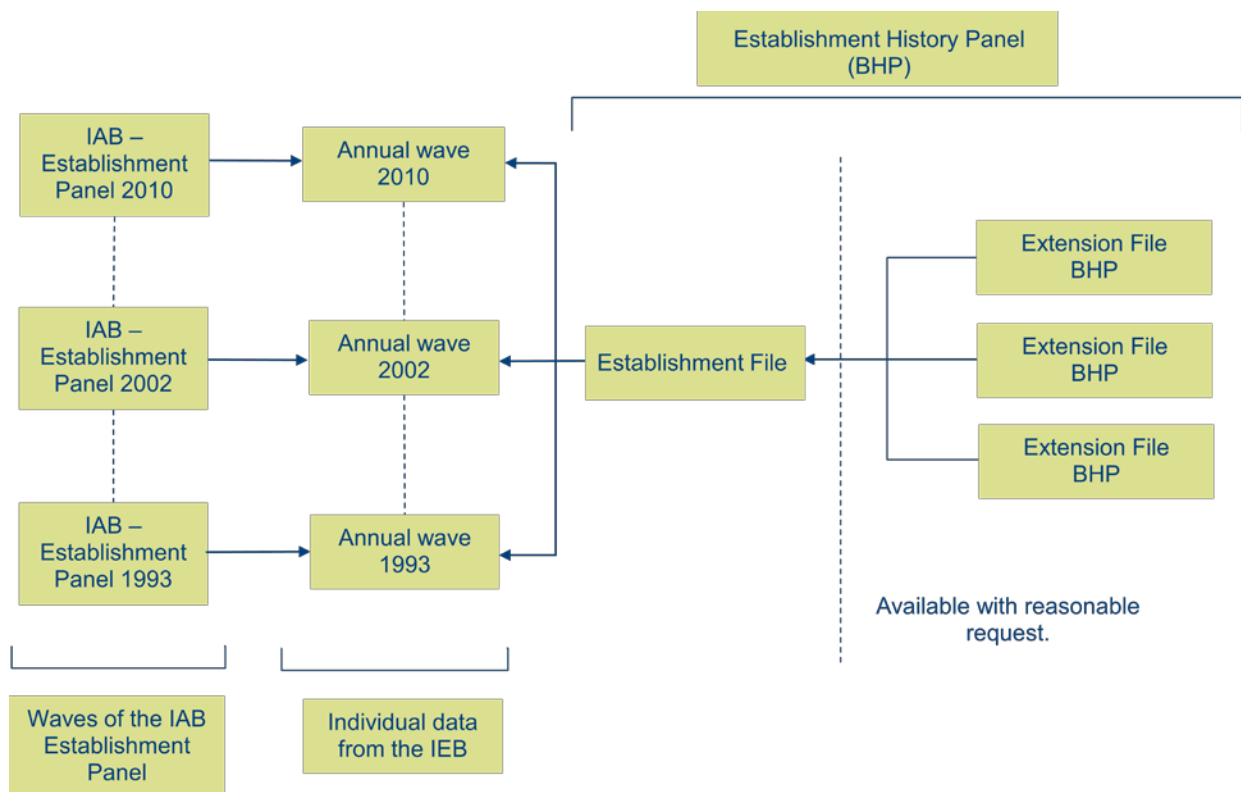


Figure 1: Data management of the Linked Employer-Employee dataset Cross-sectional Model 2. The extension modules of the BHP are as well provided annually.

Establishment variables and individual variables are therefore organized separately, which makes the structure of the data clear and saves storage space in the data management system. The linkage between the waves of the IAB Establishment Panel and the individual data is based on the establishment number, which are included in both modules (`idnum`; see Box 1). In contrast, the establishment data and individual data are linked by an artificial establishment number (`betnr`; see box 2) and the year of the data set. The same applies for the extension files of the Establishment History Panel. The linkage between single files is provided by different program-specific commands for data formatting – and analysis of the used software packages. For example, the linkage in Stata can be conducted by the “`merge`”-command.

```
use LIAB_qm2_9310_v1_pers_1993.dta
sort idnum
merge m:1 idnum using iabbp_1993.dta
```

Box 1: Linkage between the individual data and a single wave of the IAB Establishment Panel (here 1993). In this example, individual data is being used as the master-file. When the

wave of the IAB Establishment Panel is being used as the master-file, the `merge` command has to be adapted.

All sensitive variables listed in the previous section are located in the corresponding files, as long as the files have been requested and approved.

1.2.3 File name of LIAB QM2 9310

Waves of the IAB Establishment Panel

iabbp_####.dta, #### = 1993 – 2010

Individual data

LIAB_qm2_9310_v1_pers_####.dta, #### = 1993 – 2010

Establishment File

LIAB_qm2_9310_v1_bhp_basis_v1.dta

Extension Files BHP

Stock data

LIAB_qm2_9310_v1_bhp_v1_####.dta, #### = 1975 – 2010

Employment flows

LIAB_qm2_9310_v1_bhp_inflow_v1.dta

LIAB_qm2_9310_v1_bhp_outflow_v1.dta

Establishment History

LIAB_qm2_9310_v1_bhp_ein_v1.dta

LIAB_qm2_9310_v1_bhp_aus_v1.dta

1.3 Developments compared to former versions

Observation period

The LIAB QM2 9310 is an update of the LIAB QM2 9308. Therefore, both data sets distinguish between the time periods.

Date setting

The date variables Start date of split episode (`begepi`) and End date of split episode (`endepi`) are not included.

Episode splitting

The LIAB QM2 9310 does not contain episode splitting.

Counter per person

The variable "Observation counter per person" (spell) was generated differently.

Corrected territorial allocation

In contrast to LIAB QM2 9308, in which only the BeH and LeH sources included the corrected territorial allocation, all locations stated in LIAB QM2 9310 incorporate the territorial allocation as of 31 December 2010.

Characteristics

In LIAB QM2 9308, the marital status (famst) and number of children (kind) characteristics included only information from the ASU source. These characteristics have now been complemented by information from the XASU, LHG, and XLHG sources.

The characteristics ao_aa and ao_rd are also filled for the LeH source now.

The "Mobility" (mobil) variable was no longer included in the LIAB QM2 9310, since it was only filled until 2006 due to a change of the notification procedure when looking for a job.

The gesund_ein variable was changed for the same reason. The variable "health problems" (gesund_ein) shows now, if the health status has effects on job placing.

The level1 and level2 variables were no longer included in the LIAB QM2 9310 for data economy reasons.

Additional bibliographical features have been added:

- Number of days in employment (tage_erw)
- Number of days with benefit receipt 2 (tage_1st2)
- Employment status 2, eight days before first day in establishment (estat2_8tv)
- Number of days in previous job or unemployment (tage_estat2_8tv)

SGB II anonymisation

A new section referring to SGB II anonymisation was included (see Chapter 3.1.5).

1.4 Outline

Current data version	LIAB Cross-sectional Model 2 1993-2010
Type and volume of the data	Information on Individuals related to 30 June from the Integrated Employment Biographies (IEB) of the IAB, linkable to the IAB Establishment Panel.

<p>Outline of the contents</p>	<p>Employee History (Beschäftigten-Historik - BeH): Annual notifications and end-of-employment notifications submitted to the social security agencies for employees covered by social security and employees in marginal part-time employment.</p> <p>Benefit Recipient History (Leistungsempfänger-Historik – LeH): Information on benefit receipt in accordance with Social Code Book III (SGB III) for recipients of unemployment benefit, unemployment assistance and maintenance allowance.</p> <p>Unemployment Benefit II Recipient History drawn from A2LL (Leistungs-Historik-Grundsicherung aus A2LL - LHG): Data on individuals in receipt of basic social security benefits in accordance with Social Code Book II (SGB II) (cooperation of employment agencies and municipalities (ARGE), separated responsibilities for the implementation of SGB II, joint facilities)</p> <p>Unemployment Benefit II Recipient History drawn from XSozial-BA-SGB II (XLHG): Data on individuals in receipt of basic social security benefits in accordance with SGB II (authorised municipalities and separated responsibilities)</p> <p>Jobseeker History (Arbeitsuchenden-Historik - ASU): Information on job search activity</p> <p>Jobseeker History drawn from XSozial-BA-SGB II (XASU): Information on job search activity reported via the transmission standard XSozial-BA-SGBII to the BA by authorised municipalities.</p> <p>Sensitive variables: Nationality (nation) Health problems (gesund_ein) Severe disability status (schweb) Place of residence: employment agency area (wo_aa) Place of residence: district (Kreis) (wo_kreis) Place of work: employment agency (ao_aa) Place of work: district (Kreis) (ao_kreis) Economic activity - sub-class of economic activity (five-digit code) (w93_5) Economic activity - sub-class of economic activity (five-digit code) (w03_5) Economic activity - sub-class of economic activity (five-digit code) (w08_5) First appearance of establishment (grd_dat) Last appearance of establishment (lzt_dat)</p> <p>IAB Establishment Panel Information from the annual Establishment Panel with shifting priorities.</p>
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	<p>Sensitive variables: type of local authority (BIK-Gemeindetyp, since 1998) district key number (Kreiskennziffer since 1998) economic activity – sub-class of economic activity (wz93) sub-class of economic activity for 2000, 2001, 2003; economic group for 2002 economic activity – sub-class of economic activity (wz03) economic activity – sub-class of economic activity (wz08)</p>
Variables with regional relevance	Place of work and place of residence, federal states, districts, regional directorates, employment agency areas. (Some of these variables are not available for all data sources and periods.)
Date of territorial allocation	31 December 2010
Type of territorial allocation	All data sources with corrected territorial allocation (date: 31 December 2010) Exception: original territorial allocation for the variable ao_aa in data sources LeH and ASU
Period covered	The period covered depends on the data source. BeH 01 January 1975 - 31 December 2010 (2008, 2009: 18-month file; 2010: 6-month file) LeH 01 January 1975 - 14 July 2011 ASU 01 January 1997 - 14 July 2011 LHG 01 January 2005 - 14 July 2011 XASU 01 January 2005 - 14 July 2011 XLHG 01 January 2005 - 14 July 2011
Update frequency	Continuous
Data unit	Employees covered by social security (including marginal part-time employees from 1999 onwards), benefit recipients, jobseekers
Number of cases	Linked establishments: 4.188 to 14.981 per year, 49.844 in total Individuals: 1.629.542 to 2.584.520 per year, 10.314.524 in total
Corrections - outline	The LIAB data on individuals are largely taken from the IEB without corrections. Only validation procedures are carried out, e.g. some variables are recoded.
Special features - outline	For the QM2 9310 only data sets are chosen, which enclose the 30 June of the respective year. If there are several parallel periodic spells for an individual, the LIAB QM2 contains all spells for the respective years which enclose the 30 June. The date variables begorig and endorig, therefore, specify the date for the beginning and ending of a single spell.
File organisation	The LIAB data on individuals are stored in one file per year. A file with establishment information taken from the BHP is stored in long format and can be linked to the data on individuals by betnr and year. The IAB Establishment Panel files remain unchanged as one file per wave and can be linked to the data on individuals by idnum.

File format and size	Stata Establishment data: IAB Establishment Panel: about 2 to 10 MB per year Establishment file: about 65 MB Individual data: about 180 to 270 MB per year
Data access	On-site use at the FDZ of the BA at the IAB and subsequent remote data access
Degree of anonymisation	Weakly anonymous
Citation method	Linked Employer-Employee Data from the IAB, Cross-sectional Model 2 1993-2010 (LIAB QM2 9310), Nuremberg 2013

1.5 List of Variables

The overview of variables lists the variable names and the longer descriptions of the variables. It also shows which variables are available for which data sources:

	Variable is available for the data source. Degree of completeness always > 0.85.
	Variable is available for the data source. Lower or varying degree of completeness, see description of variable and frequency count.
	Variable is not available for this data source. Degree of completeness always < 0.05.

Example: the school-leaving qualification is only available for ASU and XASU observations; the observations of the other data sources contain ".n" in this variable. Another characteristic is that some variables have different contents depending on the data source. For instance, for BeH observations the employment status variable contains the person group of the employment notification procedure, for LeH observations it contains the type of benefit, for LHG and XLHG observations it contains the SGB II status and for ASU and XASU observations the job search status. These differences are not immediately obvious from the variable name for every variable.

List of variables	Module	Page	BeH	LeH	LHG	XLHG	ASU	XASU
Identifiers		35						
Artificial individual ID (persnr)		35						
Artificial establishment number (betnr)	*	35						

List of variables	Module	Page	BeH	LeH	LHG	XLHG	ASU	XASU
Establishment-ID acc. to Survey (id-num)		36	■					
Period of validity		37						
Original start date of observation (begorig)		37	■	■	■	■	■	■
Original end date of observation (endorig)		37	■	■	■	■	■	■
Personal information		38						
Gender (frau)		38	■	■	■	■	■	■
Year of birth (gebjahr)		38	■	■	■	■	■	■
Nationality (nation)		38	■	■	■	■	■	■
Nationality, aggregated (nation_gr)		38	■	■	■	■	■	■
Marital status (famst)		39	■	■	■	■	■	■
Number of children (kind)		39	■	■	■	■	■	■
School education and vocational training (bild)		40	■	■	■	■	■	■
School-leaving qualification (schbild)		42	■	■	■	■	■	■
Skills level (quali)		42	■	■	■	■	■	■
Severe disability status (schweb)		42	■	■	■	■	■	■
Health problems (gesund_ein)		43	■	■	■	■	■	■
Information on employment, benefit receipt and job search		43						
Reason for notification / reason for end of benefit receipt / reason for discontinuation of unemployment benefit II / reason for deregistration (grund)		43	■	■	■	■	■	■
Daily wage, daily benefit rate (tentgelt)		45	■	■	■	■	■	■
Transition zone (gleitz)		46	■	■	■	■	■	■
Occupation – activity performed / last activity (beruf)		46	■	■	■	■	■	■
Occupational status and working hours (stib)		47	■	■	■	■	■	■
Employment status (erwstat)		48	■	■	■	■	■	■
Employment status prior to job search (estatvor)		49	■	■	■	■	■	■
Type of benefit (lart)		49	■	■	■	■	■	■
BA Client group (kundengr)		50	■	■	■	■	■	■
Type of termination of last job (art_kuend)		50	■	■	■	■	■	■
Desired working hours of the job sought (arbeitszeit)		50	■	■	■	■	■	■

List of variables	Module	Page	BeH	LeH	LHG	XLHG	ASU	XASU
Duration of remaining entitlement to unemployment benefit (restanspruch)		51						
Type of institution (traeger)		51						
Establishment variables		52						
Economic activity 73 (w73_3)	*	52						
Economic activity 93, 5-digit code (w93_5)	*	52						
Economic activity 93, 3-digit code (w93_3)	*	53						
Economic activity 03, 5-digit code (w03_5)	*	53						
Economic activity 03, 3-digit code (w03_3)	*	54						
Economic activity 08, 5-digit code (w08_5)	*	54						
Economic activity 08, 3-digit code (w08_3)	*	55						
Economic activity 73 generated – completed by extrapolation / imputation (w73_3_gen)	*	55						
Economic activity 73 generated – type of completion (group_w73_3)	*	56						
Economic activity 93 generated – completed by extrapolation / imputation (w93_3_gen)	*	56						
Economic activity 93 generated – type of completion (group_w93_3)	*	56						
Year of first appearance of establishment number (grd_jahr)	*	57						
First appearance of establishment number (grd_dat)		57						
Year of last appearance of establishment number (lzt_jahr)	*	58						
Last appearance of establishment number (lzt_dat)		58						
Total number of employees (az_ges)	*	58						
Number of full-time employees (az_ges_vz)	*	59						
Number of employees in marginal part-time employment (az_gf)	*	59						
Median gross wage of all full-time employees (te_med)	*	59						

List of variables	Module	Page	BeH	LeH	LHG	XLHG	ASU	XASU
Location data		60						
Place of residence: district (Kreis) (wo_kreis)		60	■	■	■	■	■	■
Place of residence: employment agency (wo_aa)		61	■	■	■	■	■	■
Place of residence: regional directorate (wo_rd)		61	■	■	■	■	■	■
Place of residence: federal state (Bundesland) (wo_bula)		62	■	■	■	■	■	■
Place of work: district (Kreis) (ao_kreis)	*	62	■					
Place of work: employment agency (ao_aa)		63	■	■			■	
Place of work: regional directorate (ao_rd)		63	■	■			■	
Place of work: federal state (Bundesland) (ao_bula)	*	64	■					
Generated technical variables		64						
Source of observation (quelle)		64	■	■	■	■	■	■
Observation counter per person (spell)		64	■	■	■	■	■	■
Year (jahr)	*	64	■	■	■	■	■	■
Status of establishment number (betr_st)		65	■					
Generated biographical variables		66						
First day in establishment (ein_bet)		66	■	■	■	■	■	■
First day in employment (ein_erw)		66	■	■	■	■	■	■
Number of days in employment (tage_erw)		66	■	■	■	■	■	■
First day in establishment (ein_bet)		66	■					
Number of days in establishment (tage_bet)		67	■					
First day in job (ein_job)		68	■					
Number of days in job (tage_job)		68	■					
Number of benefit receipts (anz_lst)		69	■	■	■	■	■	■
Number of days with benefit receipt (tage_lst)		69	■	■	■	■	■	■
Number of days with benefit receipt 2 (tage_lst2)		70	■	■	■	■	■	■
Daily wage 8 days before first day in establishment (lohn8tv)		70	■					

List of variables	Module	Page	BeH	LeH	LHG	XLHG	ASU	XASU
Employment status 8 days before first day in establishment (estat8tv)		71						
Employment status 2, eight days before first day in establishment (estat2_8tv)		72						
Number of days in previous job or unemployment (tage_estat2_8tv)		72						
Employment status 5 years after reference day (estat5jn)		72						
Daily wage 5 years after reference day (lohn5jn)		73						

1.6 Volume structure

Year	Establishments with an interview in the IAB Establishment Panel	Establishments with an interview in the IAB Establishment Panel and a linkage to individual data	Individuals	Establishments in LIAB QM2 9310 in total
1993	4.265	4.188	2.584.520	10.799
1994	4.154	4.041	2.223.969	9.319
1995	4.114	3.933	1.884.613	9.027
1996	8.604	8.292	2.472.655	13.653
1997	8.917	8.385	2.121.198	13.060
1998	9.334	8.787	2.080.365	13.812
1999	9.915	9.433	2.019.226	54.186
2000	14.083	13.462	2.343.871	69.521
2001	15.782	14.981	2.536.580	73.631
2002	15.682	14.698	2.396.953	67.205
2003	16.165	15.061	2.184.739	74.223
2004	16.063	14.832	2.385.792	98.758
2005	16.280	14.870	2.397.092	105.479
2006	15.976	14.461	2.229.718	104.281
2007	16.181	14.590	2.017.155	101.294
2008	16.058	14.364	1.960.825	101.965
2009	16.145	14.390	1.908.602	104.785
2010	16.296	14.359	1.629.542	92.009

Table 1: Volume structure

The first column shows the number of establishments with valid interviews in the IAB Establishment Panel, which means that the wave code¹ takes on the specification A, B, C, D, E or G. Not all of the surveyed establishments can be linked to the individual data. The number of establishments, which can be linked to the individual data, is listed in the second column. The number of individuals per year is presented in the third column. It should be taken into account that the number of data lines in the individual data is higher than the explicit number of individuals. Parallel employment contracts, benefit receipt and job search are documented respectively in one data line. The last column refers to the number of different artificial establishment numbers in the individual data. Due to parallel employment in Non-IAB-Establishment-Panel-firms these numbers are much higher than the numbers in the second and third column. It is apparent that the number of establishments has quadrupled whereas the number of employees remained on the same level. This is caused by a decline in the share of large establishments in the IAB Establishment Panel.

2 Data sources

The administrative individual data were drawn from the Integrated Employment Biographies (IEB) of the IAB. They unite data from five different data sources, each of which may contain information from different administrative procedures.

¹ See Fischer et al. (2008), page 29f.

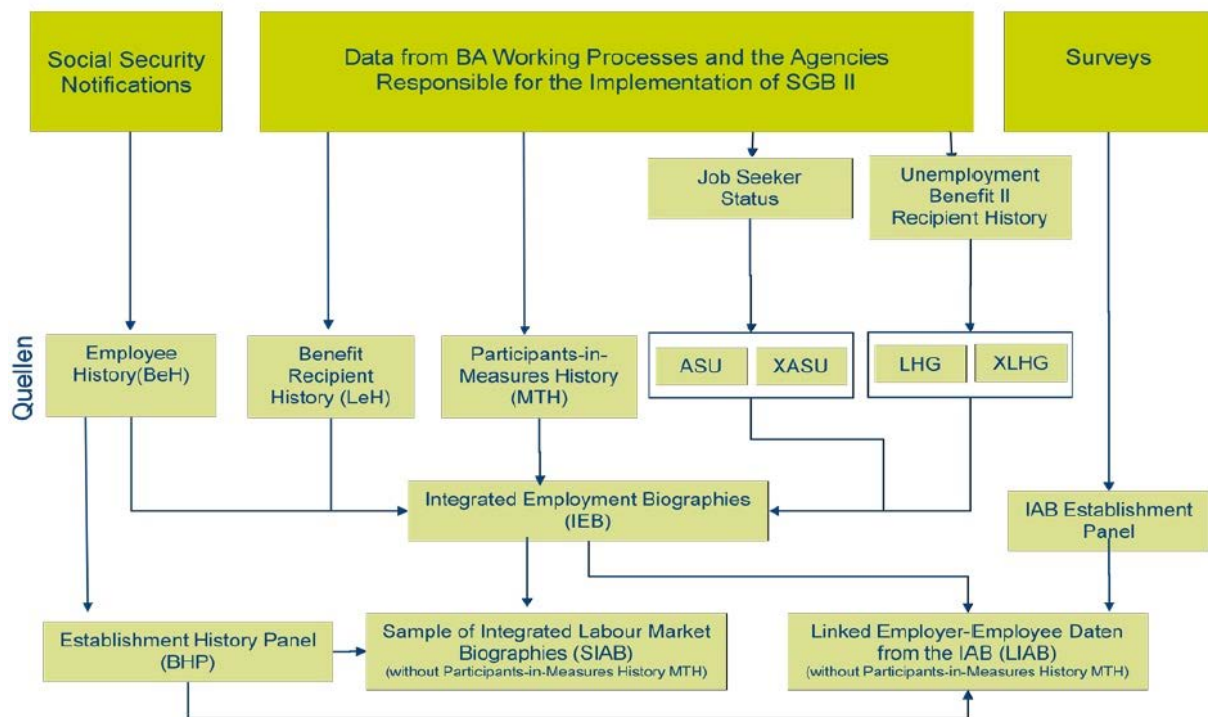


Figure 2: Data sources of the IEB

Observations from all of the data sources shown, with the exception of participation in employment and training measures (MTH), are incorporated from the IEB.

2.1 Employee History (BeH)

The source of data regarding employment is the Employment History (Beschäftigten-Historik - BeH) of the IAB. The data basis is the integrated notification procedure for health, pension and unemployment insurance, which came into effect as of 01 January 1973 (and was extended to cover Eastern Germany as of 01 January 1991) and is known by the abbreviation DEÜV (previously DEVO / DÜVO) (for further details see: Bender et al. 1996, p. 4 et seq.; Wermter /Cramer 1988). Under this procedure employers are required to submit notifications to the responsible social security agencies concerning all of their employees covered by social security at least once a year. The BeH covers all white- and blue-collar workers as well as apprentices as long as they are not exempt from social security contributions. This means that civil servants, self-employed persons and regular students (see Cramer 1985) are in principle not recorded in the BeH. Since the notification procedure was changed on 01 January 1999, employees in marginal part-time employment and unpaid family workers have also been recorded (not contained in the data until 01 April 1999). The data are recorded by the

health insurance companies, collected and edited by the Federal Employment Agency (BA) and subsequently integrated into the History File by the IAB.

The administrative individual data are supplemented with establishment data (basic establishment data and BHP extension file). They are taken from the Establishment History Panel (Betriebs-Historik-Panel - BHP), which is also based on the BeH.

When linking individual data with establishment data it has to be taken into account that the variables in the Basis Establishment File as well as in the BHP Extension Files are aggregated on 30 June of a year. Unlike the data on individuals, the establishment variables are therefore not spell data but are only valid on 30 June precisely each year.²

The Establishment File is linked with the Individual File via the programme-specific commands of the software packages used for preparing and analysing the data. In Stata, for instance, the two files can be linked using the “merge” command in connection with the relevant paths (see Box 2).

```
use LIAB_qm2_9310_v1_pers_1993.dta
gen jahr = year(begorig)
sort betnr jahr
merge m:1 betnr jahr using LIAB_9310_v1_bhp_basis_v1_1993.dta
```

Box 2: Example code for Stata12 and the year 1993

2.2 Benefit Recipient History (LeH)

The Benefit Recipient History (Leistungsempfänger-Historik - LeH) of the IAB covers periods during which individuals receive earnings replacement benefits from the Federal Employment Agency. The benefits comprise unemployment benefit, unemployment assistance and maintenance allowance, in other words not benefits under the sphere of Social Code Book II (e.g. unemployment benefit II). Since the entitlement to receive benefits depends on meeting certain legal requirements, unemployment periods in which the requirements are not met (e.g. no entitlement for receipt of benefits in case of unemployment assistance, or non-completion of the qualifying period for unemployment benefit) are not reported in the Benefit Recipient History.

² An extreme example: an employment notification exists from 01 January 2006 to 30 May 2006; the establishment goes bankrupt in June 2006. There is then no information about this establishment in the BHP for 2006.

2.3 Unemployment Benefit II Recipient History (LHG / XLHG)

The Unemployment Benefit II Recipient Histories (Leistungshistoriken Grundsicherung LHG / XLHG) contain the receipt of benefits in accordance with Social Code Book II (SGB II). This covers both basic social security benefits (e.g. unemployment benefit II) and supplements to unemployment benefit or additional benefits. Unlike the benefits in the sphere of Social Code Book III, the BA is no longer necessarily the sole institution responsible for administering the benefits. The data therefore distinguish between the three possible types of institution responsible for implementing SGB II:

- Joint facilities (Gemeinsame Einrichtungen) / Cooperation of employment agencies and municipalities (Arbeitsgemeinschaften – ARGE, until the end of 2010) in which the BA and the municipality deal with tasks jointly,
- Separated responsibilities (getrennte Trägerschaft) (until the end of 2011) – the tasks continue to be divided between the BA and the municipality³ –,
- Authorised municipalities which are also called opting local authorities or opting municipalities according to the initial experimental clause of Section 6a - here the local authority is responsible for all tasks in the sphere of SGB II.

The data of the “Unemployment Benefit II Recipient History drawn from A2LL” (LHG) come from the BA administrative procedure A2LL, whilst the “Unemployment Benefit II Recipient History drawn from XLHG-BA-SGB II” (XLHG) records data which was reported in accordance with the transmission standard X-Sozial-BA-SBG II.

As a rule, A2LL is used until 2010 in all ARGE cooperation projects, and from 2011 onwards in joint facilities, whilst the standard X-Sozial-BA-SBG II is used by the authorised municipalities. Both of the procedures are used by municipalities with separated responsibilities.

An important difference compared with the LeH is that the amount of benefits received is not determined at the level of the individual but at the level of the benefit community (Bedarfsgemeinschaft⁴). It is not possible, however, to link individuals with benefit receipt under

³ The municipality pays the costs for housing and heating (Section 22 SGB II) and additional one-off benefit payments to cover extra costs (Section 23 (3) SGB II) and the additional benefits to support integration in accordance with Section 16 (2) Clause 2 No. 1 - 4 SGB II. The BA, on the other hand, covers the costs for regular benefits, social insurance contributions and integration benefits (SGB III and SGB II) and specific benefits excluding the additional benefits to support integration cited above.

⁴ A so-called ‘Bedarfsgemeinschaft’, or ‘benefit community’, includes all individuals in a household who receive benefits jointly (i.e. as a joint payment). In the majority of cases, the ‘benefit community’ and the household will be the same, which in particular applies in the case of (married or unmarried) couples and parents with children under the age of 25. However, under specific circumstances the ‘benefit community’ might not include all household members, or a household in which everybody receives benefit payments might be made up of more than one ‘benefit community’. An example of the former is if a grown-up child lives with his/her parents and earns just enough to make his/her own liv-

SGB II at the level of benefit communities. The LHG and the XLHG in principle contain all registered individuals who are entitled to receive benefits in accordance with Section 7 SGB II, in other words, needy individuals who are capable of work and, if applicable, also the members of their benefit community. However, only periods during which a person is capable of work or is over the age of 65 are incorporated.

Each dataset depicts non-overlapping periods of entitlement to benefit of a person in a certain benefit community. A new observation starts for the following administrative reasons:

- on relevant birthdays (14, 15, 18 and 65) of the members of a benefit community, which are statutory and relevant for structural changes of the benefit community (see Chapter 3.1.53.1.5),
- if there are changes in the composition of a benefit community (e.g. by members joining or leaving the benefit community),
- if there are changes in the variables of the benefit community client, and
- at the beginning and end of a sanction period for observations from 01 April 2006 onwards. However it must be taken into account that it is not possible to determine either the duration, the type of the sanction or the time when the sanction was imposed or when it began based on the data. The reason for this is the lack of a corresponding variable or value that indicates the start, the type or the duration of a sanction.

The LHG data are available from 01 January 2005, the XLHG data from 01 November 2005. However, until the beginning of 2007 both data sources are incomplete (see Chapter 4).

2.4 Jobseeker History (ASU / XASU)

Data about jobseekers are stored in the Jobseeker History (Arbeitsuchendehistorik – ASU / XASU). The ASU data source contains information on jobseekers who are registered with employment agencies, and from 2005 onwards also includes ARGE cooperation projects and separated responsibilities for the implementation of SGB II. The XASU data source, on the other hand, contains the data of jobseekers in receipt of Unemployment Benefit II (ALG-II) from authorised municipalities from 2005 onwards. These data are reported in accordance with the X-Sozial-BA-SBG II standard.

ing but has insufficient means to support his/her mother and father – in this case the 'benefit community' will only include the parents. An example of the latter is a three- (or more) generation household: since a 'benefit community' may only consist of two generations, this type of household will be made up of two such 'benefit communities', one consisting of the grandparent(s) and one of the parent(s) and child(ren). (Trappmann et al. 2007)

3 Data preparation and sampling procedure

3.1 Corrections and validation procedures

Before the data from the data sources specified in Chapter 2 are merged to form the IEB they undergo source-specific correction procedures (see the following chapters). The IEB as a whole undergo the following corrections:

- Observations in which the age is under 13 or over 75 are deleted.
- Observations whose end date precedes the start date are deleted.

Inconsistent information on gender or date of birth within an account is corrected, datasets without information on the date of birth are deleted. Further corrections, like in the IABS (Completion procedure of presumably missing notifications, strike corrections) do not happen.

3.1.1 Employee History (BeH)

- To capture a person group that is as constant as possible over time, some person groups for which data are not available throughout the entire observation period are excluded. To be precise, from 1999 onwards only the person groups 101, 102, 103, 105, 106, 112, 118, 119, 120, 140, 141, 142, 143, 149, 201, 203 and 205 are supplied, as well as the two groups 109 and 209, which indicate people in marginal part-time employment. Groups that are not included from 1999 onwards include people in short-term employment, i.e. person groups 110, 202 and 210.
- Observations with earnings amounting to zero or with no details on earnings, and the value 101 for the person group variable, and the value 50 for the reason for notification (annual notification) are not incorporated into the IEB.
- Gender and date of birth are taken from the social security number. This information is harmonised across data sources.
- The territorial allocations for place of work and place of residence are updated to the status as of 31 December 2010.

3.1.2 Benefit Recipient History (LeH)

- It must be taken into account that in cases of ongoing receipt the end date corresponds to the end of the period for which the benefit is allowed and not the end of the benefit receipt period. LeH observations which go beyond 14 July 2011 thus depict the period for which the benefit is allowed. Observations with no end date or an invalid end date are excluded from further processing, since in these cases it cannot be assumed that a benefit payment was made at all.

- Observations without a valid start date are excluded.
- Observations whose end date precedes the start date are excluded.
- If the end date for the receipt of unemployment assistance precedes the start date by one day, then the end date is increased by one year.
- The territorial allocations are corrected analogous to the BeH.

3.1.3 Unemployment Benefit II Recipient History (LHG / XLHG)

- It only contains observations of people who are capable of work and people over the age of 65.
- Individual-related variables that are available for the (X)LHG sources are valid for the entire observation period.
- The territorial allocations are corrected analogous to the BeH.

3.1.4 Jobseeker History (ASU / XASU)

- Observations whose end date precedes the start date are not included in the ASU.
- There is no consolidation of the ASU observations of individual persons. Therefore, overlaps between ASU observations might occur.
- Individual-related variables that are only available for the (X)ASU sources always refer to the beginning of the spell.
- A new ASU spell is generated as soon as a change of status (e.g. from job-seeking to unemployed) occurs. This also applies if the type of institution (employment agency, joint facility, authorised municipalities, separated responsibilities) changes. The ASU data basis only distinguishes between observations with the status “unemployed”, “job seeker” as well as since 2006 “seeking advice” and “without status”. In the IEB, however, an additional status “ill / not able to work” is available. The employment status “ill / not able to work” is assigned to IEB spells when in the ASU data basis
 - a preceding observation with the status “unemployed” exists which joins the next observation without a gap and has “incapacitated for work” as the reason for exit, and
 - a subsequent observation with the status “unemployed” exists which also follows without a gap, and
 - the observation itself does not have the status “unemployed” but “jobseeker”.
- In contrast to the ASU source, the XASU only distinguishes the status
 - “not unemployed, but seeking job” or
 - “unemployed and simultaneously seeking job”.

- Unlike the ASU, periods of illness are not taken into account when generating the “employment status”, since there is no information about illness available in the XASU data. When calculating the unemployment duration with XASU observations, gaps due to illness cannot be identified.
- The XASU contains non-overlapping time periods for individuals. If one of the following variables changes, in each case a new data spell is generated for the XASU:
 - Change of job search status
 - Change of availability
 - Change of SGB II institution (due to notification procedure)
 - Change of place of residence
 - The territorial allocations are corrected analogous to the BeH.

3.1.5 SGB II anonymisation

In order to reduce the risk of de-anonymisation, in general only the year of birth is indicated in the administrative data. However, in the (X)LHG and (X)ASU sources there is the risk that the exact date of birth may still be obvious due to the chronological structure of the observations. Observations might end systematically on certain birthdays and/or the day before, or start again on the birthday.

In order to prevent an indirect determination of the exact day of birth, the following procedure is applied. Observations divided on the 18th or 65th birthday will be merged into a single one. Besides the exact day of birth no other information will get lost in this case. Observations beginning on the 15th or 65th birthday (end on the 65th birthday), the start date (end date) of the observation will be set to the beginning (the end) of the respective quarter. This correction results in a bias of the duration of the observation.

Corrected observations are marked in the "employment status" variable.

3.2 Sampling procedure

The IAB Establishment Panel is an annually conducted survey. The sample is drawn from the population of all German establishments with at least one employee liable to social security. The sample is stratified according to industry, firm size, and federal state.

The data on individuals in the LIAB QM2 9310 are taken from the IEB according to the following procedure. At first all of the establishments in the IAB Establishment Panel, which have a valid interview in the respective year (wave code A, B, C, D, E or G) are selected. In a second step, all observations of individuals are drawn from the IEB that have been employed

at one of these firms on 30 June. For these individuals, all observations are made available which contain the 30 June of the respective year.

3.3 Missing values

In the LIAB, missing values are coded as follows:

Term	Value	Description
No (valid) details available	.z	Values of a variable which are not systematically missing, i.e. the variable is available in principle for the data source, but no details are available for the value considered or rather cannot be interpreted reasonably.
Systematically not available	.n	A variable is not available in principle for a data source (dark grey cells in the overview of variables in Chapter 1.5) or is not available for a certain period.

4 Data quality and problems

4.1 Entire IEB

The IEBs contain employment histories. Not each kind of employment is included in the administrative data, though. Certain persons with certain courses of life are not represented in the IEBs at all.

For evaluation purposes, it is often relevant to know gaps in the included biographies (e.g. for control group creation, course of life analyses, etc.) The gaps listed in the following are defined as periods of time after the end of school education for which no data is included in the IEBs. These gaps can be divided into

- gaps with no information available, and
- gaps for which information may be available from the reason for notification / reason for end of benefit receipts / reason for discontinuation of SGB II / reason for deregistration characteristic of the direct preceding dataset (if a corresponding dataset exists).

These gaps were identified using the manifestation of the reason for notification / reason for end of benefit receipts / reason for discontinuation of SGB II / reason for deregistration and employment status characteristics in the various sources. The list makes no claims of being complete.

Biographical gap	Information on gap, identifiable using the manifestation of the "grund" characteristic in the preceding dataset of the source, if necessary
Civil servants, professional soldiers, judges, employees of bodies or foundations under public law, unsupported self-employed persons	LeH, ASU
Students, people in school-based further education	LeH, ASU
People who are ill / not able to work for more than 6 weeks (illness during unemployment, however, is represented in the ASU source under certain conditions, see Chapter 3.1.4)	BeH, LeH, ASU
People receiving old-age pension without employment if not member of a benefit community	LeH, ASU
Recipients of early retirement benefits	LeH, ASU
Trade professionals working from home	
Short-time employed persons	ASU
People in facilities of the youth welfare service organisation, in vocational training centres, approved workshops or similar facilities for disabled persons	ASU
Participants in benefit programmes for participation in working life (people in rehabilitation)	ASU
(Sideline) farmers	
Caregivers according to Section 19 SGB XI	
Conscriptors	BeH, LeH, ASU
Persons in reserve duty training	BeH, LeH, ASU
Persons fulfilling community service	BeH, LeH, ASU
Persons fulfilling a voluntary social or ecological year instead of community service	
Other people not registered with the statutory pension insurance or the Federal Employment Agency (e.g. sabbatical, funding from personal assets or pensions, emigration, employment abroad, voluntary work, etc.)	LeH, ASU, BeH
Strikers in case of a duration of the strike of more than a month	LeH
Social benefit recipients (prior to the introduction of SGB II in 2005), social allowance recipients (according to SGB II)	
Compensation recipients according to FELEG (Gesetz zur Förderung der Einstellung der landwirtschaftlichen Erwerbstätigkeit, Act on the Support in Case of Termination of Farming Activities)	
People participating in measures	ASU

Table 2: Biographical gaps and identification possibilities

In terms of table 2 it should be noted that generally not the complete employment biography of an individual, like it exists in the IEB, is included in the individual data of the LIAB QM2 9310. This is because the LIAB QM2 9310 only contains spells including the 30 June of the respective year. Other spells of the employment history, which do not include this date are therefore not part of the LIAB QM2 9310. Furthermore the LIAB QM2 9310 only includes information about individuals over time if the employing establishment participates with a valid interview continuous at the IAB Establishment Panel.

4.2 Employee History (BeH)

- Due to the introduction of the employment notification procedure in the federal states of Eastern Germany, the notifications for Eastern Germany can only be assumed to be sufficiently complete from 1993 onwards. For the same reason, a great deal of spells in 1991 show missing values for several variables (such as employment status).
- The increase in the number of BeH observations from 1999 onwards is due to the introduction of the obligation to submit employment notifications for people in marginal part-time employment from 01 April 1999 onwards.
- Especially in 1999, observations with part-time employment increase significantly. This is caused by the actually observed increase in part-time work as well as by the fact that since 1999 employment notifications have been completed more properly.
- Within the employment notification procedure, a certain time lag is unavoidable. Although changes in employment relationships have to be reported immediately, and existing employment relationships have to be confirmed annually by April of the following year, some notifications actually arrive years later. The History File of the IAB is not updated continuously, however, but at certain intervals. This is done using files of employment notifications for one particular year which were submitted 36, 18, 12 or 6 months after the end of the reporting year (e.g. the 18-month file for 2007 can be created in July 2009 at the earliest). Notifications submitted more than three years late are not taken into account at the IAB, which means that a 36-month file shows a 100 % degree of completeness by definition.
- In the version of the IEB on which the LIAB data are based the degree of completeness of the BeH observations last stood at 100 % in 2007. 18-month files

were used for 2008 and 2009, and the observations for 2010 come from a 6-month file. It can therefore be assumed that the BeH observations for 2008, 2009 and in particular for 2010 are slightly underreported. However, this should not reduce the ability to analyse the data at individual level. The missing notifications occur more frequently in a few establishments, however. This means that in individual cases the establishment data, e.g. establishment size, are grossly incorrect and will change considerably in subsequent versions.

- In 1984, a change was made in the employment notification procedure. From that time onwards, one-off payments of gross earned income were reported as part of the annual earnings subject to social security contributions, which leads to an increase in the average daily wage. In particular, the proportion of wages and salaries above the upper earnings limit has increased considerably from that year onwards (see Bender et al. 1996).
- For the years 1992 until 2000 noticeable drops and rises in the number of notifications were noticed. Drops can be observed especially for the following 10 districts: Braunschweig (03101), Wolfsburg (03103), Emden (03402), Kassel (06633), Essen (05113), Neuss (05162), Erftkreis (05362), Hersfeld-Rotenburg (06632), Miltenberg (09676) and Kempten (Allgäu) (09763). This is due to notification problems of single or several establishments in these regions.
- Considerable drops were also observed for the districts Salzgitter (03102) und Hoyerswerda (14264).
- Concerning the notifications for full-time employment, especially the districts Main-Taunus (06436) und Alzey-Worms (07331) are noteworthy. They feature above-average rises. Also in this case, the reasons are notification problems at single or several establishments in these regions.
- In the years 1996 to 1998, the values 841-844 (doctors and pharmacies) within the "occupation – activity performed" variable are very rare compared to the neighbouring years.

4.3 Benefit Recipient History (LeH)

- Caused by an internal change of systems, there is a break in the collection of periods of exclusion of benefits and of benefit suspension in 2004 due to failure to comply in 2004.

4.4 Unemployment Benefit II Recipient History (LHG / XLHG)

- With regard to the completeness of case numbers or benefit histories from the LHG and XLHG data sources, there are substantial gaps in the years 2005 and 2006. We therefore strongly advise against analysing the data for this time period based merely on the (X)LHG sources.
- Also as of 2007, underrecording of mostly one month depending on the institution has occurred, especially in the XLHG. The LHG shows underrecording and overrecording related to changes in the type of institution as well.
- Furthermore, for both of the data sources LHG and XLHG it can be observed that there is an above-average number of 15-year-olds and fewer 16- and 17-year-olds with references to a lack of capacity to work. 15- and 16-year-old individuals in need who are supported by the authorised municipalities may therefore be more poorly represented, as "individuals not capable of work" are not included in the IEB.
- Some individuals for whom a (X)LHG spell exists are excluded completely or partly from the benefit receipt according to SGB II, for instance because they are in a subsidised training programme, receive old-age pensions, live in a stationary institution or receive insurance payments to avoid need for assistance. This affects on average 3 to 5 percent of all cases.

4.5 Jobseeker History (ASU / XASU)

4.5.1 ASU

- The registered periods of job search activity in the ASU source have been regarded as complete from the year 1997 onwards. Therefore, the analysis potential of the ASU spells before 1996 is limited.
- For the placement experts it is not possible to always immediately record the allocation to the legal sphere, since frequently it is only known after some time which institution is primarily responsible due to a possible entitlement to SGB II benefits. Therefore, we recommend comparing the manifestation of the "type of institution" characteristic from the ASU with the manifestation of the LHG and/or XLHG during the same period of time. Due to the recording gaps in the LHG and XLHG between 2005 and 2006 this is not always possible.

- For some people for whom an opting municipality has been responsible since 2005, "artificial" ASU datasets were created by the Federal Employment Agency in parallel. These can be identified via estatvor (transfer to an authorised municipality).
- From mid-2005 until mid-2006, the coArb IT procedure, from which the jobseeker and applicant pool data originate, was superseded by the VerBIS procedure at the Federal Employment Agency. In July 2005, coArb was first replaced by VerBIS in the employment agency in Wiesbaden as a pilot project. From December 2005 onwards, it was then gradually replaced by VerBIS in several stages in all employment agencies. The information for many of the variables recorded was gathered with different levels of differentiation and different qualitative weighting in the two systems. It is therefore very difficult to integrate these variables into the IEB, which is only possible using a special procedure (mapping). Unfortunately, a full conversion of the affected variables from coArb to VerBIS cannot be achieved by means of mapping, so for some variables there is an unusually large number of the values "no details available", "other" or "missing". Moreover, striking differences may occur in frequency counts, depending on whether the original source of the data was coArb or VerBIS. Important limitations of the analysis potential are mentioned in the corresponding description of variables.

4.5.2 XASU

- In contrast to the job search spells from the cooperation of employment agencies and municipalities (ARGE) and the separated responsibilities, systematic cases of underrecording have emerged for the 69 authorised municipalities since 01 January 2005. Thus, data from the XASU source should only be analysed from June 2006 onwards.
- A variety of variables sometimes have only a very low degree of completeness for the XASU. Variables which are affected by this include "school-leaving qualification", "severe disability status", "reason for notification" as well as "employment status prior to job search". Although the degree of completeness of these variables improves over time, they are still partly unsatisfactory. The beruf "occupation – activity performed" variable is not available in the XASU for almost the entire period available.
- For a number of institutions (districts), the proportion of registered recipients of unemployment benefit II who are also registered jobseekers is implausibly large at

times or continuously in the IEB. One possible reason for this could be an incorrect determination of the status “not unemployed but seeking work” by these institutions.

- The institution-related and period-related plausibility of the XASU data should be examined before use, taking the research question into account.

5 Description of variables

Frequency counts and overviews of the individual values and labels of the variables can be found in separate files under <http://fdz.iab.de>.

5.1 Identifiers

5.1.1 Artificial individual ID (persnr)

Variable label	Individual ID
Variable name	persnr
Category	identifiers
Origin	BeH, LeH, LHG, XLHG, ASU, XASU
Data type	numerical
Hierarchy	none
Detailed description	<p>The artificial individual ID indicates which observations belong to the same person. Artificial means that it is not possible to infer any of the person’s characteristics or any original identifiers from this individual ID.</p> <p>As there is no uniform individual identifier in the different data sources, the allocation of the information from different data sources (e.g. employment and benefits) to individuals is not always unambiguous. In such cases, implausible employment histories may arise.</p> <p>The formation of the individual identifier which spans all data sources is based on a heuristic developed by the BA.</p>

5.1.2 Artificial establishment number (betnr)

Variable label	Establishment ID
Variable name	betnr
Category	identifiers
Origin	BeH
Data type	numerical
Hierarchy	none

Detailed description	<p>The artificial establishment number indicates which observations belong to the same establishment. It is based on the establishment number allocated by the BA, which was replaced by an artificial number. (Further information on the allocation of establishment numbers by the BA can be found in Bender et al. 1996: p. 15 et seq. and pp. 27-30.) The establishment ID and year specification can be used to merge individual and establishment information.</p> <p>For the establishment number, the following should be observed in general:</p> <ul style="list-style-type: none"> a) If the company has one office only, or if the company has one office only in one municipality, this office is the establishment and receives an establishment number. b) If the company has several branch offices in one municipality, these establishment premises / workplaces must be merged into a single establishment under one establishment number, if they are part of the same economic class. Vice versa, if they are not part of the same economic class, each branch office is an establishment and receives an establishment number each. c) If the company has several branch offices in several municipalities, each of these branch offices is an establishment and receives an establishment number each. <p>In this context, the following definitions with regards to the allocation of establishment numbers as part of the notification procedure for social security must be observed:</p> <ul style="list-style-type: none"> a) An establishment is a regionally and economically delimited unit in which employees work and to which, according to the above-mentioned principles, an establishment number is to be allocated. b) A workplace is a unit in which employees work and to which, according to the above-mentioned principles, no establishment number is to be allocated. c) A company as a term combines establishment premises and workplaces of the same employer. d) An employer is any natural person or legal entity that employs at least one employee subject to social insurance contributions or in marginal part-time employment. e) Establishment and establishment premises are synonyms; branch office is a synonym for subsidiary, district office, out-sourced office, workplace, etc. if it is no establishment.
Note on quality	<p>The establishment ID is only missing in a very limited number of cases. These observations are notifications for the person group "205" (earnings notifications for casual workers). As establishment variables (place of work, economic activity, establishment size, etc.) are merged via the establishment number, they are missing in these observations.</p>

5.1.3 Establishment-ID acc. to Survey (idnum)

Variable label	Establishment-ID acc. to Survey
Variable name	idnum

Category	Identifiers
Origin	IAB Establishment Panel
Data type	Numeric
Hierarchy	None
Detailed description	The Establishment ID acc. to Survey is adopted from the IAB Establishment Panel. The variable is only filled in the Individual File, if the person is employed in an establishment, which is in the IAB-Establishment Panel on the reference date with a valid interview.

5.2 Period of validity

5.2.1 Original start date of observation (begorig)

Variable label	Original start date
Variable name	begorig
Category	period of validity
Origin	BeH, LeH, LHG, XLHG, ASU, XASU
Data type	date
Hierarchy	none
Detailed description	The original start date of the observation corresponds to the original start date of the notification. Since the notification logic might under certain circumstances allow for re-identification of the exact day of birth, the original information on the date were changed in these cases by applying the anonymisation procedure described in Chapter 3.1.5 Because of the rules of the notification procedure, in BeH observations the starting and ending year are always identical (obligation of the employer to submit annual employment notifications).

5.2.2 Original end date of observation (endorig)

Variable label	Original end date
Variable name	endorig
Category	period of validity
Origin	BeH, LeH, LHG, XLHG, ASU, XASU
Data type	date
Hierarchy	none
Detailed description	The original end date of the observation corresponds to the original end date of the notification. Since the notification logic might under certain circumstances allow for re-identification of the exact day of birth, the original information on the date were changed in these cases by applying the anonymisation procedure described in Chapter 3.1.5. Because of the rules of the notification procedure, in BeH observations the starting and ending year are always identical (obligation of the employer to submit annual employment notifications).

5.3 Personal information

5.3.1 Gender (frau)

Variable label	Gender
Variable name	frau
Category	personal variable
Origin	BeH, LeH, LHG, XLHG, ASU, XASU
Data type	numerical
Hierarchy	none
Detailed description	Gender dummy (0 - man, 1 - women). The gender information is constant within one individual account.

5.3.2 Year of birth (gebjahr)

Variable label	Year of birth
Variable name	gebjahr
Category	personal variables
Origin	BeH, LeH, LHG, XLHG, ASU, XASU
Data type	numerical
Hierarchy	none
Detailed description	The year of birth is constant within one individual account.
Note on quality	In the original data, it may happen that the year of birth changes between the data sources. This is corrected during the data preparation process. The information from the social security number is given highest priority here.

5.3.3 Nationality (nation)

Variable label	Nationality
Variable name	nation
Category	personal variables
Origin	BeH, LeH, LHG, XLHG, ASU, XASU
Data type	numerical
Hierarchy	none
Detailed description	The variable contains the nation codes used by the Federal Statistical Office (Statistisches Bundesamt).
Notes	Owing to its particular sensitivity with regard to data protection legislation, this variable is only made available in non-aggregated form on application and only in well-founded cases.

5.3.4 Nationality, aggregated (nation_gr)

Variable label	Nationality, grouped
Variable name	nation_gr
Category	personal variables
Origin	BeH, LeH, LHG, XLHG, ASU, XASU
Data type	numerical

Hierarchy	none
Detailed description	The variable contains a grouped version of the nation codes used by the Federal Statistical Office.

5.3.5 Marital status (famst)

Variable label	Marital status
Variable name	famst
Category	personal variables
Origin	LeH, LHG, XLHG, ASU, XASU
Data type	numerical
Hierarchy	none
Detailed description	<p>This variable describes the marital status. The characteristic in the LeH source has only two manifestations (0 - not married, 1 - married), while in the ASU / XASU sources, a distinction is made between four manifestations, and in the LHG / XLHG sources between seven manifestations. The information from the sources was not compared.</p> <p>1) ASU / XASU Marital status includes categories of living in a joint household with children or a partner. However, it is not possible to distinguish clearly whether</p> <ul style="list-style-type: none"> • a married person / person living in a joint household is bringing up children, • a married person / person living in a joint household / single person has any children at all, • a lone parent / person living in a joint household / single person is married <p>2) XLHG The quality of the variable is reduced due to a break in the notification logic in 2007.</p>

5.3.6 Number of children (kind)

Variable label	Number of children
Variable name	kind
Category	personal variables
Origin	LeH, LHG, XLHG, ASU, XASU
Data type	numerical
Hierarchy	none
Detailed description	<p>This variable has a different meaning depending on the data source. Except for the LeH source, it indicates the number of children aged under 15 living in the household / in the benefit community (Bedarfsgemeinschaft) at the time when the application was made.</p> <p>1) LeH The LeH only distinguishes between whether the number of children is</p>

	<p>zero or at least one. The following values are therefore available:</p> <p>0 no children 100 One or more children</p> <p>The variable is not updated when there are changes in the type of benefit or the approval of benefits, but only when a new case of benefit receipt occurs after a period of employment.</p> <p>Children are generally included in the LeH up to their 18th year of age, under certain conditions also beyond that date if these conditions constitute a higher benefit rate for the beneficiary.</p> <p>2) ASU</p> <p>Here, the value of the variable corresponds to the number of children. Until 30 June 2006, only up to nine children could be recorded. The value 0 does not exist. For datasets prior to 30 June 2006, the zero value was recoded to "missing", since it is not clear whether zero should be interpreted as "no children" or as "field not filled in". For datasets after 30 June 2006, the characteristic is only filled in if children exist.</p> <p>3) LHG, XLHG, XASU</p> <p>The variable shows the number of children in the benefit community (Bedarfsgemeinschaft). In the LHG and XLHG sources, the value is valid for the entire original period.</p>
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5.3.7 School education and vocational training (bild)

Variable label	School education and vocational training
Variable name	bild
Category	personal variables
Origin	BeH, ASU, XASU
Data type	numerical
Hierarchy	none
Detailed description	<p>It must be taken into account that this variable has a different meaning depending on the data source:</p> <p>1) BeH</p> <p>For BeH observations, the variable contains the school education / vocational training reported by the employers in the employment notification procedure. The 'school education and vocational training' indicator is a combined variable which is used to gather information on both the employee's school education and his/her vocational qualifications (the highest qualification gained in each case). Here the school qualifications are to be established first and then the vocational qualifications. Only in the case of the values 5 (degree from a university of applied sciences) and 6 (university degree) are no other vocational qualifications determined (see BA 2005, p. IX.). The following values exist:</p> <p>1 Primary school / lower secondary school / intermediate school leaving certificate or equivalent school education, without a vocational qualification</p> <p>2 Primary school / lower secondary school / intermediate school</p>

	<p>leaving certificate or equivalent school education with a vocational qualification</p> <p>3 With upper secondary school leaving certificate (Abitur), without a vocational qualification</p> <p>4 With upper secondary school leaving certificate (Abitur) and a vocational qualification</p> <p>5 Degree from a university of applied sciences (Fachhochschule)</p> <p>6 University degree</p> <p>It cannot be inferred from the data whether the individual completed school education or not, both cases can occur in the values "1" and "2".</p> <p>"Changes in the vocational training status frequently occur at the same time as a change of establishment. This is because the notification data are compiled anew in the new firm. If, for example, an employee has gained a higher qualification via a part-time further training course while still working then this change of status is probably not recorded until he/she joins a new firm. It can generally be assumed that when a person is employed in a firm for a longer period, the personal data that they reported when they joined the firm is simply continued." (Meinken / Koch 2004, p. 63).</p> <p>A method for correcting missing values or temporal inconsistencies in the education and training data in the predecessor sample, the IABS, can be found in Fitzenberger et al. (2006) and in Drews (2006). Only the BeH data source is used for this, however, as this was the only data source with information on education and training in the IABS.</p> <p>2) ASU / XASU</p> <p>ASU and XASU observations contain the completed vocational training at the beginning of the job search activity. The following values exist:</p> <p>21 no completed vocational training</p> <p>22 in-firm training</p> <p>23 external training</p> <p>24 full-time vocational school (Berufsfachschule)</p> <p>25 technical college (Fachschule)</p> <p>26 university of applied sciences (Fachhochschule)</p> <p>27 university</p> <p>For the ASU source, it has not been possible to differentiate between in-firm and external vocational training since 01 July 2006 due to changes in the procedure. For the XASU source, this differentiation is not possible at all over the entire period of time. In both cases, the mixed category is coded to "in-firm training". For the ASU source, it has neither been possible to differentiate between "no completed vocational training" and "not specified" since 01 July 2006.</p>
Note on quality	<p>"For certain sub-groups there is a large proportion of missing data because this variable is not of importance as regards social security (this affects people in marginal part-time employment, for example)." (Meinken / Koch 2004, p. 63).</p> <p>We advise against a quantitative analysis of the variable for the ASU source from 2006 forward.</p>

5.3.8 School-leaving qualification (schbild)

Variable label	School leaving qualifications
Variable name	schbild
Category	personal variables
Origin	ASU, XASU
Data type	numerical
Hierarchy	none
Detailed description	This variable contains the school-leaving qualification held by the individual at the beginning of the period of unemployment or job search.
Note on quality	Although the degree of completeness in the XASU has continuously increased over the years, it remains comparatively low (partially under 50 %).

5.3.9 Skills level (quali)

Variable label	Qualification
Variable name	quali
Category	personal variables
Origin	ASU
Data type	numerical
Hierarchy	none
Detailed description	This variable takes into account not only vocational training but also occupational experience. In the case of equivalent competence as a result of educational background, performance or experience, a skills level can also be entered when the applicant does not hold a corresponding qualification.
Note on quality	Due to a change in the notification procedure, this value is only available until 2006.

5.3.10 Severe disability status (schweb)

Variable label	Severe disability status
Variable name	schweb
Category	personal variables
Origin	ASU, XASU
Data type	numerical
Hierarchy	none
Detailed description	A severe disability status is recognised from a level of disability of over 50 %. Equal status to severely disabled is granted on application in accordance with Section 2 of the Severely Disabled Persons Act (Schwerbehindertengesetz – SchwbG) when the level of disability is 30 or 40 %. The variable refers to the start date of the period of unemployment or the job search status.

Notes	Owing to its particular sensitivity with regard to data protection legislation, this variable is only made available in non-aggregated form on application and only in well-founded cases.
Note on quality	The degree of completeness of this variable is poor in the XASU in 2005 and 2006.

5.3.11 Health problems (gesund_ein)

Variable label	Health status with effects on job placing
Variable name	gesund_ein
Category	personal variables
Origin	ASU, XASU
Data type	numerical
Hierarchy	none
Detailed description	The variable provides information on whether placement-relevant, approved health problems exist for a person.
Notes	<p>The new <i>health problems - impact on placement</i> characteristic replaces the old <i>health problems</i> characteristic which was included in LIAB QM2 9308 and filled in only until 2006 due to a change in the notification procedure.</p> <p>For this characteristic it is not known whether a customer refused to give details or the information was not collected by the placement agent.</p> <p>Owing to its particular sensitivity with regard to data protection legislation, this variable is only made available in non-aggregated form on application and only in well-founded cases.</p>

5.4 Information on employment, benefit receipt and job search

5.4.1 Reason for notification / reason for end of benefit receipt / reason for discontinuation of unemployment benefit II / reason for deregistration (grund)

Variable label	Reason of notification / Reason of end of benefit receipt
Variable name	grund
Category	information on employment, benefit receipt and job search
Origin	BeH, LeH, LHG, XLHG, ASU, XASU
Data type	numerical
Hierarchy	none
Detailed description	<p>1) BeH</p> <p>In BeH observations, the 'reason of notification' variable indicates the reason why the employer submitted the employment notification in question to the social security agencies. However, not all of the possible reasons for submitting a notification that may occur in the context of the notification procedure are available in the IEB. For instance, the IEB only includes notifications that have information on earnings (i.e. annual, employment interruption and end of employment notifications), whilst initial registrations are not contained as they contain no infor-</p>

mation on earnings. However, this does not involve a loss of information, as the details from a registration are transmitted again with the following annual, employment interruption or end of employment notification.

The reasons for submitting employment notifications are encoded according to the regulations of the notification procedure which has been in effect since 01 January 1999 (in accordance with DEÜV).

2) LeH

In LeH observations, the variable indicates the reason for the end of receipt of unemployment benefit, unemployment assistance or maintenance allowance. In contrast, the LeH contains no information about the reasons for the start of benefit receipt, as the information for the LeH comes from the notifications submitted by the employment agencies to the health insurance institutions regarding finished periods of benefit receipt.

3) LHG / XLHG

The LHG and XLHG datasets contain the 'reason for discontinuation of Unemployment Benefit II' and indicate the reason why current benefits have been discontinued. The 'reason for discontinuation of Unemployment Benefit II' variable **refers to the individual**, not to the benefit community. If the Unemployment Benefit II receipt of a different member of the benefit community is discontinued, all observations of the members of the benefit community are split on this date, but the reason for discontinuation of Unemployment Benefit II is only available for the individual whose benefit is discontinued.

If the Unemployment Benefit II receipt of one member of the benefit community is discontinued, new observations for all members of the benefit community are started at this date, while the reason for end / discontinuation of benefit is only available for the person concerned. This variable is valid exactly at the end of the original observation.

4) ASU / XASU

In the case of ASU records, the variable contains the deregistration or exit reason. It must be taken into account here that the number of values of the variable has been reduced from 26 April 2003 onwards. For analysis over long periods of time, the old values can be recoded to the currently valid ones using the table below:

old	->	new	old	->	new	old	->	new	old	->	new
29	->	60	36	->	61	44	->	74	51	->	74
30	->	60	37	->	66	45	->	77	52	->	76
31	->	61	38	->	66	46	->	67	53	->	68
32	->	60	39	->	71	47	->	67	54	->	78
33	->	60	40	->	69	48	->	78		->	

	34 -> 60	42 -> 65	49 -> 69				
	35 -> 60	43 -> 70	50 -> 75				
Note on quality	Proportion of valid values (degree of completeness) for the reason for notification in the LHG, XLHG, ASU and XASU data sources:						
	Source	2005	2006	2007	2008	2009	2010
	LHG	0.157	0.150	0.182	0.179	0.160	0.154
	XLHG	0.077	0.098	0.119	0.126	0.193	0.271
	ASU	0.703	0.968	0.948	0.932	0.924	0.931
XASU	0.254	0.361	0.363	0.367	0.383	0.409	

5.4.2 Daily wage, daily benefit rate (tentgelt)

Variable label	Daily wage/daily benefit
Variable name	tentgelt
Category	information on employment, benefit receipt and job search
Origin	BeH, LeH
Data type	numerical
Hierarchy	none
Detailed description	<p>1) BeH</p> <p>In BeH observations, this variable shows the employee's gross daily wage. It is calculated from the fixed-period wages reported by the employer and the duration of the (unsplit) original notification period in calendar days. The daily wage is shown in euros.</p> <p>Until 1998, employers in principle only reported the earnings which were subject to social security contributions. Earnings below the marginal part-time income threshold were not reported. Earnings exceeding the upper earnings limit for statutory pension insurance are only reported up to this limit. There are two upper earnings limits in the statutory pension insurance scheme. The earnings limit of the miners' pension insurance is generally higher than the earnings limit of the pension insurance for wage and salary earners. However, in the data a differentiation between these two insurance carriers is not possible.</p> <p>Since the inclusion of marginal part-time employees in the employment notification procedure on 01 April 1999, earnings below the marginal part-time income threshold have also been recorded; the upper earnings limit still applies as the upper ceiling. In some cases, however, the reported earnings nonetheless exceed the upper earnings limit. Generally, this can probably be attributed to the payment of annual bonuses which the employer can add to the regular earnings in the annual, employment interruption or end of employment notifications. In this case, it is irrelevant whether the upper earnings limit in the statutory pension insurance which is decisive for the notification period is exceeded as a result of this addition. However, such earnings notifications could also be due to incorrect details in the employment period. (The earnings information, however, may be considered less error-prone due to their insurance relevance.) The marginal part-time income threshold and the upper earnings limit for statutory pension in-</p>

	<p>insurance differ from year to year as well as between Eastern and Western Germany (the decisive factor is the location of the establishment). An overview of these limits and thresholds can be found under http://fdz.iab.de.</p> <p>A daily wage reported as 0 euros can be put down to “employment interruption notifications”. During these periods, the employment relationship continues to exist in legal terms, but without pay. This is the case for periods of illness after the end of continued payment of wages, for periods of maternity leave and for sabbaticals.</p> <p>The daily wage is shown with two decimal places. All values greater than 0 and smaller than 0.01 were rounded up to 0.01. This makes it possible to identify the above-mentioned employment interruption notifications with the condition daily wage = 0.</p> <p>2) LeH</p> <p>For LeH observations, the variable shows the daily benefit rate, converted into euros in each case. It must be taken into account that for observations with an original start date prior to 01 January 1998 the daily benefit rate applies to working days, while for observations with an original start date from 01 January 1998 onwards it applies to calendar days.</p> <p>Since 01 January 2005, a daily benefit rate reported as 0 euros can be put down to benefit suspension periods or interruptions of benefit payments. If a reason for end of benefit is reported for an observation with a daily benefit rate equal to 0, then it is a notification of interruption of benefit payments. In the case of observations that reflect a period of benefit suspension, the entitlement is the same as before the start of the benefit suspension period.</p>
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5.4.3 Transition zone (gleitz)

Variable label	Transition zone
Variable name	gleitz
Category	information on employment, benefit receipt and job search
Origin	BeH
Data type	numerical
Hierarchy	none
Detailed description	<p>This variable has only been available from 2003 onwards and only for BeH observations. It indicates whether the employment notification relates to employment in the low-wage sector, within the so-called transition zone. Jobs in the transition zone have a gross monthly wage of € 400.01 to € 800.00 (so-called midi jobs) for which the employee only has to pay a reduced overall social security contribution. As employees with earnings in the transition zone can voluntarily pay the “regular” social security contribution, not all employees with corresponding earnings are automatically classified as being in the transition zone. The corresponding legislation has been in force since 01 April 2003.</p>

5.4.4 Occupation – activity performed / last activity (beruf)

Variable label	Occupation
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Variable name	beruf
Category	employment / benefit receipt
Origin	BeH, ASU, XASU
Data type	numerical
Hierarchy	none
Detailed description	<p>1) BeH The occupational title of the job performed by the employee during the notification period is a component of the 'employment details' submitted by the employer. For this, the employer encodes the employee's job in accordance with the "Classification of Occupations. Systematic and Alphabetical Directory of Job Titles" (published by the Federal Employment Agency, Nuremberg, 1988), which contains approx. 25,000 job titles. The occupational classification consists of a 3-digit code and comprises about 330 values. If more than one job title with different classification codes applies to one employee, the employer is required to select the job title that best defines the main activity performed (see BA 2005, p. V).</p> <p>2) ASU / XASU For ASU observations, this variable contains the occupation of the last activity performed. For XASU observations, the variable contains the last successfully completed vocational training.</p>

5.4.5 Occupational status and working hours (stib)

Variable label	Occupational status and working hours
Variable name	stib
Category	information on employment, benefit receipt and job search
Origin	BeH
Data type	numerical
Hierarchy	none
Detailed description	<p>The employee's occupational status during the notification period is reported by the employer in the "employment details". The "occupational status" variable first distinguishes between full-time and part-time employees. The decisive factor here is the ratio between the contracted hours and the usual working hours in the establishment. The variable actually provides details about the occupational status for full-time employees only, whilst for part-time employees it only records whether their working hours exceed a certain limit or not. This limit was 20 hours of work per week until 1978, between 1979 and 1987 it was 15 hours per week, and since 1988 it has been 18 hours per week. The distinction between blue-collar employees in full-time employment and white-collar employees centres solely on the type of pension insurance institution (Federal Social Insurance Office for Salaried Employees – BfA – for white-collar workers, and Land Social Insurance Office – LVA – for blue-collar workers). The "employees in vocational training" category covers not only trainees / apprentices, placement</p>

	<p>workers and interns but also semi-skilled trainees, students at colleges for health occupations and participants in subsidised further vocational training, retraining and induction training.</p> <p>If more than one code is possible for an employee, the employer is required to classify the job according to the activity which is performed most. If this cannot be ascertained clearly, the code of the higher occupational status is to be entered (see BA 2005, p. VI).</p>
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5.4.6 Employment status (erwstat)

Variable label	Employment status
Variable name	erwstat
Category	personal variables
Origin	BeH, LeH, LHG, XLHG, ASU, XASU
Data type	numerical
Hierarchy	none
Detailed description	<p>This variable assumes different values with different meanings for each data source.</p> <p>1) BeH</p> <p>For BeH observations, the variable contains the category of the employment notification, which was introduced along with the new notification procedure (DEÜV) as of 01 January 1999. It indicates contribution- or benefit-related particularities of the employment relationship.</p> <p>If multiple keys apply to an employment notification, the smallest must be indicated by the reporting employer. The majority of these cases are employment relationships subject to social security contributions without any exceptions which are kept under key number 101. Therefore, it is possible that these employees are slightly overestimated. The notification procedure states that changes in the employment status - e.g. when an apprentice is employed with his/her training company after completing his/her vocational training - must be indicated by a new notification (cf. Deutsche BKK 2012, p. 31).</p> <p>The status can be contained in employment notifications that refer to the years prior to 1999 but were not received until 1999 or later. For notifications which were received before 1999, an attempt is made to allocate the notifications to the person groups on the basis of certain rules and with the aid of the 'school education and vocational training', 'occupational status and working hours' and 'occupation' variables as well as other information. In many cases, however, appropriate allocations are not possible. Since 01 April 1999, also employees in marginal part-time employment have been recorded in the DEÜV notification procedure. This group of people can be differentiated via the manifestations 109 and 209. For employees in marginal part-time employment, no data prior to the introduction of the notification obligation in 1999 could be collected.</p> <p>2) LeH</p> <p>For LeH observations, the variable employment status contains the grouped benefit type. Thus, it can be differentiated whether a person receives unemployment benefit, unemployment assistance or mainte-</p>

	<p>nance allowance or whether contributions to private long-term care insurance are paid by the BA.</p> <p>3) ASU / XASU</p> <p>For ASU observations, the "employment status" variable reports the job search status. Recipients of unemployment benefits (Unemployment Benefit I or II) over the age of 58 who receive benefits under the relaxed conditions according to Section 428 of Social Code Book III (or Section 65 Para. 4 of Social Code Book II) and individuals aged over 58 who are not benefit recipients and are not willing to be placed in employment in the sense of Section 252 Para. 8 Social Code Book VI are recorded as individuals seeking advice.</p> <p>In XASU observations, the variable employment status reports the "not unemployed, but registered as a job seeker" as well as "unemployed and registered as a job seeker" values.</p> <p>Since the notification logic might in many cases allow for re-identification of the exact day of birth, the original information on the date were changed by applying the anonymisation procedure described in Chapter 3.1.5</p> <p>4) LHG / XLHG</p> <p>For LHG and XLHG datasets, the "employment status" characteristic shows whether the person is registered as underage employable, full-aged employable or not employable as of old-age pension threshold.</p> <p>Since the notification logic might in many cases allow for re-identification of the exact day of birth, the original information on the date were changed by applying the anonymisation procedure described in Chapter 3.1.5</p>
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5.4.7 Employment status prior to job search (estatvor)

Variable label	Employment status prior to job search
Variable name	estatvor
Category	information on employment, benefit receipt and job search
Origin	ASU, XASU
Data type	numerical
Hierarchy	none
Detailed description	<p>For ASU and XASU observations, this variable shows the employment status prior to the job search activity. From 12/2002 onwards the values of the variable have reduced substantially. The values of older observations were recoded to the currently valid values, which are thus valid for the entire period.</p> <p>This information does not refer to the start date of the episode, but to the start of the original time period.</p>
Note on quality	The proportion of valid values (degree of completeness) is very small for XASU observations:

5.4.8 Type of benefit (lart)

Variable label	Benefit type
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Variable name	lart
Category	information on employment, benefit receipt and job search
Origin	LeH
Data type	numerical
Hierarchy	none
Detailed description	Type of earnings replacement benefit paid by the BA. In the "employment status" variable this variable is combined for the LeH data source.

5.4.9 BA Client group (kundengr)

Variable label	Person Group
Variable name	kundengr
Category	information on employment, benefit receipt and job search
Origin	ASU
Data type	numerical
Hierarchy	none
Detailed description	This variable contains the classification of the BA clients into different types, such as market client, client to be activated, client to be supported and counselling client. This differentiation takes into account the need for action with regard to the individual's potential obstacles to integration.

5.4.10 Type of termination of last job (art_kuend)

Variable label	Reason for end of previous employment
Variable name	art_kuend
Category	information on employment, benefit receipt and job search
Origin	ASU
Data type	numerical
Hierarchy	none
Detailed description	This variable describes how the last employment or training relationship was terminated before a new period of job search. It can therefore be used to identify job-to-job placements.

5.4.11 Desired working hours of the job sought (arbzeit)

Variable label	Working hours of job application
Variable name	arbzeit
Category	information on employment, benefit receipt and job search
Origin	ASU
Data type	numerical
Hierarchy	none
Detailed description	During the placement procedure, jobseekers indicate how many working hours the job they are seeking should have.

5.4.12 Duration of remaining entitlement to unemployment benefit (restanspruch)

Variable label	Residual claim of unemployment benefits
Variable name	restanspruch
Category	information on employment, benefit receipt and job search
Origin	LeH
Data type	numerical
Hierarchy	none
Detailed description	<p>Remaining entitlement is the entitlement that remains after the end of the current period of benefit receipt. The remaining entitlement used to remain in place for seven years, since February 2006, this has been four years. If the end date of the benefit receipt is before 01 January 1998, the remaining entitlement is reported in working days, after this date it is reported in calendar days. This entitlement counts up to a maximum of the longest possible duration for the individual's respective age.</p> <p>This information does not refer to the start date of the episode, but to the start of the original time period.</p>

5.4.13 Type of institution (traeger)

Variable label	Type of provider
Variable name	traeger
Category	information on employment, benefit receipt and job search
Origin	LHG, XLHG, ASU, XASU
Data type	numerical
Hierarchy	none
Detailed description	<p>Until 2011, this variable shows the three possible types of institution responsible for the sphere of Social Code Book II (cooperation of employment agencies and municipalities (ARGE), authorised municipalities (zkT), separated responsibilities (gT)) and the type of institution for the sphere of Social Code Book III (Federal Employment Agency). From 2011 onwards, ARGEs have generally been organised as joint facilities (gE). By 01 January 2012 at the latest, separated responsibilities formed joint facilities or authorised municipalities. The characteristics manifestation 2 indicates the cooperation of employment agencies and municipalities (ARGE) type of institution until 2010, since 2011 it has been joint facilities (gE).</p> <p>The cooperation of employment agencies and municipalities (ARGE) is formed by the Federal Employment Agency and municipalities dealing with tasks jointly. In the case of authorised municipalities (zkT) (at first also called "opting local authorities" according to the experimental clause of Section 6a), the relevant municipality takes on the tasks in the field of SGB II independently. In the case of separated responsibilities (gAw), also called municipalities exercising their duties separately (gAw), the federal and/or municipal SGB II benefits are granted on their own responsibility.</p> <p>It must be taken into account that the district territories covered by the institutions are not always clear and thus may not necessarily corre-</p>

	<p>spond to the boundaries of the districts. The same applies to the employment agencies.</p> <p>ASU and XASU observations contain the type of institution that holds the records of the Applicant Pool Data.</p>
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5.5 Establishment variables

5.5.1 Economic activity 73 (w73_3)

Variable label	classification of economic activities 73
Variable name	w73_3
Category	establishment variables
Origin	BeH
Data type	numerical
Hierarchy	division (1-digit code) group (2-digit code) class (3-digit code) of economic activity
Detailed description	<p>This variable indicates the economic activity as a 3-digit code in accordance with the WS73 classification and is available from 1975 up to and including 2002.</p> <p>WS73 stands for the “Classification of Economic Activities for the Statistics of the Federal Employment Services, edition 1973” (“Klassifikation der Wirtschaftszweige für die Statistik der Bundesanstalt für Arbeit, Ausgabe 1973”). Using a 3-digit code, the classification distinguishes between 269 classes of economic activity, whereby the first digit of the code defines the division of economic activity of a total of 10, and the first two digits together define the particular group of economic activity of a total of 95.</p> <p>Each establishment is only assigned one code. The assignment to the relevant class of economic activity is carried out under consideration of the institutional orientation of the establishment.</p>

5.5.2 Economic activity 93, 5-digit code (w93_5)

Variable label	classification of economic activities 93, sub-classes
Variable name	w93_5
Category	establishment variables
Origin	BeH
Data type	numerical
Hierarchy	section (1-digit code) division (2-digit code) group (3-digit code) class (4-digit code) sub-class (5 digit code) of economic activity
Detailed description	<p>This variable indicates the economic activity as a 5-digit code in accordance with the WZ93 classification and is available from 1998 up to and including 2003. WZ93 stands for the “Classification of Economic Activities for the Statistics of the Federal Employment Services, edition 1993” (“Klassifikation der Wirtschaftszweige für die Statistik der Bundesanstalt für Arbeit, Ausgabe 1993”). The WZ93 is based on the Statistical Classification of Economic Activities in the European Community NACE Rev. 1 („Nomenclature générale des activités économiques dans les communautés européennes“) which has four levels the first two of which are based on the international standard ISIC Rev. 3 („In-</p>

	<p>ternational Standard Industrial Classification of All Economic Activities“).</p> <p>Each establishment is only assigned one code. If an establishment is active in different economic sectors, the main economic activity should be reflected.</p>
Notes	<p>Owing to its particular sensitivity with regard to data protection legislation, this variable is only made available in non-aggregated form on application and only in well-founded cases. Otherwise, the economic activity is only shown as the 3-digit code (w93_3).</p>

5.5.3 Economic activity 93, 3-digit code (w93_3)

Variable label	classification of economic activities 93, groups
Variable name	w93_3
Category	establishment variables
Origin	BeH
Data type	numerical
Hierarchy	section (1-digit code) division (2-digit code) group (3-digit code) class (4-digit code) sub-class (5 digit code) of economic activity
Detailed description	<p>This variable indicates the economic activity as a 3-digit code in accordance with the WZ93 classification and is available from 1998 up to and including 2003. WZ93 stands for the “Classification of Economic Activities for the Statistics of the Federal Employment Services, edition 1993” (“Klassifikation der Wirtschaftszweige für die Statistik der Bundesanstalt für Arbeit, Ausgabe 1993”). The WZ93 is based on the Statistical Classification of Economic Activities in the European Community NACE Rev. 1 („Nomenclature générale des activités économiques dans les communautés européennes“) which has four levels the first two of which are based on the international standard ISIC Rev. 3 („International Standard Industrial Classification of All Economic Activities“).</p> <p>Each establishment is only assigned one code. If an establishment is active in different economic sectors, the main economic activity should be reflected.</p>

5.5.4 Economic activity 03, 5-digit code (w03_5)

Variable label	classification of economic activities 03, sub-classes
Variable name	w03_5
Category	establishment variables
Origin	BeH
Data type	numerical
Hierarchy	section (1-digit code) division (2-digit code) group (3-digit code) class (4-digit code) sub-class (5-digit code) of economic activity
Detailed description	<p>This variable indicates the economic activity as a 5-digit code in accordance with the WZ03 classification and is available from 2003 up to 2008. WZ03 stands for the “Classification of Economic Activities, Edition 2003” (“Klassifikation der Wirtschaftszweige Ausgabe 2003“) of the Federal Statistical Office (eds.). Like the WZ93, the WZ03 is based on the Statistical Classification of Economic Activities in the European</p>

	<p>Community NACE Rev. 1 (see description of variables w93_3, w93_5). The classification of the economic activity has been updated, whereas the structure of the WZ93 has been largely maintained.</p> <p>Each establishment is only assigned one code. If an establishment is active in different economic sectors, the main economic activity should be reflected.</p>
Notes	<p>Owing to its particular sensitivity with regard to data protection legislation, this variable is only made available in non-aggregated form on application and only in well-founded cases. Otherwise, the economic activity is only shown as the 3-digit code (w03_3).</p>

5.5.5 Economic activity 03, 3-digit code (w03_3)

Variable label	classification of economic activities 03, groups
Variable name	w03_3
Category	establishment variables
Origin	BeH
Data type	numerical
Hierarchy	section (1-digit code) division (2-digit code) group (3-digit code) class (4-digit code) sub-class (5 digit code) of economic activity
Detailed description	<p>This variable indicates the economic activity as a 3-digit code in accordance with the WZ03 classification and is available from 2003 up to 2008. WZ03 stands for the “Classification of Economic Activities, Edition 2003” (“Klassifikation der Wirtschaftszweige Ausgabe 2003”) of the Federal Statistical Office (eds.). Like the WZ93, the WZ03 is based on the Statistical Classification of Economic Activities in the European Community NACE Rev. 1 (see description of variables w93_3, w93_5). The classification of the economic activity has been updated, whereas the structure of the WZ93 has been largely maintained.</p> <p>Each establishment is only assigned one code. If an establishment is active in different economic sectors, the main economic activity should be reflected.</p>

5.5.6 Economic activity 08, 5-digit code (w08_5)

Variable label	classification of economic activities 08, sub-classes
Variable name	w08_5
Category	establishment variables
Origin	BeH
Data type	numerical
Hierarchy	section (1-digit code) division (2-digit code) group (3-digit code) class (4-digit code) sub-class (5-digit code) of economic activity
Detailed description	<p>This variable indicates the economic activity as a 5-digit code in accordance with the WZ08 classification and is available from 2008 onwards. WZ08 stands for the “Classification of Economic Activities, Edition 2008” (“Klassifikation der Wirtschaftszweige Ausgabe 2008”) of the Federal Statistical Office (eds.). The WZ08 is based on the Statistical Classification of Economic Activities in the European Community NACE Rev. 2.</p> <p>Each establishment is only assigned one code. If an establishment is</p>

	active in different economic sectors, the main economic activity should be reflected.
Notes	Owing to its particular sensitivity with regard to data protection legislation, this variable is only made available in non-aggregated form on application and only in well-founded cases. Otherwise the economic activity is only shown as the 3-digit code (w08_3).

5.5.7 Economic activity 08, 3-digit code (w08_3)

Variable label	classification of economic activities 08, groups
Variable name	w08_3
Category	establishment variables
Origin	BeH
Data type	numerical
Hierarchy	section (1-digit code) division (2-digit code) group (3-digit code) class (4-digit code) sub-class (5 digit code) of economic activity
Detailed description	<p>This variable indicates the economic activity as a 3-digit code in accordance with the WZ08 classification and is available for the years since 2008. WZ08 stands for the “Classification of Economic Activities, Edition 2008” (“Klassifikation der Wirtschaftszweige Ausgabe 2008”) of the Federal Statistical Office (eds.). The WZ08 is based on the Statistical Classification of Economic Activities in the European Community NACE Rev. 2.</p> <p>Each establishment is only assigned one code. If an establishment is active in different economic sectors, the main economic activity should be reflected.</p>

5.5.8 Economic activity 73 generated – completed by extrapolation / imputation (w73_3_gen)

Variable label	w73_3 completed by extrapolation/imputation
Variable name	w73_3_gen
Category	establishment variables
Origin	BeH
Data type	numerical
Hierarchy	division (1-digit code) group (2-digit code) class (3-digit code)
Detailed description	<p>This variable indicates the economic activity as a 3-digit code in accordance with the WZ73 classification. From 1975 up to and including 2002, the variable contains the original values from w73_3. From 2003 onwards, the information is either continued or replaced with the help of recoding tables. Thus the variable provides time-consistent information on the economic activity based on the economic activity classification WS73. A detailed description can be found in Eberle et al. (2011).</p> <p>Further information on the WS73 classification can be found in the description of variables w73_3.</p>

5.5.9 Economic activity 73 generated – type of completion (group_w73_3)

Variable label	Type of imputation w73_3
Variable name	group_w73_3
Category	establishment variables
Origin	BeH
Data type	numerical
Hierarchy	None
Detailed description	<p>This variable indicates the type of completion for the w73_3_gen variable. It is denoted whether the relevant value in w73_3_gen is consistent with the original value from w73_3, still missing / extrapolated or imputed based on recording tables.</p> <p>A detailed description of the procedure can be found in Eberle et al. (2011).</p>

5.5.10 Economic activity 93 generated – completed by extrapolation / imputation (w93_3_gen)

Variable label	w93_3 completed by extrapolation/imputation
Variable name	W93_3_gen
Category	establishment variables
Origin	BeH
Data type	numerical
Hierarchy	section (1-digit code) division (2-digit code) group (3-digit code) class (4-digit code) sub-class (5 digit code) of economic activity
Detailed description	<p>This variable indicates the economic activity as a 3-digit code in accordance with the WZ93 classification. From 1998 up to and including 2003, the variable contains the original values from w93_3. Before 1998 and after 2003, the information is either written back / continued or replaced with the help of recoding tables, so that the variable contains time-consistent information on the economic activity based on the economic activity classification WS93. A detailed description can be found in Eberle et al. (2011).</p> <p>Further information on the WS93 classification can be found in the description of variables w93_3.</p>

5.5.11 Economic activity 93 generated – type of completion (group_w93_3)

Variable label	Type of imputation w93_3
Variable name	group_w93_3
Category	establishment variables
Origin	BeH
Data type	numerical
Hierarchy	None
Detailed description	<p>This variable indicates the type of completion for the w93_3_gen variable. It is denoted whether the relevant value in w93_3_gen is consistent with the original value from w93_3, still missing / extrapolated or imputed based on recording tables.</p>

	A detailed description of the procedure can be found in Eberle et al. (2011).
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5.5.12 Year of first appearance of establishment number (grd_jahr)

Variable label	year of first appearance
Variable name	grd_jahr
Category	establishment variables
Origin	BeH
Data type	numerical
Hierarchy	none
Detailed description	<p>This variable indicates the first appearance of the establishment number in the dataset.</p> <p>If an establishment number is only determined for the first time after 1975 (or after 1992 in Eastern Germany), this variable could indicate the date when the respective establishment was founded. However, it could also be an establishment that has been in existence for a longer time but has been allocated a new establishment number following a change of owner or a change in the legal form of the establishment. (For the allocation of establishment numbers see Bundesagentur für Arbeit 2007, p. 9-11). It might also be that the establishment already existed before, but did not have any employees liable to social security, or from 1999 onwards, neither marginal part-time workers.</p>

5.5.13 First appearance of establishment number (grd_dat)

Variable label	first appearance
Variable name	grd_dat
Category	establishment variables
Origin	BeH
Data type	date
Hierarchy	none
Detailed description	<p>This variable indicates the first appearance of the establishment number in the BeH to the day. If an establishment number in Western Germany is determined for the first time only after 1975, or after 1992 in Eastern Germany, this variable could indicate the date when the respective establishment was founded. However, it could also be an establishment that has been in existence for a longer time but has been allocated a new establishment number following a change of ownership or a change in the legal form of the establishment. (For the allocation of establishment numbers see Bundesagentur für Arbeit 2007, p. 9-11). It might also be that the establishment already existed before, but did not have any employees liable to social security, or from 1999 onwards, neither marginal part-time workers.</p>
Notes	<p>Owing to its particular sensitivity with regard to data protection legislation, this variable is only made available in non-aggregated form on application and only in well-founded cases. Otherwise, the economic activity is only shown as the 3-digit code (grd_jahr).</p>

5.5.14 Year of last appearance of establishment number (lzt_jahr)

Variable label	year of last appearance
Variable name	lzt_jahr
Category	establishment variables
Origin	BeH
Data type	numerical
Hierarchy	none
Detailed description	<p>This variable indicates the last appearance of the establishment number in the dataset (see Bender et. al. 1996).</p> <p>If the existence of an establishment number in the BHP already ends before 2008, it could indicate the closure of the establishment. However, other possible reasons for this are an “arbitrary change of the establishment number following a change of owner or a change in the legal form of the establishment”, the “outsourcing of parts of the firm under a new establishment number” or other administrative changes (see Bender et. al. 1996 or Bundesagentur für Arbeit 2007, p. 9-11).</p>

5.5.15 Last appearance of establishment number (lzt_dat)

Variable label	last appearance
Variable name	lzt_dat
Category	establishment variables
Origin	BeH
Data type	date
Hierarchy	none
Detailed description	<p>This variable indicates the last appearance of the establishment number in the dataset to the date (see Bender et. al. 1996). If the existence of an establishment number in the BHP already ends before 2008, it could indicate the closure of the establishment. However, other possible reasons for this are an “arbitrary change of the establishment number following a change of ownership or a change in the legal form of the establishment”, the “outsourcing of parts of the firm under a new establishment number” or other administrative changes (see Bender et al. 1996 or Bundesagentur für Arbeit 2007, p. 9-11).</p>
Notes	<p>Owing to its particular sensitivity with regard to data protection legislation, this variable is only made available in non-aggregated form on application and only in well-founded cases. Otherwise, the economic activity is only shown as the 3-digit code (lzt_jahr).</p>

5.5.16 Total number of employees (az_ges)

Variable label	no. employees
Variable name	az_ges
Category	generated establishment variables
Origin	BeH

Detailed description	This variable contains the total number of an establishment's employees reported to the social security agencies as of 30 June of a year. Since the introduction of the new notification regulations in 1999, people in marginal part-time employment have also been recorded. Part-time employees and dormant employment relationships (daily wage of zero) are also included.
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5.5.17 Number of full-time employees (az_ges_vz)

Variable label	no. full-time employees
Variable name	az_ges_vz
Category	generated establishment variables
Origin	BeH
Hierarchy	none
Detailed description	This variable contains the number of an establishment's full-time employees on 30 June of a year. People in marginal part-time employment and dormant employment relationships (daily wage of zero) are not included here.

5.5.18 Number of employees in marginal part-time employment (az_gf)

Variable label	no. marginal part-time workers
Variable name	az_gf
Category	generated establishment variables
Origin	BeH
Hierarchy	none
Detailed description	The number of employees in marginal part-time employment is generated using the person group code – values 109 and 209. This variable has only been contained in the dataset since 1999 as it has only been included in the social security notification procedure since that year.

5.5.19 Median gross wage of all full-time employees (te_med)

Variable label	median wage all full-time employees
Variable name	te_med
Category	generated establishment variables
Origin	BeH
Data type	numerical
Hierarchy	none
Detailed description	This variable contains the median gross daily wage of the full-time employees of a company. Employees in marginal part-time employment and dormant employment relationships (daily wage of zero) are not included. The values are in euros for all years. According to the social insurance notification regulations, employers must indicate the amount of gross income subject to contributions of the employer for a certain period of time (income for a period of time). Until the end of 1998, employers had to report the gross wage subject to social insurance contributions only. So only income above the marginal threshold and below the contribution assessment ceiling were

	recorded. Since 1999, also incomes below the contribution assessment ceiling have been recorded as part of the new notification procedure. Gross wages above the contribution assessment ceiling, however, are still cut. In order to determine the gross daily wage, the income for a period of time is divided by the number of calendar days of that period, and this value is rounded to two decimal places. These data are then aggregated on the establishment level.
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5.6 Location data

5.6.1 Place of residence: district (Kreis) (wo_kreis)

Variable label	Place of residence: district (Kreis)
Variable name	wo_kreis
Category	location data
Origin	BeH, LeH, LHG, XLHG, ASU, XASU
Data type	numerical
Hierarchy	federal state district
Detailed description	<p>In BeH and LeH observations, the place of residence at district level is only available for the years from 1999 onwards. The variable indicates the district (urban district or rural district) in which the social security contributor lives. The first two digits of the 5-digit district code (Kreisschlüssel) show the code for the federal state (Bundesland), positions 1-3 indicate the regional authority (Regierungsbezirk), and positions 1-5 show the district authority (Kreis). Federal states without a regional authority have a 0 in the third position.</p> <p>In the BeH, the place of residence is determined at the end of each year and added consistently to all datasets of a year. For the LHG, XLHG and XASU sources, the place of residence applies to the period of the original observation. For the ASU and LeH, the characteristic contains the place of residence at the beginning of the original period of time.</p> <p>In order to guarantee consistent regional allocations across the entire observation period, the information on the district was recoded with reference to the territorial allocation of 31 December 2010 for all sources, i.e. in all calendar years, a place of residence is assigned to a district in accordance with the boundaries that the district had on 31 December 2010. As the district boundaries have changed over time, cases would occur in which the district code changes without the individual concerned having relocated if the territorial allocations of the districts were not updated.</p> <p>For observations with an original start date after 2010, the location data was set to “missing”, because changes in the territorial allocation implemented from 2011 onwards cannot be recoded precisely to the allocation of 31 December 2010.</p> <p>For LHG, XLHG and XASU observations, the variable is available from 2005 onwards.</p>
Notes	Owing to its particular sensitivity with regard to data protection legislation, this variable is only made available in non-aggregated form on application and only in well-founded cases. Otherwise, only the federal state (wo_bula) is shown as regional information.

5.6.2 Place of residence: employment agency (wo_aa)

Variable label	Place of residence: employment agency (Arbeitsagentur)
Variable name	wo_aa
Category	location data
Origin	BeH, LeH, LHG, XLHG, ASU, XASU
Data type	numerical
Hierarchy	regional directorate employment agency
Detailed description	<p>This variable contains the employment agency of the employee's / BA client's place of residence. This information is extracted from the residence address. For the LHG, XLHG and XASU data sources, the place of residence is valid for the period of the original observation. In the case of the LeH and ASU, the variable contains the place of residence at the start of the period of unemployment or the job search. For the BeH and LeH, it is available from 1999 onwards, for the LHG, XLHG and XASU from 2005 onwards, and for ASU observations, the variable is already available before 1999.</p> <p>In order to guarantee consistent regional allocations across the entire observation period, the information on the employment agency was recoded to the territorial allocation of 31 December 2010 for all data sources observations, i.e. in all calendar years, a place of residence is assigned to an employment agency area in accordance with the boundaries that the employment agency area had on 31 December 2010. As the boundaries of the employment agency areas have changed over time, cases would occur in which a person's employment agency area changes without him/her having relocated if the territorial allocations were not updated. Berlin constitutes a problematic case with regard to updating territorial allocations, however: The boundaries of Berlin's employment agency areas have been changed repeatedly over the years, which could not be fully corrected even by recoding the territorial allocations. For observations with an original start date after 2010, the location data was set to "missing", because changes in the territorial allocation implemented from 2011 onwards cannot be recoded precisely to the allocation of 31 December 2010.</p>
Notes	Owing to its particular sensitivity with regard to data protection legislation, this variable is only made available in non-aggregated form on application and only in well-founded cases. Otherwise, only the area of the regional directorate in which the social security contributor's place of residence is located is shown.

5.6.3 Place of residence: regional directorate (wo_rd)

Variable label	Place of residence: regional directorate (Regionaldirektion)
Variable name	wo_rd
Category	location data
Origin	BeH, LeH, LHG, XLHG, ASU, XASU
Data type	numerical
Hierarchy	regional directorate employment agency
Detailed description	This variable contains the regional directorate of the place of residence. For the LHG, XLHG and XASU data sources, the place of resi-

	<p>dence is valid for the period of the observation. A change of place of residence (already at the level of local employment office (Geschäftsstelle) or local authority district (Gemeinde)) causes a new observation. In the case of the LeH and ASU, the variable contains the place of residence at the start of the period of unemployment or the jobseeker status. The variable is available for the BeH and the LeH from 1999 onwards, and for the LHG, XLHG and XASU from 2005 onwards. For ASU observations, the variable is already available before 1999.</p> <p>For all data sources, the territorial allocations were corrected to the status of 31 December 2010. For observations with an original start date after 2010, the location data was set to “missing”, because changes in the territorial allocation implemented from 2011 onwards cannot be recoded precisely to the allocation of 31 December 2010.</p>
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5.6.4 Place of residence: federal state (Bundesland) (wo_bula)

Variable label	Place of residence: federal state (Bundesland)
Variable name	wo_bula
Category	location data
Origin	BeH, LeH, LHG, XLHG, ASU, XASU
Data type	numerical
Hierarchy	federal state district
Detailed description	<p>This variable is an aggregation of the “district” variable to the 16 German federal states.</p> <p>In BeH observations, the federal state of the place of residence is only available for the years from 1999 onwards. Further information on the district of the place of residence can be found under 5.6.1 Place of residence: district (Kreis) (wo_kreis).</p>

5.6.5 Place of work: district (Kreis) (ao_kreis)

Variable label	Place of work: district (Kreis)
Variable name	ao_kreis
Category	location data
Origin	BeH
Data type	numerical
Hierarchy	federal state district
Detailed description	<p>The variable indicates the district (urban district or rural district) in which the employee’s establishment is located. The first two digits of the 5-digit district code (Kreisschlüssel) show the code for the federal state (Bundesland), positions 1-3 indicate the regional authority (Regierungsbezirk), and positions 1-5 show the district authority (Kreis). Federal states without a regional authority have a 0 in the third position.</p> <p>In order to guarantee consistent regional allocations across the entire observation period, the information on the district was recoded to the territorial allocation of 31 December 2010, i.e. in all calendar years, a place of work is assigned to a district in accordance with the boundaries that the district had on 31 December 2010. As the district bounda-</p>

	ries have changed over time, cases would occur in which the district code of the location of the establishment would change without the establishment concerned having relocated, if the territorial allocations were not updated.
Notes	Owing to its particular sensitivity with regard to data protection legislation, this variable is only made available in non-aggregated form on application and only in well-founded cases. Otherwise, only the federal state (ao_bula) is shown as regional information.

5.6.6 Place of work: employment agency (ao_aa)

Variable label	Place of work: employment agency (Arbeitsagentur)
Variable name	ao_aa
Category	location data
Origin	BeH, LeH, ASU
Data type	numerical
Hierarchy	regional directorate employment agency
Detailed description	<p>For employment notifications from the BeH, the characteristic contains the employment agency of the job location. For the LeH, this characteristic indicates the employment agency responsible for the payment. The employment agency taking care for the customer is included in the ASU. In contrast to the "place of residence: employment agency" characteristic, this characteristic has been available for the BeH and LeH datasets since 1975.</p> <p>The characteristic includes the corrected territorial allocation as of 31 December 2010. However, this does not apply to the LeH and ASU. For observations with an original start date after 2010, the location data was set to "missing", because changes in the territorial allocation implemented from 2011 onwards cannot be recoded precisely to the allocation of 31 December 2010.</p>
Notes	Owing to its particular sensitivity with regard to data protection legislation, this variable is only made available in non-aggregated form on application and only in well-founded cases. Otherwise, only the area of the regional directorate (ao_rd) in which the social security contributor's place of residence is located is shown.

5.6.7 Place of work: regional directorate (ao_rd)

Variable label	Place of work: regional directorate (Regionaldirektion)
Variable name	ao_rd
Category	location data
Origin	BeH, LeH, ASU
Data type	numerical
Hierarchy	regional directorate employment agency
Detailed description	<p>The variable indicates the regional directorate of the BA client's place of work. In contrast to the "place of residence: regional directorate" variable, the variable is available for BeH and LeH observations from 1975 onwards and for ASU observations from 2000 onwards.</p> <p>The characteristic includes the corrected territorial allocation as of 31 December 2010. For observations in 2011 and 2012, the location data</p>

	was set to “missing”, because changes in the territorial allocation implemented from 2011 onwards cannot be recoded precisely to the allocation of 31 December 2010.
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5.6.8 Place of work: federal state (Bundesland) (ao_bula)

Variable label	Place of work: federal state (Bundesland)
Variable name	ao_bula
Category	location data
Origin	BeH
Data type	numerical
Hierarchy	federal state district
Detailed description	The variable indicates the federal state in which the establishment is located. This variable is generated from the district key number (ao_kreis). The first two positions of the district key number indicate the federal state.

5.7 Generated technical variables

5.7.1 Source of observation (quelle)

Variable label	Source of spell
Variable name	quelle
Category	generated technical variables
Origin	BeH, LeH, LHG, XLHG, ASU, XASU
Data type	numerical
Hierarchy	none
Detailed description	The variable indicates the data source.

5.7.2 Observation counter per person (spell)

Variable label	counter per person
Variable name	spell
Category	generated technical variables
Origin	BeH, LeH, LHG, XLHG, ASU, XASU
Data type	numerical
Hierarchy	none
Detailed description	This variable numbers the spells of an individual in ascending order. Spells are generally sorted first by the year and then by the source of the spell. The variable “counter per person” has not to be continuous. This applies if for at least one year no information has been extracted from the IEB database for the specific individual.

5.7.3 Year (jahr)

Variable label	Year
Variable name	jahr

Category	generated technical variables
Origin	BeH
Data type	numerical
Hierarchy	none
Detailed description	<p>This variable is only included in the Establishment File. It indicates the year of validity of the establishment data as of the reference date of 30 June.</p> <p>This variable can be used together with the establishment number to link the Individual File and the Establishment File.</p>

5.7.4 Status of establishment number (betr_st)

Variable label	Status of establishment number
Variable name	betr_st
Category	generated technical variables
Origin	BeH
Data type	numerical
Hierarchy	none
Detailed description	<p>The variable indicates for the current episode in the individual data if there is information from the IAB Establishment Panel for this episode.</p> <p>1 – Employment in establishment of Establishment Panel with interview in same year, establishment selected for LIAB model 2 – Employment in establishment of Establishment Panel without interview in same year, establishment selected for LIAB model Establishment chosen for LIAB-model 3 – Employment in establishment of Establishment Panel, establishment not selected for LIAB model 4 – Employment in establishment not of Establishment Panel</p> <p>The values 1-3 indicate employments in establishments, which have taken part in the IAB Establishment Panel at least once, whereas value 4 marks the employment in establishments, which have never taken part in the IAB Establishment Panel. 1 and 2 describe employments in establishments, which are in the IAB Establishment Panel, which has been chosen for the respective LIAB model. Number 3 defines employments in firms, which have not been chosen for the respective LIAB model.</p> <p>The difference between 1 and 2 depends on the fact, whether the episode includes the 30 June of the respective year, for a firm that has been interviewed, or not.</p> <p>Value 3 does not appear by definition in a Cross-sectional Model of the LIAB, because all firms of the IAB Establishment Panel have been interviewed at least once and due to construction chosen for the LIAB Cross-sectional Model.</p>

5.8 Generated biographical variables

5.8.1 First day in employment (ein_erw)

Variable label	First day in employment
Variable name	ein_erw
Category	generated biographical variables
Origin	generated from BeH
Data type	date
Hierarchy	none
Detailed description	<p>This variable specifies the date of start of employment subject to social security in the IEB. Training periods are not included (occupational status = 0). Persons have always a missing value, if they pass a training period in the IEB but do not have an employment covered by the social security system.</p> <p>The first day in employment (ein_erw) can occur a long time after the first day in establishment (ein_bet) and the first day in job (ein_job) because in the latter cases training periods are included.</p>
Note on quality	For West Germans the variable is left censored on 1.1.1975. For East Germans the censoring is not so clear. Entries on 1.1.1990 are censored for sure, but often also entries on 1.1.1991 and 1.1.1992 may be affected because in 1990 and 1991 many employment notifications are missing.

5.8.2 Number of days in employment (tage_erw)

Variable label	Number of days in employment
Variable name	tage_erw
Category	generated biographical variables
Origin	generated from BEH
Data type	numerical
Hierarchy	none
Detailed description	<p>The variable contains the number of days, which an individual has worked till the 30 June of a year (Cross-sectional Model) or to the end date of the respective episode (Longitudinal Model). Training periods are not taken into account (stib=0). If an individual was just in training, the variable adopts the value 0.</p> <p>The number of days in employment (tage_erw) can be zero, even though the variable first day in employment (ein_erw) is filled. This happens, when individuals have not entered the work force until the 30 June of the respective year (Cross-sectional Model) or still not entered the work force until the end of the episode (Longitudinal Model).</p>
Note on quality	For West Germans the variable is left censored on 1.1.1975. For East Germans the censoring is not so clear. Entries on 1.1.1990 are censored for sure, but often also entries on 1.1.1991 and 1.1.1992 may be affected because in 1990 and 1991 many employment notifications are missing.

5.8.3 First day in establishment (ein_bet)

Variable label	First day in establishment
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Variable name	ein_bet
Category	generated biographical variables
Origin	generated from BeH
Data type	date
Hierarchy	none
Detailed description	This variable contains the start date of the first employment notification in the current establishment in the IEB. Training periods are also considered. An interruption of the employment in the establishment does not change the start date, i.e. it is constant for each combination of individual and establishment number. The first day in employment (ein_erw) can occur a long time after the first day in establishment (ein_bet) and the first day in job (ein_job) because in the latter cases training periods are included.
Note on quality	For West Germans the variable is left censored on 1.1.1975. For East Germans the censoring is not so clear. Entries on 1.1.1990 are censored for sure, but often also entries on 1.1.1991 and 1.1.1992 may be affected because in 1990 and 1991 many employment notifications are missing.

5.8.4 Number of days in establishment (tage_bet)

Variable label	Number of days in establishment
Variable name	tage_bet
Category	Generated biographical variables
Origin	Generated from BeH
Data type	numeric
Hierarchy	none
Detailed description	<p>The variable contains the number of days a person has been working in the respective establishment. In the Cross-sectional Model the duration is calculated until the 30 June of this year, in the Longitudinal Model until the end of the episode. Training periods are also included, meanwhile employment gaps are not.</p> <p>If the number of days in the establishment is alternatively calculated with the variable First day in establishment (ein_bet)</p> <p>in QM: $gen\ tag_bet_neu = mdy(6,30,jahr) - ein_bet + 1$</p> <p>in LM: $gen\ tag_bet_neu = endepi - ein_bet + 1$</p> <p>the values, which are obtained, are larger than or equal to the variable tage_bet, because tage_bet does not include interruptions of employment.</p> <p>Number of days in establishment (tage_bet) can be larger than Duration of a working life (tage_erw). The variable tage_bet includes periods of education, tage_erw doesn't include these periods.</p>
Note on quality	For West Germans the variable is left censored on 1.1.1975. For East Germans the censoring is not so clear. Entries on 1.1.1990 are censored for sure, but often also entries on 1.1.1991 and 1.1.1992 may

	be affected because in 1990 and 1991 many employment notifications are missing.
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5.8.5 First day in job (ein_job)

Variable label	First day in job
Variable name	ein_job
Category	generated biographical variables
Origin	generated from BeH
Data type	numerical
Hierarchy	none
Detailed description	<p>This variable contains the start date of the first employment notification in the current job.</p> <p>Training periods (stib = 0) in the same establishment are treated as separate jobs, even if they follow directly or are followed directly by a job in the same establishment.</p> <p>An employment in the same establishment after a gap is considered a new job if</p> <ul style="list-style-type: none"> - the reason for notification of the last employment record before the gap indicates the end of the last job (grund = 30, 34, 40 or 49) and the gap is longer than 92 days or - the reason for notification of the last employment record before the gap does not indicate the end of the last job and the gap is longer than 366 days. ^ <p>The first day in job (ein_job) cannot occur before the first day in establishment (ein_bet), but it can occur before first day in employment (ein_erw).</p>
Note on quality	For West Germans the variable is left censored on 1.1.1975. For East Germans the censoring is not so clear. Entries on 1.1.1990 are censored for sure, but often also entries on 1.1.1991 and 1.1.1992 may be affected because in 1990 and 1991 many employment notifications are missing.

5.8.6 Number of days in job (tage_job)

Variable label	Numbers of days in job
Variable name	tage_job
Category	generated biographical variables
Origin	generated from BeH
Data type	numerical
Hierarchy	none
Detailed description	<p>The variable counts how many days a person has been working in the current job.</p> <p>Training periods (stib = 0) in the same establishment are treated as separate jobs, even if they follow directly or are followed directly by a job in the same establishment.</p> <p>An employment in the same establishment after a gap is considered a new job if</p>

	<p>- the reason for notification of the last employment record before the gap indicates the end of the last job (grund = 30, 34, 40, 0r 49) and the gap is longer than 92 days or</p> <p>- the reason for notification of the last employment record before the gap does not indicate the end of the last job and the gap is longer than 366 days. In the Cross-sectional Model this duration relates to 30 June of the year, in all other LIAB data it relates to the end of the episode. Training periods in the establishment are included, employment gaps not. If the number of days in the current job is alternatively calculated with the first day in job variable (ein_job),</p> <pre>in QM:gen tage_job_neu = mdy(6,30,jahr) - ein_job+1 in LM:gen tage_job_neu = endepi - ein_job+1</pre> <p>the values obtained are larger or equal than the variable tage_job because it does not include interruptions of employment.</p>
Note on quality	For West Germans the variable is left censored on 1.1.1975. For East Germans the censoring is not so clear. Entries on 1.1.1990 are censored for sure, but often also entries on 1.1.1991 and 1.1.1992 may be affected because in 1990 and 1991 many employment notifications are missing.

5.8.7 Number of benefit receipts (anz_1st)

Variable label	Number of benefit receipt spells
Variable name	anz_1st
Category	generated biographical variables
Origin	generated from LEH/LHG/XLHG
Data type	numerical
Hierarchy	none
Detailed description	<p>The variable contains the number of periods of benefit receipts of a person until the 30 June of each year (Cross-sectional Model) or the end date of the respective episode (Longitudinal Model). If there weren't any benefit receipts, the variable adopts the value 0.</p> <p>Social Code II and Social Code III benefits are treated the same. Hence, the meaning of the variable changes in 2005.</p> <p>Gaps of less than 10 days between two spells of the benefit receipt are ignored, i.e. benefit spells before and after the gap are treated as one period of benefit receipt. Changes in the type of benefit are not counted as a new benefit receipt.</p>
Note on quality	For West Germans the variable is left censored on 1.1.1975. For East Germans the censoring is not so clear. Entries on 1.1.1990 are censored for sure, but often also entries on 1.1.1991 and 1.1.1992 may be affected because in 1990 and 1991 many employment notifications are missing.

5.8.8 Number of days with benefit receipt (tage_1st)

Variable label	Number of days of benefit receipt
Variable name	tage_1st

Category	generated biographical variables
Origin	generated from LEH/LHG/XLHG
Data type	numerical
Hierarchy	none
Detailed description	<p>The variable contains the number of days of benefit receipts of a person until the 30 June of each year (Cross-sectional Model) or the end date of the respective episode (Longitudinal Model). If there are no benefit receipts, the variable adopts the value 0.</p> <p>Social Code II and Social Code III benefits are treated the same. Hence, the meaning of the variable changes in 2005.</p> <p>Gaps are not added.</p>
Note on quality	For West Germans the variable is left censored on 1.1.1975. For East Germans the censoring is not so clear. Entries on 1.1.1990 are censored for sure, but often also entries on 1.1.1991 and 1.1.1992 may be affected because in 1990 and 1991 many employment notifications are missing.

5.8.9 Number of days with benefit receipt 2 (tage_1st2)

Variable label	Number of days of benefit receipt 2
Variable name	tage_1st2
Category	generated biographical variables
Origin	generated from LeH/LHG/XLHG
Data type	numerical
Hierarchy	none
Detailed description	<p>The variable contains the duration of benefit receipts of an individual until 30 June of each year (Cross sectional Model) or the end date of the respective episode (Longitudinal Model), during unemployment. The difference to the variable tage_1st consists in the fact that simultaneous episodes of employment and benefit receipts are not taken into account.</p> <p>Social Code II and Social Code III benefits Benefit receipts are both included similarly. Hence, the meaning of the variable changes in 2005.</p>
Note on quality	There are several reasons, why an individual is employed (liable to social security or marginal part-time) and is getting benefit receipts simultaneously. In this case tage_1st2 is less than tage_1st. The variable tage_1st2 cannot exceed tage_1st.

5.8.10 Daily wage 8 days before first day in establishment (lohn8tv)

Variable label	Daily wage 8 days before first day in establishment
Variable name	lohn8tv
Category	generated biographical variables
Origin	generated from BeH/LEH
Data type	numerical
Hierarchy	none
Detailed description	The variable contains information about the daily wage respectively

	<p>the daily benefit rate of a person 8 days before the first day in an establishment (ein_bet).</p> <p>Details on the daily wage are given in the description of the variable Daily wage, daily benefit rate (tentgelt).</p> <p>Whether a wage or benefit receipt exists, is indicated by the employment status (estat8tv). If there is more than one record in the IEB that is valid 8 days before the first day in the current establishment, only one record is selected. Regular employment dominates marginal employment, in case of more than one regular employment the record with the highest daily wage dominates.</p>
Note on quality	<p>For West Germans the variable is left censored on 1.1.1975. For East Germans the censoring is not so clear. Entries on 1.1.1990 are censored for sure, but often also entries on 1.1.1991 and 1.1.1992 may be affected because in 1990 and 1991 many employment notifications are missing.</p>

5.8.11 Employment status 8 days before first day in establishment (estat8tv)

Variable label	Employment status 8 days before first day in establishment
Variable name	estat8tv
Category	generated biographical variables
Origin	generated from BeH/LEH/LHG/XLHG
Data type	numerical
Hierarchy	none
Detailed description	<p>The variable contains information on the employment status of a person 8 days before the first day in the establishment (ein_bet).</p> <p>The employment status was generated from the following variables:</p> <ul style="list-style-type: none"> - Occupational status and working hours (stib): full-time, part-time, apprentice, missing - Person group: normal, marginal part-time workers, others - Establishment number: same or different from the current - Type of benefit: ALG, ALH, UHG, subsidy § 166b AFG/§ 207a SGB III - Source of the spell: LHG, XLHG, ASU, XASU <p>If there is more than one record in the IEB that is valid 8 days before the first day in the establishment, only one record is selected. Regular employment dominates marginal employment which dominates benefit receipt which dominates job search.</p> <p>By definition, preceding employment indicated by estat8tv has to occur in another establishment.</p>
Note on quality	<p>For West Germans the variable is left censored on 1.1.1975. For East Germans the censoring is not so clear. Entries on 1.1.1990 are censored for sure, but often also entries on 1.1.1991 and 1.1.1992 may be affected because in 1990 and 1991 many employment notifications are missing.</p>

5.8.12 Employment status 2, eight days before first day in establishment (estat2_8tv)

Variable label	Employment status 2, 8 days before first day in establishment
Variable name	estat2_8tv
Category	generated biographical variables
Origin	generated from BeH/LeH/LHG/XLHG
Data type	numerical
Hierarchy	none
Detailed description	The variable contains information about the employment status of an individual eight days before the entry in the current employment (8 days before ein_bet). If there is no data in the IEB eight days before the entry in the current establishment, the variable contains information about the individual receiving benefits eight days before the entry in the current establishment.

5.8.13 Number of days in previous job or unemployment (tage_estat2_8tv)

Variable label	Number of days in previous job or unemployment
Variable name	tage_estat2_8tv
Category	generated biographical variables
Origin	generated from BeH
Data type	numerical
Hierarchy	none
Detailed description	The variable contains information about the duration of the employment contract, which the individual had 8 days before the entry in the current establishment. If the individual was not employed 8 days before the entry in the current establishment, the variable refers to the length of the period (in days) between the end of the previous employment and the date of entry in the current establishment (ein_bet). It should be noted, that an individual can still be employed at a previous employment after starting a new employment, because it is possible that an individual is engaged in multiple employment contracts simultaneously.

5.8.14 Employment status 5 years after reference day (estat5jn)

Variable label	Employment status 5 years after reference day
Variable name	estat5jn
Category	generated biographical variables
Origin	generated from BeH/LEH/LHG/XLHG
Data type	numerical
Hierarchy	none
Detailed description	The variable contains information on the employment status of a person 5 years after the reference date 30 June. This is relevant in the Cross-sectional Model if the person is no longer employed at an establishment of the IAB Establishment Panel at that time.

	<p>The employment status was generated from the variables:</p> <ul style="list-style-type: none"> - Occupational status and working hours (stib): full-time, part-time, apprentice, missing - Person group: normal, marginal part-time workers, others - Establishment number: same or different from the current - Type of benefit: ALG, ALH, UHG, subsidy § 166b AFG/§ 207a SGB III. - Source of the spell: LHG, XLHG, ASU, XASU <p>If there are several parallel records in the IEB, five years after the reference day, exactly one record is selected. Regular employment dominates marginal employment, which dominates benefit receipt which dominates job search.</p>
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5.8.15 Daily wage 5 years after reference day (lohn5jn)

Variable label	Daily wage 5 years after reference day
Variable name	lohn5jn
Category	generated biographical variables
Origin	generated from BeH/LEH
Data type	numerical
Hierarchy	none
Detailed description	<p>The variable contains information about daily wage respectively the daily benefit rate of a person five years after 30 June of the respective year.</p> <p>Details on the daily wage are given in the description of the variable Daily wage, daily benefit rate (tentgelt).</p> <p>Whether a wage or benefit receipt exists, is indicated by the employment status (estat5jn). If there is more than one employment record five years ahead, only one record is selected Regular employment dominates marginal employment, in case of more than one regular job, the record with the highest daily wage is selected.</p>

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7 Appendix

7.1 Frequency tables

Frequency tables and overviews of the individual values and labels of the variables can be found in separate files under <http://fdz.iab.de>.

8 List of abbreviations

AA	Agentur für Arbeit/ Arbeitsamt	Employment agency / employment office
ALG	Arbeitslosengeld	unemployment benefit
ARGE	Arbeitsgemeinschaft	co-operation of employment agencies and municipalities
ASU	Arbeitsuchende-Historik	Jobseeker History
BA	Bundesagentur für Arbeit	Federal Employment Agency
BeH	Beschäftigten-Historik	Employee History
BfA	Bundesversicherungsanstalt für Angestellte	Federal Social Insurance Office for Salaried Employees
BHP	Betriebs-Historik-Panel	Establishment History Panel
BMAS	Bundesministerium für Arbeit und Soziales	Federal Ministry of Labour and Social Affairs
coArb	Computerunterstützte Arbeitsvermittlung (operatives Verfahren zur Verwaltung der Vermittlung (Altverfahren))	computer-aided job placement (procedure for the administration of job placements – old procedure)
DEÜV	Verordnung über die Erfassung und Übermittlung von Daten für die Träger der Sozialversicherung – Datenerfassungs- und –übermittlungs-Verordnung –	Data Collection and Transmission Regulation - regulation on the collection and transmission of data for the social security agencies
DEVO	Zweite VO über die Erfassung von Daten für die Träger der Sozialversicherung und für die BA – Datenerfassungs-Verordnung –	Data Collection Regulation - second regulation on the collection of data for the social security agencies and for the Federal Employment Agency
DÜVO	Zweite VO über die Datenübermittlung auf maschinell verwertbaren Datenträgern im Bereich der Sozialversicherung und der BA – Datenübermittlungs-Verordnung –	Data Transmission Regulation - second regulation on the transfer of data on machine-readable data media in the field of social security and the BA
FDZ	Forschungsdatenzentrum	Research Data Centre
IAB	Institut für Arbeitsmarkt- und Berufsforschung	Institute for Employment Research
IABS	IAB-Beschäftigtenstichprobe	IAB Employment Samples
IEB	Integrierte Erwerbsbiographien	Integrated Employment Biographies
IEBS	Stichprobe der Integrierten Erwerbsbiographien	Integrated Employment Biographies Sample
LeH	Leistungsempfänger-Historik	Benefit Recipient History
LIAB	Linked Employer Employee Daten des IAB	Linked Employer Employee Data of the IAB
LHG	Leistungs-Historik Grundsicherung	Unemployment Benefit II Recipient History
LVA	Landesversicherungsanstalt	Land Social Insurance Office
MTH	Maßnahmeteilnehmer-Historik	Participants-in-Measures History File
SchwBG	Gesetz zur Sicherung der Eingliederung Schwerbehinderter in Arbeit, Beruf und Gesellschaft – Schwerbehindertengesetz-	law to guarantee the integration of persons with severe disabilities into employment and society – Severely Dis-abled Persons Act
SGB	Sozialgesetzbuch	German Social Code
VerBIS	Vermittlungs- und Beratungsinforma-	Information System for Placement and

XASU	tionssysteme Arbeitsuchenden-Historik aus XSozial-BA-SGB II	Counselling Jobseeker History from XSozial-BA-SGB II
XLHG	Leistungsempfänger-Historik Grund- sicherung aus XSozial-BA-SGB II	Unemployment Benefit II Recipient History from XSozial-BA-SGB II

Imprint

FDZ-Datenreport 02/2013

Publisher

The Research Data Centre (FDZ)
of the Federal Employment Agency
in the Institute for Employment Research
Regensburger Str. 104
D-90478 Nuremberg

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