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FDZ-Methodenreport

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Methodological aspects of labour market data

CHK Effects

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CHK Effects

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Die FDZ-Methodenreporte befassen sich mit den methodischen Aspekten der Daten des FDZ und helfen somit Nutzerinnen und Nutzern bei der Analyse der Daten. Nutzerinnen und Nutzer können hierzu in dieser Reihe zitationsfähig publizieren und stellen sich der öffentlichen Diskussion.

FDZ-Methodenreporte (FDZ method reports) deal with methodical aspects of FDZ data and help users in the analysis of these data. In addition, users can publish their results in a citable manner and present them for public discussion.

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Abstract

This FDZ Methodenreport describes the files and variables containing the person and establishment effects estimated by Card, Heining, and Kline 2013 and how this information may be combined with several of the data products available at the research Data Center (FDZ) of the German Federal Employment Agency at the Institute for Employment Research (IAB).

Zusammenfassung

Dieser FDZ Methodenreport beschreibt die Dateien und Merkmale, welche die von Card, Heining und Kline geschätzten Personen- und Betriebseffekte enthalten und wie diese zu einigen der über das Forschungsdatenzentrum (FDZ) der Bundesagentur für Arbeit im Institut für Arbeitsmarkt- und Berufsforschung (IAB) verfügbaren Datensätze zugespült werden können.

Keywords: Person and Establishment Fixed Effects, German Administrative Data

1 Introduction

In the 2013 paper by Card, Heining, and Kline, the role of establishment-specific wage premiums in generating recent increases in West German wage inequality was studied. For four subintervals covering the period from 1985 to 2009, Card et al. estimated models with additive fixed effects for workers and establishments following the estimation strategy introduced in Abowd, Kramaz, and Margolis 1999.

The analyses of Card et al. 2013 were based on administrative data for Germany, the so-called Integrated Employment Biographies (IEB) data base which represents the universe of workers subject to social security contributions in Germany. The IEB data base is built by the Institute for Employment Research (IAB) and is one of the major resources of the data products available at the Research Data Center (FDZ) of the German Federal Employment Agency at IAB.

In the framework applied by Card et al., the estimates for person fixed effects may be interpreted as a combination of individual skills and other factors which are rewarded equally across employers. On the other hand, an establishment fixed effect represents the proportional pay premium (or discount) that is paid by specific establishments to all employees.

Given the comprehensive meaningfulness of the estimated worker and establishment fixed effects in Card et al. (CHK effects), the resulting coefficients represent a valuable piece of information by themselves. Consequently, FDZ has prepared several files containing the CHK effects which may be linked to the Sample of Integrated Labor Market Biographies (SIAB) data and the Linked Employer-Employee Data (LIAB) of IAB.

This FDZ Methodenreport describes these files and is structured as follows: Section 2 provides a more detailed overview on the IEB data base and the sample used by Card et al. Their estimation strategy is briefly discussed in section 3. The linkage of the CHK effects to the SIAB or LIAB data is described in section 4. Section 5 provides information on how to access these files. Finally, section 6 contains a description of variables.

2 Data

The IEB data base comprises information on workers stemming from different administrative processes which include:

- employment subject to social security contributions,
- receipt of benefits (unemployment benefits) in accordance with the German Social Code, Book III or Book II,
- job search as registered by the German labor administration (Bundesagentur für Arbeit - BA), and
- participation in labor market programs and training schemes.

All information is available on a daily basis which allows constructing precise work histories for each worker contained in the IEB data base.

For their estimations, Card et al. focused on workers in West-Germany, age 20 to 60 and estimated the CHK effects separately for women and men. Furthermore, all analyses were conducted for four time periods, in particular 1985 to 1991, 1990 to 1996, 1996 to 2002, and 2002 to 2009.

	1985 - 1991	1990 - 1996	1996 - 2002	2002 - 2009
Males				
Number of person effects	16.295.106	17.223.290	16.384.815	15.834.602
Number of establishment effects	1.221.098	1.357.824	1.476.705	1.504.095
Females				
Number of person effects	10.128.342	10.346.742	9.288.956	8.145.059
Number of establishment effects	1.079.129	1.176.133	1.191.607	1.196.201

Table 1: Number of CHK effects.

Additional summary statistics are included in the appendix.

3 Estimation

For the estimation of worker and establishment fixed effects, Card et al. followed the framework introduced by Abowd et al in 1999.

$$y_{it} = \alpha_i + \psi_{J(i,t)} + x'_{it}\beta + r_{it}$$

In a given time interval the data set contains N^* person-year observations on N workers and J establishments. The function $J(i, t)$ gives the identity of the unique establishment that employs worker i in year t . It is assumed that the log daily real wage y_{it} of individual i in year t is the sum of a worker component α_i , an establishment component $\psi_{J(i,t)}$, an index of time-varying observable characteristics $x'_{it}\beta$, and an error component r_{it} . The person effect α_i is interpreted as a combination of skills and other factors that are rewarded equally across employers. Likewise, the index $x'_{it}\beta$ is interpreted as a combination of life cycle and aggregate factors that affect worker i 's productivity at all jobs. An unrestricted set of year dummies as well as quadratic and cubic terms in age fully interacted with educational attainment is included in x_{it} . Finally, the establishment effect ψ_j is interpreted as a proportional pay premium (or discount) that is paid by establishment j to all employees (i.e., all those with $J(i, t) = j$).

Such a premium could represent rent-sharing, an efficiency wage premium, or strategic wage posting behavior.

4 CHK Effects and Linkage

FDZ has prepared files containing CHK person and establishment effects for four data sets:

- Sample of Integrated Labor Market Biographies (Weakly anonymous version, SIAB 7510)
- Sample of Integrated Labor Market Biographies (Scientific Use File, SIAB-Regionalfile 7510)
- Linked Employer-Employee Data: Longitudinal Model (LIAB LM 9310)
- Linked Employer-Employee Data: Cross-Sectional Model (LIAB LM 9310)

In particular, the names of the files containing the CHK effects are:

SIAB 7510:

SIAB_7510_v1_chk_v1.dta

SIAB R 7510 (Scientific Use File):

siab-r-7510_v1_chk_v1.dta

LIAB LM 9310:

LIAB_LM_9310_v1_chk_v1.dta

LIAB QM2 9310:

LIAB_QM2_9310_v1_chk_v1_####.dta, *#### = 1993 -2009*

The CHK person and establishments effects have been estimated only for regularly employed, full time workers, excluding for example, marginal workers or apprentices. As consequence, the CHK effects may only be meaningfully interpreted for codes 101 and 201 of the *erwstat* variable **and** for the codes 1,2,3, and 4 of the *stib* variable (`inlist(stib,1,2,3,4) & inlist(erwstat,101,201)`).

However, the merging procedure described below will assign CHK effects to spells where the *erwstat* and *stib* variables may have different values. It is up to the researcher whether to use the CHK information for these data spells or not.

The prepared files not only contain the point estimates of the person and establishment effects. Moreover, information on the personal level is also given on the number of years in employment and the number of establishments at which the respective individual was employed during the observed period in the sample used by Card et al. Additionally, variables indicating the 5%-percentile position in the overall distribution of point estimates for both the person and the establishment effects are included. However, it is important to keep in mind that the CHK effects have been estimated separately for women and men.

4.1 Sample of Integrated Labor Market Biographies

4.1.1 Sample of Integrated Labor Market Biographies (Weakly anonymous version, SIAB 7510)

The CHK effects may be linked to the SIAB 7510 data (see vom Berge, König and Seth 2013) by using the *persnr* and the *spell* variables.

```
use SIAB_7510_v1.dta, clear
merge 1:1 persnr spell using SIAB_7510_v1_chk_v1.dta
```

Table 2 provides an overview on the number linked CHK effects in the SIAB 7510 data.

Interval	Males		Females	
	Total	Percentage	Total	Percentage
1985 – 1991	324.561	37,0	187.543	24,6
1990 – 1996	343.477	39,2	200.255	26,2
1996 – 2002	326.541	37,3	192.375	25,2
2002 – 2009	316.060	36,1	188.877	24,8
Total	521.857	59,6	353.098	46,3

Table 2: CHK effects in the SIAB 7510 data. The sum over all intervals does not yield the total numbers shown in the last row of the table due to the overlapping intervals. Percentages refer to the total number of female or male workers in the data.

4.1.2 Sample of Integrated Labor Market Biographies (Scientific Use File, SIAB-Regionalfile 7510)

A file containing CHK effects has also been prepared for the Scientific Use File (SUF) of the SIAB 7510 data (SIAB-Regionalfile 7510, see vom Berge, Burghardt and Trenkle 2013). SUF data in general are characterized by a higher degree of anonymity since they are specifically designed for off-site access. In order to preserve confidentiality when adding the CHK effects to the SIAB-Regionalfile 7510 data, not the full scope of CHK variables as compared to the weakly anonymized version of the SIAB data (SIAB 7510, see above) are available. In particular, the file containing the CHK effects for the SIAB-Regionalfile 7510 data include the point estimates for the worker effects in each of the four intervals, their 5%-percentile position in the overall distribution of worker effects and the percentile positions of the establishment effects. However, the point estimates of the establishment effects are excluded.

As for the SIAB 7510 data, the CHK effects may be linked to the SIAB-Regionalfile 7510 data by using the *persnr* and the *spell* variables.

```
use SIAB_7510_v1.dta, clear
merge 1:1 persnr spell using SIAB_7510_v1_chk_v1.dta
```

Table 3 provides an overview on the number of workers and establishments with CHK effects in the SIAB-Regionalfile 7510 data.

Interval	Worker and Establishment Effects			
	Males		Females	
	Total	Percentage	Total	Percentage
1985 – 1991	324.528	38,1	187.551	25,3
1990 – 1996	343.495	40,3	200.281	27,0
1996 – 2002	326.539	38,3	192.403	25,9
2002 – 2009	316.053	37,1	188.874	25,4
Total	595.903	70,0	497.315	67,0

Table 3: CHK effects in the SIAB-Regionalfile 7510 data. The sum over all intervals does not yield the total numbers shown in the last row of the table due to the overlapping intervals. Percentages refer to the total number of female or male workers in the data.

4.2 Linked-Employer-Employee Data (LIAB)

When working with the LIAB data, it is important to keep in mind that in both the longitudinal and the cross-sectional model, worker and establishment information is included as of 1993. As a consequence, the files containing the CHK effects for the LIAB data do not include the estimates for the period between 1985 to 1991 and the years 1990 to 1992.

4.2.1 Longitudinal Model (LIAB LM 9310)

The LIAB LM 9310 data are stored in several files (see Klosterhuber, Heining, and Seth 2013). In order to merge the CHK effects to the LIAB LM 9310 data, the LIAB_LM_9310_v1_chk_pers.dta file has to be used. As for the SIAB data, the *persnr* and *spell* variables are required for the merging procedure.

```
use LIAB_lm_9310_v1_pers.dta, clear

merge 1:1 persnr spell using LIAB_LM_9310_v1_chk_v1.dta
```

Table 4 provides an overview on the number of workers and establishments with CHK effects in the LIAB LM 9310 data.

Interval	Person and Establishment Effects			
	Males		Females	
	Total	Percentage	Total	Percentage
1990 – 1996	448.305	41,5	210.587	26,2
1996 – 2002	575.578	53,3	276.105	34,3
2002 – 2009	637.249	59,0	318.502	39,6
Total	736.843	68,3	410.688	51,1

Table 4: CHK effects in the LIAB LM 9310 data. The sum over all intervals does not yield the total numbers shown in the last row of the table due to the overlapping intervals. Percentages refer to the total number of female or male workers in the data.

4.2.2 Cross-Sectional Model (LIAB QM2 9310)

The file organization of the LIAB QM2 9310 data differs substantially from the SIAB 7510 and LIAB LM 9310 data (see Heining, Scholz, and Seth 2013). Worker and establishment data of the LIAB QM2 9310 data are stored separately for each year with the consequence that for each year one file with CHK effects exists.

Merging the CHK effects to the LIAB QM2 9310 worker data is analogous to the SIAB 7510, the SIAB-Regionalfiler 7510 and the LIAB LM 9310 data.

```

use LIAB_qm2_9310_v1_pers_jjjj.dta

merge 1:1 persnr spell LIAB_QM2_9310_v1_chk_v1_jjjj.dta

with jjj = 1993 to 2009

```

Table 5 gives an overview on the number of workers and establishments with CHK effects in the LIAB QM2 9310 data.

Interval	Person and Establishment Effects			
	Males		Females	
	Total	Percentage	Total	Percentage
1990 – 1996	2.132.935	36,0	944.954	22,5
1996 – 2002	2.477.403	41,8	1.194.490	28,5
2002 – 2009	2.561.723	43,2	1.262.210	30,1
Total	4.592.625	77,4	2.384.801	56,8

Table 5: CHK effects in the LIAB QM2 9310 data. The sum over all intervals does not yield the total numbers shown in the last row of the table due to the overlapping intervals. Percentages refer to the total number of female or male workers in the data.

5 Data access

The CHK effects will be provided to researchers working with the SIAB 7510, SIAB-R 7510, LIAB LM 9310, or LIAB QM2 93 data upon request by FDZ. An unexpired use agreement covering the respective data is required.

6 Description of Variables

The variables contain both English and German variable labels. The label language may be changed by using the `label language en` or `label language de` command in Stata.

6.1 Identifiers

6.1.1 Individual ID (persnr)

Variable label	Individual ID
Variable name	persnr
Category	Identifier

Origin	BeH
Data type	Numerical
Hierarchy	None
Detailed description	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.

6.2 Personal Variables

6.2.1 Person Effect 1985 – 1991 (pers_effekt1985_1991)

Variable label	Person Effect 1985-1991
Variable name	pers_effekt1985_1991
Category	Personal variable
Data type	Numerical
Hierarchy	None
Detailed description	This variable contains the estimated person effects for both male and female workers in the period 1985 to 1991.
Notice on quality	This variable not available for the LIAB LM 9310 and LIAB QM2 9310 data.

6.2.2 Percentile Person Effects 1985 – 1991 (p_pers_effekt1985_1991)

Variable label	Percentile Person Effects 1985-1991
Variable name	p_pers_effekt1985_1991
Category	Personal variable
Data type	Numerical
Hierarchy	None
Detailed description	This variable contains the 5%-percentile position of the person effect in the overall distributions of person effects for female and male workers in the period 1985 to 1991.
Notice on quality	This variable not available for the LIAB LM 9310 and LIAB QM2 9310 data.

6.2.3 Number of Years in Employment 1985 – 1991 (anz_jahre1985_1991)

Variable label	Number of Years in Employment 1985-1991
Variable name	anz_jahre1985_1991
Category	Personal variable
Origin	BeH
Data type	Numerical
Hierarchy	None

Detailed description	This variable contains the number of years in employment during the period 1985 to 1991 as measured by Card et. al 2013.
Notice on quality	This variable is not available for the LIAB LM 9310 and LIAB QM2 9310 data. This variable is not contained in the file prepared for the SIAB-Regionalfiler 7510 data (Scientific Use File, siab-r-7510_v1_chk_v1.dta).

6.2.4 Number of Establishments 1985 – 1991 (anz_bet1985_1991)

Variable label	Number of Establishments 1985-1991
Variable name	anz_bet1985_1991
Category	Personal variable
Origin	BeH
Data type	Numerical
Hierarchy	None
Detailed description	This variable contains the number of establishments during the period 1985 to 1991 as measured by Card et. al 2013.
Notice on quality	This variable is not available for the LIAB LM 9310 and LIAB QM2 9310 data. This variable is not contained in the file prepared for the SIAB-Regionalfiler 7510 data (Scientific Use File, siab-r-7510_v1_chk_v1.dta).

6.2.5 Person Effect 1990 – 1996 (pers_effekt1990_1996)

Variable label	Person Effect 1990-1996
Variable name	pers_effekt1990_1996
Category	Personal variable
Origin	BeH
Data type	Numerical
Hierarchy	None
Detailed description	This variable contains the estimated person effects for both male and female workers in the period 1990 to 1996.
Notice on quality	This variable is populated in both the LIAB LM 9310 and the LIAB QM2 9310 data as of 1993.

6.2.6 Percentile Person Effects 1990 – 1996 (p_pers_effekt1990_1996)

Variable label	Percentile Person Effects 1990-1996
Variable name	p_pers_effekt1990_1996
Category	Personal variable
Data type	Numerical
Hierarchy	None

Detailed description	This variable contains the 5%-percentile position of the person effect in the overall distributions of person effects for female and male workers in the period 1990 to 1996.
Notice on quality	This variable is populated in both the LIAB LM 9310 and the LIAB QM2 9310 data as of 1993.

6.2.7 Number of Years in Employment 1990 – 1996 (anz_jahre1990_1996)

Variable label	Number of Years in Employment 1990-1996
Variable name	anz_jahre1990_1996
Category	Personal variable
Origin	BeH
Data type	Numerical
Hierarchy	None
Detailed description	This variable contains the number of years in employment during the period 1990 to 1996 as measured by Card et. al 2013.
Notice on quality	This variable is populated in both the LIAB LM 9310 and the LIAB QM2 9310 data as of 1993. This variable is not contained in the file prepared for the SIAB-Regionalfile 7510 data (Scientific Use File, siab-r-7510_v1_chk_v1.dta).

6.2.8 Number of Establishments 1990 – 1996 (anz_bet1990_1996)

Variable label	Number of Establishments 1990-1996
Variable name	anz_bet1990_1996
Category	Personal variable
Origin	BeH
Data type	Numerical
Hierarchy	None
Detailed description	This variable contains the number of establishments during the period 1990 to 1996 as measured by Card et. al 2013.
Notice on quality	This variable is populated in both the LIAB LM 9310 and the LIAB QM2 9310 data as of 1993. This variable is not contained in the file prepared for the SIAB-Regionalfile 7510 data (Scientific Use File, siab-r-7510_v1_chk_v1.dta).

6.2.9 Person Effect 1996 – 2002 (pers_effekt1996_2002)

Variable label	Person Effect 1996-2002
Variable name	pers_effekt1996_2002
Category	Personal variable
Origin	BeH
Data type	Numerical

Hierarchy	None
Detailed description	This variable contains the estimated person effects for both male and female workers in the period 1996 to 2002.

6.2.10 Percentile Person Effects 1996 – 2002 (p_pers_effekt1996_2002)

Variable label	Percentile Person Effects 1996-2002
Variable name	p_pers_effekt1996_2002
Category	Personal variable
Data type	Numerical
Hierarchy	None
Detailed description	This variable contains the 5%-percentile position of the person effect in the overall distributions of person effects for female and male workers in the period 1996 to 2002.

6.2.11 Number of Years in Employment 1996 – 2002 (anz_jahre1996_2002)

Variable label	Number of Years in Employment 1996-2002
Variable name	anz_jahre1996_2002
Category	Personal variable
Origin	BeH
Data type	Numerical
Hierarchy	None
Detailed description	This variable contains the number of years in employment during the period 1996 to 2002 as measured by Card et. al 2013.
Notice on quality	This variable is not contained in the file prepared for the SIAB-Regionalfiler 7510 data (Scientific Use File, siab-r-7510_v1_chk_v1.dta).

6.2.12 Number of Establishments 1996 – 2002 (anz_bet1996_2002)

Variable label	Number of Establishments 1996-2002
Variable name	anz_bet1996_2002
Category	Personal variable
Origin	BeH
Data type	Numerical
Hierarchy	None
Detailed description	This variable contains the number of establishments during the period 1996 to 2002 as measured by Card et. al 2013.
Notice on quality	This variable is not contained in the file prepared for the SIAB-Regionalfiler 7510 data (Scientific Use File, siab-r-7510_v1_chk_v1.dta).

6.2.13 Person Effect 2002 – 2009 (pers_effekt2002_2009)

Variable label	Person Effect 2002-2009
Variable name	pers_effekt2002_2009
Category	Personal variable
Origin	BeH
Data type	Numerical
Hierarchy	None
Detailed description	This variable contains the estimated person effects for both male and female workers in the period 2002 to 2009.

6.2.14 Percentile Person Effects 2002 – 2009 (p_pers_effekt2002_2009)

Variable label	Percentile Person Effects 2002-2009
Variable name	p_pers_effekt2002_2009
Category	Personal variable
Data type	Numerical
Hierarchy	None
Detailed description	This variable contains the 5%-percentile position of the person effect in the overall distributions of person effects for female and male workers in the period 2002 to 2009.

6.2.15 Number of Years in Employment 2002 – 2009 (anz_jahre2002_2009)

Variable label	Number of Years in Employment 2002-2009
Variable name	anz_jahre2002_2009
Category	Personal variable
Origin	BeH
Data type	Numerical
Hierarchy	none
Detailed description	This variable contains the number of years in employment during the period 2002 to 2009 as measured by Card et. al 2013.
Notice on quality	This variable is not contained in the file prepared for the SIAB-Regionalfiler 7510 data (Scientific Use File, siab-r-7510_v1_chk_v1.dta).

6.2.16 Number of Establishments 2002 – 2009 (anz_bet2002_2009)

Variable label	Number of Establishments 2002-2009
Variable name	anz_bet2002_2009
Category	Personal variable
Origin	BeH
Data type	Numerical
Hierarchy	None

Detailed description	This variable contains the number of establishments during the period 2002 to 2009 as measured by Card et. al 2013.
Notice on quality	This variable is not contained in the file prepared for the SIAB-Regionalfiler 7510 data (Scientific Use File, siab-r-7510_v1_chk_v1.dta).

6.3 Establishment Variables

6.3.1 Establishment Effect 1985 – 1991 (bet_effekt1985_1991)

Variable label	Establishment Effect 1985-1991
Variable name	bet_effekt1985_1991
Category	Establishment variable
Origin	BeH
Data type	Numerical
Hierarchy	None
Detailed description	This variable contains the estimated establishment effects for the period 1985 to 1991.
Notice on quality	This variable not available for the LIAB LM 9310 and LIAB QM2 9310. This variable is not contained in the file prepared for the SIAB-Regionalfiler 7510 data (Scientific Use File, siab-r-7510_v1_chk_v1.dta).

6.3.2 Percentile Establishment Effects 1985 – 1991 (p_pers_effekt1985_1991)

Variable label	Percentile Establishment Effects 1985-1991
Variable name	p_pers_effekt1985_1991
Category	Establishment variable
Data type	Numerical
Hierarchy	None
Detailed description	This variable contains the 5%-percentile position of the establishment effect in the overall distribution of establishment effects for female and male workers in the period 1985 to 1991.

6.3.3 Establishment Effect 1990 – 1996 (bet_effekt1990_1996)

Variable label	Establishment Effect 1990-1996
Variable name	bet_effekt1990_1996
Category	Establishment variable
Origin	BeH
Data type	Numerical
Hierarchy	None

Detailed description	This variable contains the estimated establishment effects for the period 1990 to 1996.
Notice on quality	This variable is populated in both the LIAB LM 9310 and the LIAB QM2 9310 data as of 1993. This variable is not contained in the file prepared for the SIAB-Regionalfile 7510 data (Scientific Use File, siab-r-7510_v1_chk_v1.dta).

6.3.4 Percentile Establishment Effects 1990 – 1996 (p_pers_effekt1990_1996)

Variable label	Percentile Establishment Effects 1990-1996
Variable name	p_pers_effekt1990_1996
Category	Establishment variable
Data type	Numerical
Hierarchy	None
Detailed description	This variable contains the 5%-percentile position of the establishment effect in the overall distribution of establishment effects for female and male workers in the period 1990 to 1996.
Notice on quality	This variable is populated in both the LIAB LM 9310 and the LIAB QM2 9310 data as of 1993.

6.3.5 Establishment Effect 1996 – 2002 (bet_effekt1996_2002)

Variable label	Establishment Effect 1996-2002
Variable name	bet_effekt1996_2002
Category	Establishment variable
Origin	BeH
Data type	Numerical
Hierarchy	None
Detailed description	This variable contains the estimated establishment effects the period 1996 to 2002.
Notice on quality	This variable is not contained in the file prepared for the SIAB-Regionalfile 7510 data (Scientific Use File, siab-r-7510_chk_v1.dta).

6.3.6 Percentile Establishment Effects 1996 – 2002 (p_pers_effekt1996_2002)

Variable label	Percentile Establishment Effects 1996-2002
Variable name	p_pers_effekt1996_2002
Category	Establishment variable
Data type	Numerical
Hierarchy	None
Detailed description	This variable contains the 5%-percentile position of the establishment effect in the overall distribution of establishment effects for female and

	male workers in the period 1996 to 2002.
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6.3.7 Establishment Effect 2002 – 2009 (bet_effekt2002_2009)

Variable label	Establishment Effect 2002-2009
Variable name	bet_effekt2002_2009
Category	Establishment variable
Origin	BeH
Data type	Numerical
Hierarchy	None
Detailed description	This variable contains the estimated establishment effects for the period 2002 to 2009.
Notice on quality	This variable is not contained in the file prepared for the SIAB-Regionalfiler 7510 data (Scientific Use File, siab-r-7510_v1_chk_v1.dta).

6.3.8 Percentile Establishment Effects 2002 – 2009 (p_pers_effekt2002_2009)

Variable label	Percentile Establishment Effects 2002-2009
Variable name	p_pers_effekt2002_2009
Category	Establishment variable
Data type	Numerical
Hierarchy	None
Detailed description	This variable contains the 5%-percentile position of the establishment effect in the overall distribution of establishment effects for female and male workers in the period 2002 to 2009.

6.4 Generated Technical Variables

6.4.1 Spell counter per person (spell)

Variable label	Spell counter per year
Variable name	spell
Category	generated technical variables
Origin	BeH
Data type	Numerical
Hierarchy	None
Detailed description	The observation counter per person counts a person's observations, beginning with 1. The variable is generated during the episode splitting procedure and refers to the split observations. Using the variable "observation counter per person" it is easy to restore the original sorting order. The observations are sorted first by the start date of the split episode and then by the data source.

Appendix

A1. Summary Statistics Person Effects

1985-1991

Males

5%- Percentile Position	N	mean	sd	p25	p50	p75	p99
1	814.756	3,21041	0,25064	3,14529	3,30136	3,37565	3,42154
2	814.755	3,48265	0,03009	3,45802	3,48574	3,50900	3,52833
3	814.755	3,56196	0,01780	3,54689	3,56289	3,57752	3,59050
4	814.756	3,61481	0,01320	3,60352	3,61524	3,62631	3,63643
5	814.755	3,65629	0,01094	3,64690	3,65652	3,66582	3,67445
6	814.755	3,69187	0,00970	3,68351	3,69201	3,70028	3,70810
7	814.756	3,72416	0,00899	3,71641	3,72423	3,73195	3,73932
8	814.755	3,75472	0,00866	3,74725	3,75477	3,76222	3,76937
9	814.755	3,78454	0,00857	3,77711	3,78456	3,79195	3,79908
10	814.755	3,81429	0,00862	3,80681	3,81428	3,82176	3,82897
11	814.756	3,84457	0,00890	3,83685	3,84453	3,85226	3,85978
12	814.755	3,87622	0,00943	3,86803	3,87612	3,88436	3,89241
13	814.755	3,91032	0,01031	3,90136	3,91015	3,91918	3,92816
14	814.756	3,94843	0,01178	3,93817	3,94817	3,95855	3,96890
15	814.755	3,99298	0,01411	3,98066	3,99256	4,00510	4,01771
16	814.755	4,04780	0,01782	4,03224	4,04712	4,06303	4,07939
17	814.756	4,11926	0,02376	4,09846	4,11823	4,13953	4,16152
18	814.755	4,21482	0,03171	4,18706	4,21357	4,24191	4,27103
19	814.755	4,34057	0,04131	4,30459	4,33868	4,37556	4,41490
20	814.755	4,57884	0,17859	4,46598	4,53237	4,63952	5,10332
Total	16.295.106	3,85848	0,31030	3,67480	3,82927	4,01825	4,67365

Females

5%- Percentile Position	N	mean	sd	p25	p50	p75	p99
1	472.581	2,94280	0,24994	2,84258	3,02043	3,12533	3,19949
2	472.581	3,30947	0,05530	3,26354	3,31475	3,35816	3,39355
3	472.581	3,45114	0,02960	3,42640	3,45347	3,47709	3,49727
4	472.581	3,53316	0,01910	3,51693	3,53410	3,54980	3,56399
5	472.580	3,59141	0,01503	3,57853	3,59173	3,60450	3,61632
6	472.581	3,64039	0,01349	3,62871	3,64049	3,65210	3,66311
7	472.581	3,68631	0,01309	3,67498	3,68631	3,69767	3,70852
8	472.581	3,73175	0,01316	3,72033	3,73175	3,74316	3,75405
9	472.581	3,77715	0,01302	3,76589	3,77719	3,78844	3,79916
10	472.580	3,82136	0,01246	3,81059	3,82143	3,83217	3,84232
11	472.581	3,86318	0,01166	3,85311	3,86330	3,87332	3,88274
12	472.581	3,90239	0,01106	3,89282	3,90246	3,91197	3,92106
13	472.581	3,94007	0,01073	3,93079	3,94009	3,94934	3,95829
14	472.581	3,97728	0,01080	3,96793	3,97723	3,98662	3,99572
15	472.580	4,01569	0,01146	4,00576	4,01555	4,02558	4,03545
16	472.581	4,05780	0,01297	4,04653	4,05747	4,06891	4,08047
17	472.581	4,10769	0,01612	4,09359	4,10708	4,12146	4,13628
18	472.581	4,17329	0,02236	4,15372	4,17207	4,19226	4,21371
19	472.581	4,27260	0,03725	4,23992	4,26905	4,30338	4,34343
20	472.580	4,53620	0,18777	4,39993	4,47934	4,61766	5,19161
Total	9.451.616	3,81656	0,35597	3,61681	3,84273	4,03587	4,66048

1990-1996

Males

5%- Percentile Position	N	mean	sd	p25	p50	p75	p99
1	861.165	3,21740	0,26354	3,14148	3,31364	3,39574	3,44590
2	861.164	3,51186	0,03233	3,48548	3,51528	3,54022	3,56071
3	861.165	3,59614	0,01869	3,58033	3,59720	3,61248	3,62604
4	861.164	3,65138	0,01373	3,63967	3,65186	3,66337	3,67381
5	861.165	3,69428	0,01125	3,68463	3,69453	3,70407	3,71293
6	861.164	3,73081	0,00993	3,72225	3,73095	3,73944	3,74742
7	861.165	3,76386	0,00921	3,75591	3,76393	3,77185	3,77936
8	861.164	3,79502	0,00881	3,78740	3,79507	3,80267	3,80989
9	861.165	3,82521	0,00866	3,81771	3,82521	3,83271	3,83989
10	861.164	3,85537	0,00878	3,84777	3,85535	3,86297	3,87034
11	861.165	3,88634	0,00915	3,87842	3,88625	3,89425	3,90205
12	861.164	3,91929	0,00992	3,91068	3,91915	3,92783	3,93640
13	861.165	3,95570	0,01120	3,94595	3,95547	3,96534	3,97514
14	861.164	3,99773	0,01321	3,98623	3,99736	4,00905	4,02088
15	861.165	4,04870	0,01640	4,03439	4,04815	4,06274	4,07759
16	861.164	4,11278	0,02080	4,09460	4,11205	4,13056	4,14948
17	861.165	4,19457	0,02666	4,17126	4,19366	4,21741	4,24156
18	861.164	4,29904	0,03385	4,26949	4,29797	4,32805	4,35852
19	861.165	4,42960	0,04204	4,39298	4,42796	4,46522	4,50484
20	861.164	4,65133	0,14624	4,55517	4,61775	4,71121	5,05595
Total	17.223.290	3,90682	0,32766	3,71329	3,87065	4,07823	4,73831

Females

5%- Percentile Position	N	mean	sd	p25	p50	p75	p99
1	502.129	3,16468	0,25452	3,06381	3,24527	3,34986	3,42463
2	502.129	3,53624	0,05646	3,48930	3,54118	3,58583	3,62297
3	502.128	3,68485	0,03203	3,65788	3,68720	3,71299	3,73487
4	502.129	3,77370	0,02062	3,75620	3,77476	3,79175	3,80683
5	502.128	3,83573	0,01581	3,82216	3,83615	3,84949	3,86180
6	502.129	3,88683	0,01391	3,87484	3,88701	3,89892	3,91010
7	502.129	3,93327	0,01300	3,92203	3,93337	3,94454	3,95518
8	502.128	3,97735	0,01245	3,96659	3,97744	3,98816	3,99832
9	502.129	4,01953	0,01188	4,00925	4,01962	4,02985	4,03952
10	502.128	4,05953	0,01123	4,04982	4,05962	4,06928	4,07844
11	502.129	4,09752	0,01074	4,08823	4,09758	4,10685	4,11565
12	502.129	4,13429	0,01053	4,12516	4,13433	4,14340	4,15214
13	502.128	4,17076	0,01056	4,16162	4,17071	4,17989	4,18876
14	502.129	4,20801	0,01096	4,19850	4,20795	4,21746	4,22677
15	502.128	4,24715	0,01171	4,23699	4,24698	4,25724	4,26734
16	502.129	4,29033	0,01338	4,27868	4,29001	4,30181	4,31371
17	502.129	4,34165	0,01652	4,32722	4,34101	4,35579	4,37089
18	502.128	4,40795	0,02230	4,38840	4,40680	4,42685	4,44816
19	502.129	4,50664	0,03705	4,47412	4,50303	4,53722	4,57723
20	502.128	4,76557	0,17921	4,63403	4,71455	4,84799	5,38457
Total	10.042.572	4,05208	0,35599	3,86232	4,07883	4,26777	4,88703

1996-2002

Males

5%- Percentile Position	N	mean	sd	p25	p50	p75	p99
1	819.241	2,37251	0,28715	2,26471	2,47587	2,57852	2,63923
2	819.241	2,71606	0,03726	2,68581	2,72032	2,74863	2,77196
3	819.241	2,81199	0,02105	2,79421	2,81319	2,83043	2,84555
4	819.240	2,87359	0,01515	2,86066	2,87417	2,88682	2,89828
5	819.241	2,92060	0,01227	2,91005	2,92092	2,93129	2,94086
6	819.241	2,96008	0,01066	2,95092	2,96025	2,96935	2,97786
7	819.241	2,99535	0,00979	2,98690	2,99543	3,00383	3,01181
8	819.240	3,02847	0,00938	3,02035	3,02849	3,03660	3,04436
9	819.241	3,06093	0,00941	3,05278	3,06091	3,06907	3,07693
10	819.241	3,09393	0,00970	3,08551	3,09386	3,10230	3,11053
11	819.241	3,12857	0,01034	3,11959	3,12844	3,13748	3,14636
12	819.240	3,16619	0,01145	3,15624	3,16597	3,17604	3,18603
13	819.241	3,20864	0,01315	3,19719	3,20833	3,21995	3,23154
14	819.241	3,25841	0,01570	3,24471	3,25798	3,27190	3,28584
15	819.241	3,31849	0,01912	3,30180	3,31792	3,33489	3,35200
16	819.240	3,39151	0,02306	3,37143	3,39090	3,41129	3,43180
17	819.241	3,47928	0,02779	3,45505	3,47845	3,50314	3,52800
18	819.241	3,58587	0,03389	3,55629	3,58496	3,61501	3,64507
19	819.241	3,71543	0,04145	3,67934	3,71393	3,75065	3,78917
20	819.240	3,93095	0,14069	3,83720	3,89580	3,98548	4,37370
Total	16.384.815	3,15084	0,35796	2,94125	3,11088	3,35273	4,01256

Females

5%- Percentile Position	N	mean	sd	p25	p50	p75	p99
1	482.038	3,20410	0,26573	3,08334	3,28649	3,40384	3,48515
2	482.038	3,60594	0,06093	3,55535	3,61138	3,65942	3,69956
3	482.038	3,76734	0,03521	3,73772	3,76977	3,79824	3,82269
4	482.038	3,86624	0,02324	3,84648	3,86735	3,88654	3,90366
5	482.038	3,93654	0,01796	3,92111	3,93706	3,95218	3,96613
6	482.038	3,99399	0,01543	3,98073	3,99424	4,00741	4,01970
7	482.038	4,04490	0,01407	4,03278	4,04504	4,05712	4,06852
8	482.038	4,09194	0,01308	4,08064	4,09210	4,10328	4,11389
9	482.038	4,13590	0,01237	4,12522	4,13597	4,14661	4,15679
10	482.038	4,17791	0,01189	4,16763	4,17794	4,18825	4,19799
11	482.038	4,21850	0,01158	4,20848	4,21855	4,22851	4,23814
12	482.038	4,25852	0,01155	4,24851	4,25850	4,26850	4,27816
13	482.038	4,29885	0,01178	4,28861	4,29878	4,30902	4,31900
14	482.038	4,34074	0,01245	4,32996	4,34060	4,35147	4,36219
15	482.038	4,38602	0,01378	4,37401	4,38580	4,39788	4,40989
16	482.038	4,43733	0,01602	4,42337	4,43689	4,45107	4,46537
17	482.038	4,49907	0,01990	4,48171	4,49833	4,51611	4,53415
18	482.038	4,57854	0,02672	4,55520	4,57709	4,60121	4,62680
19	482.038	4,69704	0,04435	4,65822	4,69275	4,73381	4,78113
20	482.037	4,98365	0,19053	4,84646	4,93297	5,06625	5,66522
Total	9.640.759	4,17615	0,39497	3,96669	4,19841	4,41041	5,10492

2002-2009

Males

5%- Percentile Position	N	mean	sd	p25	p50	p75	p99
1	791.731	2,97735	0,28414	2,87119	3,07774	3,18117	3,24394
2	791.730	3,32419	0,03897	3,29249	3,32863	3,35823	3,38264
3	791.730	3,42454	0,02208	3,40584	3,42581	3,44386	3,45982
4	791.730	3,48962	0,01612	3,47585	3,49021	3,50370	3,51591
5	791.730	3,53976	0,01309	3,52853	3,54010	3,55115	3,56144
6	791.730	3,58205	0,01146	3,57216	3,58222	3,59201	3,60119
7	791.730	3,62014	0,01063	3,61096	3,62022	3,62936	3,63803
8	791.730	3,65622	0,01028	3,64730	3,65624	3,66514	3,67362
9	791.730	3,69179	0,01030	3,68288	3,69177	3,70068	3,70935
10	791.730	3,72800	0,01067	3,71876	3,72790	3,73720	3,74629
11	791.731	3,76608	0,01133	3,75624	3,76595	3,77584	3,78556
12	791.730	3,80720	0,01249	3,79634	3,80699	3,81795	3,82884
13	791.730	3,85339	0,01427	3,84095	3,85306	3,86567	3,87823
14	791.730	3,90704	0,01682	3,89240	3,90659	3,92147	3,93645
15	791.730	3,97107	0,02023	3,95343	3,97049	3,98846	4,00643
16	791.730	4,04775	0,02405	4,02678	4,04720	4,06842	4,08968
17	791.730	4,13919	0,02911	4,11385	4,13819	4,16408	4,19051
18	791.730	4,25454	0,03815	4,22118	4,25298	4,28712	4,32231
19	791.730	4,40763	0,05064	4,36334	4,40555	4,45102	4,49728
20	791.730	4,65319	0,14734	4,55307	4,61734	4,71136	5,15494
Total	15.834.602	3,79204	0,38480	3,56186	3,74667	4,00722	4,73951

Females

5%- Percentile Position	N	mean	sd	p25	p50	p75	p99
1	473.392	2,87391	0,26288	2,74626	2,95131	3,07394	3,15953
2	473.392	3,28632	0,06360	3,23374	3,29214	3,34203	3,38380
3	473.392	3,45441	0,03682	3,42337	3,45691	3,48671	3,51243
4	473.392	3,55842	0,02451	3,53758	3,55957	3,57984	3,59794
5	473.392	3,63289	0,01909	3,61656	3,63340	3,64949	3,66442
6	473.392	3,69422	0,01655	3,67997	3,69448	3,70863	3,72184
7	473.391	3,74888	0,01510	3,73581	3,74907	3,76199	3,77420
8	473.392	3,79935	0,01408	3,78721	3,79950	3,81155	3,82304
9	473.392	3,84699	0,01346	3,83535	3,84708	3,85865	3,86967
10	473.392	3,89281	0,01304	3,88152	3,89286	3,90410	3,91488
11	473.392	3,93756	0,01281	3,92647	3,93756	3,94866	3,95928
12	473.392	3,98186	0,01280	3,97077	3,98186	3,99292	4,00364
13	473.392	4,02660	0,01307	4,01527	4,02652	4,03790	4,04895
14	473.391	4,07310	0,01385	4,06105	4,07298	4,08504	4,09687
15	473.392	4,12324	0,01525	4,10997	4,12297	4,13635	4,14967
16	473.392	4,18013	0,01776	4,16466	4,17968	4,19538	4,21120
17	473.392	4,24867	0,02212	4,22939	4,24784	4,26758	4,28780
18	473.392	4,33784	0,03017	4,31145	4,33619	4,36340	4,39233
19	473.392	4,47124	0,04984	4,42753	4,46666	4,51238	4,56555
20	473.391	4,78657	0,20216	4,63779	4,73160	4,87797	5,48754
Total	9.467.837	3,89775	0,42571	3,66504	3,91533	4,15023	4,92160

A2 Summary Statistics Establishment Effects

1985-1991

Males

5%- Percentile Position	N	mean	sd	p25	p50	p75	p99
1	61.055	-0,69596	0,32095	-0,82427	-0,61248	0,47822	-0,37984
2	61.055	-0,23387	0,07373	-0,29497	-0,22701	0,16929	-0,12110
3	61.055	-0,03935	0,04253	-0,07499	-0,03647	0,00201	0,02760
4	61.055	0,07937	0,02727	0,05638	0,08066	0,10333	0,12294
5	61.055	0,15821	0,01899	0,14191	0,15909	0,17494	0,18884
6	61.055	0,21491	0,01418	0,20277	0,21541	0,22725	0,23810
7	61.055	0,25899	0,01148	0,24910	0,25931	0,26897	0,27797
8	61.055	0,29541	0,00961	0,28717	0,29562	0,30376	0,31137
9	61.055	0,32664	0,00848	0,31931	0,32681	0,33406	0,34077
10	61.054	0,35457	0,00772	0,34792	0,35465	0,36127	0,36753
11	61.055	0,38046	0,00727	0,37417	0,38050	0,38679	0,39271
12	61.055	0,40526	0,00710	0,39909	0,40524	0,41139	0,41736
13	61.055	0,42975	0,00707	0,42359	0,42971	0,43590	0,44179
14	61.055	0,45435	0,00717	0,44813	0,45429	0,46053	0,46663
15	61.055	0,47993	0,00761	0,47337	0,47986	0,48649	0,49298
16	61.055	0,50745	0,00840	0,50015	0,50728	0,51467	0,52207
17	61.055	0,53899	0,00989	0,53041	0,53870	0,54744	0,55643
18	61.055	0,57828	0,01316	0,56676	0,57759	0,58942	0,60189
19	61.055	0,63626	0,02186	0,61716	0,63401	0,65424	0,67804
20	61.054	0,82998	0,21080	0,71284	0,76375	0,86659	1,64219
Total	1.221.098	0,29798	0,33860	0,18938	0,36777	0,49326	0,90333

Females

5%- Percentile Position	N	mean	sd	p25	p50	p75	p99
1	53.957	-1,07767	0,26885	-1,21198	-1,00438	-0,87187	-0,77839
2	53.956	-0,64142	0,06839	-0,69792	-0,63524	-0,58154	-0,53681
3	53.957	-0,46151	0,03936	-0,49502	-0,45889	-0,42695	-0,39903
4	53.956	-0,34768	0,02740	-0,37100	-0,34637	-0,32380	-0,30337
5	53.957	-0,26442	0,02111	-0,28245	-0,26376	-0,24595	-0,22981
6	53.956	-0,19817	0,01732	-0,21299	-0,19785	-0,18302	-0,16947
7	53.957	-0,14235	0,01501	-0,15535	-0,14215	-0,12919	-0,11742
8	53.956	-0,09369	0,01318	-0,10503	-0,09353	-0,08218	-0,07168
9	53.957	-0,05001	0,01200	-0,06031	-0,04988	-0,03962	-0,02993
10	53.956	-0,00988	0,01128	-0,01963	-0,00978	-0,00005	0,00916
11	53.956	0,02806	0,01062	0,01890	0,02810	0,03724	0,04612
12	53.957	0,06475	0,01061	0,05551	0,06475	0,07397	0,08278
13	53.956	0,10168	0,01070	0,09240	0,10171	0,11094	0,11986
14	53.957	0,13902	0,01093	0,12954	0,13903	0,14842	0,15776
15	53.956	0,17765	0,01134	0,16781	0,17761	0,18744	0,19701
16	53.957	0,21802	0,01191	0,20778	0,21789	0,22829	0,23846
17	53.956	0,26172	0,01345	0,25009	0,26148	0,27326	0,28519
18	53.957	0,31392	0,01718	0,29888	0,31307	0,32847	0,34479
19	53.956	0,38915	0,02822	0,36457	0,38635	0,41228	0,44332
20	53.956	0,63111	0,21821	0,48826	0,55712	0,69079	1,51209
Total	1.079.129	-0,04809	0,38484	-0,22915	0,00954	0,19744	0,73706

1990-1996

Males

5%- Percentile Position	N	mean	sd	p25	p50	p75	p99
1	67.892	-0,68073	0,30372	-0,80717	-0,59997	0,46856	-0,37383
2	67.891	-0,23031	0,07231	-0,29006	-0,22405	0,16711	-0,11882
3	67.891	-0,03869	0,04176	-0,07406	-0,03572	0,00226	0,02727
4	67.891	0,07908	0,02748	0,05572	0,08068	0,10321	0,12278
5	67.891	0,15888	0,01937	0,14234	0,15981	0,17576	0,19022
6	67.892	0,21756	0,01482	0,20494	0,21805	0,23046	0,24174
7	67.891	0,26348	0,01195	0,25326	0,26374	0,27390	0,28323
8	67.891	0,30161	0,01012	0,29295	0,30181	0,31039	0,31837
9	67.891	0,33437	0,00890	0,32667	0,33446	0,34211	0,34925
10	67.891	0,36363	0,00802	0,35674	0,36370	0,37057	0,37710
11	67.892	0,39054	0,00751	0,38404	0,39066	0,39702	0,40318
12	67.891	0,41605	0,00726	0,40974	0,41611	0,42235	0,42834
13	67.891	0,44097	0,00715	0,43482	0,44093	0,44718	0,45309
14	67.891	0,46603	0,00733	0,45971	0,46599	0,47239	0,47851
15	67.891	0,49211	0,00779	0,48536	0,49202	0,49886	0,50549
16	67.892	0,52023	0,00852	0,51287	0,52008	0,52754	0,53502
17	67.891	0,55206	0,00998	0,54338	0,55176	0,56056	0,56967
18	67.891	0,59149	0,01308	0,58006	0,59089	0,60260	0,61498
19	67.891	0,64886	0,02142	0,63013	0,64687	0,66640	0,68968
20	67.891	0,83929	0,20188	0,72386	0,77422	0,87301	1,66838
Total	1.357.824	0,30632	0,33893	0,19081	0,37736	0,50575	0,91033

Females

5%- Percentile Position	N	mean	sd	p25	p50	p75	p99
1	58.807	-1,20841	0,28134	-1,34416	-1,12989	-0,99382	-0,89923
2	58.807	-0,76124	0,06862	-0,81744	-0,75434	-0,70084	-0,65726
3	58.806	-0,58244	0,03897	-0,61530	-0,57993	-0,54850	-0,52076
4	58.807	-0,47118	0,02642	-0,49360	-0,47004	-0,44804	-0,42852
5	58.807	-0,39153	0,02012	-0,40869	-0,39099	-0,37397	-0,35844
6	58.806	-0,32850	0,01638	-0,34253	-0,32805	-0,31421	-0,30140
7	58.807	-0,27589	0,01407	-0,28799	-0,27560	-0,26367	-0,25255
8	58.807	-0,23020	0,01239	-0,24084	-0,22996	-0,21942	-0,20951
9	58.806	-0,18934	0,01125	-0,19902	-0,18923	-0,17958	-0,17039
10	58.807	-0,15145	0,01065	-0,16066	-0,15138	-0,14225	-0,13352
11	58.807	-0,11550	0,01019	-0,12437	-0,11549	-0,10664	-0,09825
12	58.806	-0,08051	0,01005	-0,08919	-0,08055	-0,07179	-0,06340
13	58.807	-0,04547	0,01015	-0,05428	-0,04553	-0,03669	-0,02814
14	58.807	-0,00991	0,01037	-0,01891	-0,00994	-0,00096	0,00778
15	58.806	0,02655	0,01073	0,01722	0,02653	0,03587	0,04482
16	58.807	0,06473	0,01141	0,05483	0,06456	0,07461	0,08430
17	58.807	0,10598	0,01258	0,09505	0,10567	0,11681	0,12792
18	58.806	0,15450	0,01586	0,14064	0,15376	0,16789	0,18296
19	58.807	0,22351	0,02578	0,20099	0,22074	0,24462	0,27324
20	58.806	0,45574	0,21301	0,31672	0,38171	0,51360	1,29535
Total	1.176.133	-0,19053	0,37270	-0,35780	-0,13317	0,04518	0,56161

1996-2002

Males

5%- Percentile Position	N	mean	sd	p25	p50	p75	p99
1	73.836	0,03267	0,30438	-0,10617	0,11724	0,25717	0,35661
2	73.835	0,50519	0,07511	0,44227	0,51147	0,57135	0,62126
3	73.835	0,70615	0,04432	0,66899	0,70895	0,74491	0,77621
4	73.835	0,83213	0,02959	0,80685	0,83377	0,85803	0,87945
5	73.836	0,91907	0,02139	0,90069	0,91992	0,93781	0,95371
6	73.835	0,98368	0,01627	0,96978	0,98418	0,99782	1,01038
7	73.835	1,03448	0,01320	1,02312	1,03485	1,04599	1,05625
8	73.835	1,07646	0,01113	1,06693	1,07678	1,08614	1,09490
9	73.836	1,11249	0,00979	1,10405	1,11257	1,12100	1,12884
10	73.835	1,14455	0,00881	1,13692	1,14459	1,15226	1,15931
11	73.835	1,17396	0,00821	1,16690	1,17402	1,18108	1,18773
12	73.835	1,20150	0,00773	1,19481	1,20158	1,20818	1,21452
13	73.836	1,22816	0,00772	1,22148	1,22818	1,23486	1,24123
14	73.835	1,25487	0,00779	1,24812	1,25487	1,26161	1,26814
15	73.835	1,28254	0,00823	1,27543	1,28245	1,28963	1,29666
16	73.835	1,31209	0,00889	1,30439	1,31194	1,31978	1,32744
17	73.836	1,34523	0,01045	1,33612	1,34492	1,35416	1,36359
18	73.835	1,38647	0,01379	1,37443	1,38575	1,39813	1,41136
19	73.835	1,44786	0,02335	1,42740	1,44538	1,46684	1,49298
20	73.835	1,66468	0,23035	1,53139	1,58898	1,70488	2,60905
Total	1.476.705	1,08221	0,36332	0,95429	1,15958	1,29695	1,74760

Females

5%- Percentile Position	N	mean	sd	p25	p50	p75	p99
1	59.581	-1,37578	0,29685	-1,52331	-1,29554	-1,14692	-1,04380
2	59.580	-0,89070	0,07718	-0,95481	-0,88324	-0,82309	-0,77309
3	59.581	-0,68946	0,04391	-0,72647	-0,68702	-0,65101	-0,61955
4	59.580	-0,56340	0,03003	-0,58905	-0,56203	-0,53708	-0,51488
5	59.580	-0,47369	0,02226	-0,49271	-0,47273	-0,45429	-0,43761
6	59.581	-0,40497	0,01781	-0,42028	-0,40443	-0,38938	-0,37577
7	59.580	-0,34855	0,01493	-0,36136	-0,34822	-0,33554	-0,32387
8	59.580	-0,29995	0,01323	-0,31139	-0,29961	-0,28845	-0,27794
9	59.581	-0,25621	0,01213	-0,26670	-0,25605	-0,24565	-0,23596
10	59.580	-0,21586	0,01131	-0,22562	-0,21583	-0,20600	-0,19678
11	59.580	-0,17747	0,01084	-0,18685	-0,17736	-0,16815	-0,15923
12	59.581	-0,14050	0,01062	-0,14968	-0,14048	-0,13129	-0,12250
13	59.580	-0,10386	0,01060	-0,11311	-0,10380	-0,09467	-0,08589
14	59.580	-0,06699	0,01072	-0,07620	-0,06709	-0,05770	-0,04866
15	59.581	-0,02912	0,01116	-0,03880	-0,02918	-0,01942	-0,01007
16	59.580	0,01052	0,01180	0,00027	0,01041	0,02074	0,03077
17	59.580	0,05359	0,01331	0,04199	0,05310	0,06506	0,07687
18	59.581	0,10612	0,01746	0,09087	0,10525	0,12091	0,13759
19	59.580	0,18448	0,03013	0,15802	0,18117	0,20900	0,24293
20	59.580	0,45503	0,24597	0,29342	0,36977	0,52275	1,42222
Total	1.191.607	-0,26134	0,40674	-0,43694	-0,19638	-0,00967	0,57674

2002-2009

Males

5%- Percentile Position	N	mean	sd	p25	p50	p75	p99
1	75.205	-0,70377	0,30529	-0,84942	-0,62198	0,47673	-0,37289
2	75.205	-0,21869	0,07769	-0,28299	-0,21208	0,15049	-0,09909
3	75.205	-0,01087	0,04638	-0,05007	0,00762	0,02990	0,06231
4	75.204	0,12158	0,03154	0,09477	0,12307	0,14917	0,17244
5	75.205	0,21587	0,02357	0,19568	0,21657	0,23643	0,25447
6	75.205	0,28885	0,01877	0,27282	0,28936	0,30518	0,31971
7	75.205	0,34811	0,01557	0,33470	0,34855	0,36170	0,37374
8	75.204	0,39801	0,01335	0,38648	0,39828	0,40967	0,42002
9	75.205	0,44094	0,01159	0,43092	0,44117	0,45103	0,46024
10	75.205	0,47901	0,01046	0,46999	0,47913	0,48811	0,49651
11	75.206	0,51370	0,00963	0,50538	0,51379	0,52209	0,52993
12	75.204	0,54634	0,00921	0,53840	0,54634	0,55430	0,56196
13	75.204	0,57786	0,00898	0,57008	0,57783	0,58566	0,59310
14	75.205	0,60891	0,00896	0,60115	0,60887	0,61667	0,62419
15	75.205	0,64066	0,00938	0,63252	0,64053	0,64877	0,65671
16	75.204	0,67459	0,01034	0,66556	0,67439	0,68350	0,69250
17	75.205	0,71308	0,01207	0,70253	0,71270	0,72343	0,73427
18	75.205	0,76039	0,01561	0,74673	0,75960	0,77358	0,78840
19	75.205	0,82882	0,02568	0,80634	0,82630	0,84993	0,87804
20	75.204	1,05742	0,22934	0,91924	0,98088	1,10298	2,01231
Total	1.504.095	0,41404	0,39657	0,25521	0,49685	0,65706	1,14851

Females

5%- Percentile Position	N	mean	sd	p25	p50	p75	p99
1	59.811	-1,12323	0,28873	-1,26614	-1,04953	-0,90260	-0,79533
2	59.810	-0,63609	0,07990	-0,70233	-0,62796	-0,56610	-0,51468
3	59.810	-0,42682	0,04580	-0,46523	-0,42386	-0,38677	-0,35423
4	59.810	-0,29589	0,03117	-0,32239	-0,29444	-0,26870	-0,24552
5	59.810	-0,20226	0,02338	-0,22231	-0,20135	-0,18178	-0,16407
6	59.810	-0,12986	0,01872	-0,14589	-0,12938	-0,11362	-0,09901
7	59.810	-0,07017	0,01599	-0,08400	-0,06988	-0,05625	-0,04355
8	59.810	-0,01812	0,01426	-0,03055	-0,01792	-0,00570	0,00567
9	59.810	0,02935	0,01320	0,01795	0,02953	0,04079	0,05146
10	59.810	0,07375	0,01247	0,06298	0,07384	0,08461	0,09472
11	59.810	0,11596	0,01203	0,10549	0,11588	0,12642	0,13638
12	59.810	0,15777	0,01212	0,14725	0,15780	0,16823	0,17831
13	59.810	0,19983	0,01223	0,18927	0,19971	0,21037	0,22070
14	59.810	0,24264	0,01247	0,23189	0,24258	0,25346	0,26402
15	59.810	0,28689	0,01303	0,27561	0,28674	0,29821	0,30910
16	59.810	0,33312	0,01379	0,32112	0,33303	0,34492	0,35689
17	59.810	0,38366	0,01551	0,37018	0,38326	0,39688	0,41082
18	59.810	0,44442	0,02017	0,42675	0,44338	0,46147	0,48083
19	59.810	0,53266	0,03297	0,50368	0,52944	0,55978	0,59578
20	59.810	0,81758	0,25169	0,64968	0,73053	0,89022	1,80425
Total	1.196.201	0,03576	0,43403	-0,16339	0,09512	0,30955	0,94732

References.

Abowd, John; Kramarz, Francis; Margolis, David (1999), 'High Wage Workers and High Wage Firms, In: *Econometrica*, Vol. 67, No. 2, pp. 251–333.

vom Berge, Philipp; Burghardt, Anja; Trenkle, Simon; (2013): Sample of integrated labour market biographies * regional file 1975-2010 (SIAB-R 7510). (FDZ-Datenreport, 09/2013 (en)), Nürnberg, 73 S.

vom Berge, Philipp; König, Marion; Seth, Stefan (2013): Sample of Integrated Labour Market Biographies (SIAB) 1975-2010. (FDZ-Datenreport, 01/2013 (en)), Nürnberg, 65 pp.

Card, David; Heining, Jörg; Kline, Patrick (2013): Workplace heterogeneity and the rise of West German wage inequality. In: *The Quarterly Journal of Economics*, Vol. 128, No. 3, pp. 967-1015.

Heining, Jörg; Scholz, Theresa; Seth, Stefan (2013): Linked-Employer-Employee data from the IAB: LIAB cross-sectional model 2 1993-2010 (LIAB QM2 9310). (FDZ-Datenreport, 02/2013 (en)), Nürnberg, 77 pp.

Klosterhuber, Wolfram; Heining, Jörg; Seth, Stefan (2013): Linked-employer-employee-data from the IAB: LIAB longitudinal model 1993-2010 (LIAB LM 9310). (FDZ-Datenreport, 08/2013 (en)), Nürnberg, 62 p.

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