

# FDZ *Datenreport*

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Documentation of labour market data

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## **Development of a Panel Dataset from the IAB Establishment Panel Cross- sectional Data**

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### **Notes and thanks**

The individual authors are responsible for the content of the FDZ Datenreports and Methodenreports. This panel dataset was developed by Holger Alda. Anja Spengler produced the core of the STATA syntax and the FDZ Datenreport. Building on the work of Anja Spengler, Dana Müller and Holger Alda completed the production and documentation of the panel dataset. Agnes Dundler formulated the SPSS syntax and checked the descriptive evaluations. We would like to thank Christina Bauer for her support in checking the descriptive evaluations.

### **Data availability**

The dataset described in this paper is available for use for professional researchers. For further information, see “Establishment Data” on the website: <http://fdz.iab.de/en.aspx>.

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## 1. Introduction

The IAB Establishment Panel now consists of 12 waves from 1993-2004, which are available for research use in the Research Data Centre of the Federal Employment Agency at the Institute for Employment Research. Due to repeated surveys of the same establishments, individual processes within the establishments can be studied in both cross-sectional and longitudinal terms. Cross-sectional evaluations of various waves and the production of a longitudinal or panel dataset require different tasks to be solved. Researchers must check across the individual survey years whether the variable values have remained identical or whether values are absent or new ones have been added. In addition, the measurement levels of the variables must be checked and any differences must be harmonised. Further, the time period in question can alter (e.g. financial year or first half-year). The purpose of such checks is to guarantee the comparability of the variables beyond the analysis period. The above examples illustrate that producing a panel dataset involves time-consuming processing of the individual datasets. This report has been written as a tool to support users in producing a panel dataset on the basis of data from the IAB Establishment Panel. The *Datenreport* consists of the development of a panel dataset containing variables that tend to be frequently used, in our experience. The panel dataset is available in the Research Data Centre and can be used both via remote data access and during research visits. The STATA and SPSS program code used to produce the dataset is available as a download, enabling users to integrate additional variables into the program code used with relative ease. The program codes can also be modified with the aid of the test data.

This *Datenreport* is structured as follows: following a brief description of the IAB Establishment Panel, the structure of the panel dataset is presented. Next, Chapter 4 presents the variables for the dataset in the form of tables and details the use of the program codes. Appendix 1 describes each of the variables in the panel dataset, also detailing the values and any restrictions or problems occurring. Appendix 2 presents frequency counts<sup>1</sup> of the variables used. The program codes in SPSS and STATA are contained in a separate document ([downloads of SPSS program code](#), [downloads of STATA program code](#)).

## 2. Structure of the IAB Establishment Panel

The IAB Establishment Panel is a representative survey of employers carried out on an annual basis. The first survey was of approx. 4,000 establishments in western Germany in 1993, extended to the whole of Germany from 1996 on. New establishment numbers and additions are

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<sup>1</sup> Due to data protection regulations, very small case numbers are deleted.

added to the sample annually, both to replace establishments that no longer participate in the survey or no longer exist, and to extend the sample itself. In 2004, the most recent observation year for the present data, a total of 15,689 establishments (10,104 West German and 5585 East German establishments) took part in the survey.<sup>2</sup>

The survey unit of the IAB Establishment Panel is the establishment rather than the company. The population consists of all establishments in Germany with at least one employee liable for social security contributions. The basis for this figure is the employment statistics, which are based on the registration procedure for social security. The relevant characteristics for drawing the sample are stored in what is referred to as a Federal Employment Agency "establishment file", a quarterly data file as of 30 June of the previous year<sup>3</sup>. A random sample, disproportional with regard to the size and branch of the economy of the establishments, is drawn for the IAB Establishment Panel from the establishment file<sup>4</sup>. For this reason, large establishments have a higher probability of being drawn and are thus over-represented in the sample. In order to balance out this disproportional approach, an extrapolation factor was calculated in correspondence with the distribution of establishments in the population. Extrapolation factors enable statements on the population of all establishments with employees liable for social security contributions. Since 1996 (East) / 2000 (West), the extent of the sample has allowed separate analyses on the state level. Two weighting procedures can be distinguished in this process: cross-sectional and longitudinal weighting. The possibility of longitudinal weighting is of significance for the panel dataset. Using this process, data from different waves may be linked, provided the same establishments<sup>5</sup> were constantly surveyed. In contrast, cross-sectional weightings have been produced for the individual survey years and are thus independent of one another<sup>6</sup>.

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<sup>2</sup> These are the cross-sectional cases. Cross-sectional cases are the establishments that had at least one employee liable for social security contributions in the previous year.

<sup>3</sup> There is a time lag between drawing the sample and carrying out the survey due to the registration procedure, i.e. the sample is drawn as of 30 June of the previous year.

<sup>4</sup> The stratification matrix takes into account ten establishment size classes and 16 branches of the economy up to 1999, and 20 branches of the economy from 2000 on.

<sup>5</sup> In the waves 2001, 2002 and 2003, one large establishment was adopted without interview as a dummy dataset, in order to enhance the cross-sectional extrapolation (cf. TNS Infratest (2004): IAB-Betriebspanel. Arbeitgeberbefragung 2003. Methodenbericht. Munich). This results in differing case numbers in the cross-sectional and longitudinal weighting processes, as this establishment is not identified as a panel establishment.

<sup>6</sup> Further information on the IAB Establishment Panel is available on the website of the IAB research area Establishments and Employment (focus on content-related aspects) at <http://betriebspanel.iab.de> or of the Research Data Centre (focus on data) at <http://fdz.iab.de>. The methodological approach and structure of the IAB Establishment Panel is described, for example, in Bellmann (2002): Das IAB-Betriebspanel: Konzeption und Anwendungsbereiche, Allgemeines Statistisches Archiv 86, 177-188. Counts of the individual waves are depicted in FDZ Datenreport No. 5 (<http://fdz.iab.de/pageText.asp?PageID=44#Datenreport>).

### 3. Structure of the Panel Dataset

For the construction of a panel dataset, it is necessary to process the required variables from every individual wave of the IAB Establishment Panel. There are variables that are present in every wave, but also variables that have been sampled at regular or irregular intervals. The majority of variables are subject to change over the course of time. This means that questions may have been modified over the course of time, for example by alterations in the response categories<sup>7</sup>. For this reason, the variables in the panel dataset presented here have initially been processed in a way that they remain constant over the survey years. In addition, we have given them standardised variable names<sup>8</sup>. Further, it was necessary to create a new annual variable stating the year of the wave in which the establishment was surveyed. After processing the variables for every dataset, the waves were brought together by establishment number. This results in a panel dataset, which may contain several lines for every establishment, depending on the frequency of the establishment's participation. Finally, the characteristics covering a specific period, e.g. two years, were extended to the corresponding previous year(s). Time-series can be completed by means of extending characteristics. Nevertheless, the period of the variables must always be taken into account for interpretation purposes.

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<sup>7</sup> Changes of categories and other alterations are contained in the Codebook (FDZ Datenreport No. 5).

<sup>8</sup> In the original dataset, the variable names refer to the wave (in alphabetical order: "a" corresponds to 1993, etc.) and the question number in each questionnaire (a 02 is the name of question 2 in the 1993 questionnaire).

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#### **4. Selection of Variables for the Dataset**

The most frequently used variables were selected for the panel dataset. Appendix 1 details the content of the variables, their value labels and further information on the variables. The variables of the panel dataset are distinguished on the following page in Overview 1, initially into organisation variables (a) and sampled characteristics (b). The characteristics are further divided according to personnel structure (I), labour organisation and qualification behaviour within the establishment (II) and establishment structure (III).

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**Overview 1: Brief Description of Variables in the Cross-sectional Datasets of the IAB Establishment Panel**

<b>a) Organisations variables</b>		
System-independent ID number		
Cross-sectional weighting factor		
Panel factors		
Year		
<b>b) Characteristics</b>		
<b>I Personnel structure</b>	<b>II Labour organisation and qualification behaviour within establishment</b>	<b>III Establishment structure</b>
Number of employees (liable for social security)	Overtime	Insourced establishments
Number of other employees	Financing of further training	Type of business volume
Total employees	Collective wage agreement	Level of business volume
Total unskilled/semi-skilled workers	Wages/salaries above collectively agreed level	Profitability
Total skilled workers	Total gross wages/salaries	Profitability in current financial year
Employees/civil servants (menial)	Working hours	Total of all investments
Employees/civil servants (skilled)	Reduction of hierarchies	Evaluation of technical status of equipment

(Continued overleaf)

<b>b) Characteristics</b>		
<b>I Personnel structure</b>	<b>II Labour organisation and qualification behaviour within establishment</b>	<b>III Establishment structure</b>
Total working proprietors/ directors/ managers	Reallocation of responsibilities	Employee representation within establishment
Total trainees/apprentices	Introduction of group work	Type of establishment/government agency
Total candidates for civil service	Establishment of units with independent costing	Legal form
Total female employees	Other organisational changes	Ownership
Total part-time employees	More own production/services	Member of Chamber of Trade and Industry
Female part-time employees	More acquisition of products/services	Foundation year from 1990
Employees with fixed-term employment contracts	New design of purchasing/sales channels, customer relations	Industry
Female employees with fixed-term employment contracts	Reorganisation of departments/functional sectors	West/East Germany
New recruitments	Environment-related organisational measures	Outsourcing/closure of parts of establishment
Dismissals	Improvement of quality assurance	German state
Total vacancies		

## 5. Dealing with the Program Codes

Researchers can access the panel dataset available in the Research Data Centre or use the program codes with which the panel dataset has been compiled. Users thus have the option of adopting further variables in the program code or using only certain parts. The program codes ([downloads of the SPSS program code](#), [downloads of the STATA program code](#)) were produced, in line with the programs of the users of the IAB Establishment Panel, in STATA and SPSS. In order to structure the program codes clearly, five parts have been created. The first and second parts contain the renaming and recoding of the variables for every individual wave. Part one covers the years 1993-1998 and part two the years 1999-2004. The renaming of the variables and harmonisation into standard variables valid for all years forms the basis of the panel dataset. In the third part, the prepared waves are compiled into a total dataset. The next part allocates the variable and value labels. The fifth and final part contains the extension of characteristics, i.e. values of variables are extended to other survey years if a period of several years was surveyed and the question was not asked in every survey year. If users do not require value extensions, the additional variables created can be removed in the first two parts for the years 1995, 1998, 2000 and 2004 using the `drop help*` command in STATA. A master file has been set up for STATA users, which calls up all other programs consecutively. SPSS users can start the syntaxes in consecutive order. While setting up the syntax, all steps were carefully stored in a file directory. The programs can be checked for execution with the test data.

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## 6. Summary

The panel dataset serves as a tool for the users of the IAB Establishment Panel whose research interest includes the study of developments on the establishment level. The longitudinal section contains frequently used variables. Users can follow the compilation of the panel dataset with the aid of the variable description, the counts and the program codes. Please bear in mind that variables can be processed in different ways. It is essential that researchers familiarise themselves with the questionnaires and the test data in order to compile their own panel datasets.

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## Appendix 1: Description of Variables from the Several Waves of the IAB Establishment Panel

This section describes the final variables of the panel dataset according to their division into organisational variables and characteristics in Overview 1. In the case of some variables,<sup>9</sup> there are differences between the panel dataset and the codebook, as the values “No response/don’t know” and “Don’t know” are defined in the codebook as missing values, but are available in the panel dataset as additional values. This allows researchers to make their own decisions as to how to deal with these values, and in this context, the possibility of analysing missing values.

In the case of other variables used here, there are deviations to the information in the codebook due to different approaches to filtering questions. Thus, cases were identified on the basis of a prior filter question and marked with a zero when the characteristic in question did not apply. For example, since 1996 establishments have been asked whether they have part-time employees and if so, how many. Establishments without part-time employees receive the value 0 as number of part-time employees. In the codebook, these establishments were not included in the frequency count. In the panel dataset, however, such cases are included in the relevant variables<sup>10</sup>. Further, the characteristics of the employee figures refer to 30 June of the previous year and of the survey year<sup>11</sup>. The description of the variables follows an overview in tabular form (Overview 2) of the variables of the panel dataset and the original variables.

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<sup>9</sup> This applies to the variables “Integrated establishments/parts of establishments”, “Type of business volume”, “Profitability in previous financial year”, “Profitability in current financial year”, “Evaluation of technical status of equipment”, “Overtime in previous financial year”, “Overtime in 1<sup>st</sup> half of current financial year”, “Financing of further training”, “Collective wage agreement”, “Type of enterprise/government agency”, “legal form”, “Property”, “Member of Chamber of Trade and Industry”, “Relocation of responsibilities”, “Introduction of group work”, “Establishment of departments with independent costing”, “Other organisational changes”, “More own production/services”, “More acquisition of products/services”, “New design of purchasing/sales channels, customer relations”, “Reorganisation of departments/functional sectors”, “Environment-related organisational measures”, “Improvement of quality assurance”.

<sup>10</sup> This applies to the variables “Total part-time employees”, “Female part-time employees”, “Employees with fixed-term employment contracts”, “Female employees with fixed-term employment contracts”, “New recruitments”, “Dismissals”, “Total vacancies”.

<sup>11</sup> This applies to the following variables: “Number of employees (liable for social security)”, “Number of other employees”, “Total employees”, “Total unskilled/semi-skilled workers”, “Total skilled workers”, “Employees/civil servants (menial)”, “Employees/civil servants (skilled)”, “Total working proprietors/ directors/ managers”, “Total trainees/apprentices”, “Total candidates for civil service”, “Total female employees”, “Total part-time employees”, “Employees with fixed-term employment contracts”, “Female employees with fixed-term employment contracts”.

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## Overview 2: Description of Variables

Variable (Variable name)	Description
<b>a) Organisational variables</b>	
System-independent ID number ( <i>ID</i> )	Every establishment included in the dataset receives a specific number as identification. This enables the recognition of establishments that took part in various different survey waves via the ID number.
Cross-sectional weighting factor ( <i>hrf_quer</i> )	This weighting factor enables the extrapolation of descriptive events for the population.
Panel factor ( <i>hr93_94p, hr93_95p, hr93_96p, hr93_97p, hr93_98p, hr93_99p, hr93_00p, hr93_01p, hr93_02p, hr93_03p, hr93_04p, hr96_97p, hr96_98p, hr96_99p, hr96_00p, hr96_01p, hr96_02p, hr96_03p, hr96_04p, hr00_01p, hr00_02p, hr00_03p, hr00_04p</i> )	This weighting factor also enables the weighting of descriptive events for the population. Please ensure that the analysis period is entirely within the period set as the basis for the definition of the respective panel cases. A total of 23 panel extrapolation factors are available.
Year ( <i>jahr</i> )	This variable refers to the survey year of the respective wave.
<b>b) Characteristics</b>	
<b>I Personnel structure</b>	
Number of employees (liable for social security) ( <i>svbv, svb</i> )	The number of employees liable for social security is reflected in two variables in every survey. One variable contains the relevant number in relation to the year prior to the survey and the other variable contains the employees liable for social security in the current year, i.e. the year of the survey. The provision of both variables enables researchers to compare the employment development directly on the establishment level.

<b>Variable</b> (Variable name)	<b>Description</b>
Number of other employees ( <i>son_vor</i> , <i>sonstige</i> )	Analogue to the above characteristic, this is the subject of two variables, referring to the year prior to the survey and to the survey year itself. Other employees include, for example, "marginal" part-time workers, government employees, the self-employed and unpaid family workers. In the 1994 and 1995 waves, these characteristics were polled in an additional questionnaire for first-time participants only.
Total employees ( <i>ges_vor</i> , <i>gesamt</i> )	The total number of employees is documented in two variables, describing the status for 30 June of the previous year and 30 June of the survey year respectively. The variables contain both employees liable for social security and those not liable for social security contributions.
Total unskilled/semi-skilled workers ( <i>unge</i> )	This variable contains the employee group of unskilled and semi-skilled workers (cf. footnote 11).
Total skilled workers ( <i>fach</i> )	This variable contains the employee group of skilled workers (cf. footnote 11).
Employees/civil servants (menial) ( <i>bea_einf</i> )	This variable covers the employee group of salaried and government employees carrying out menial work in the establishment. Menial work refers to tasks that do not generally require vocational training (cf. footnote 11).
Employees/civil servants (skilled) ( <i>bea_qual</i> )	This variable contains the employee group of salaried and government employees carrying out skilled work in the establishment. Skilled work generally requires a completed programme of vocational education or vocational experience of equivalent value. Managers are also included in the group of skilled salaried employees. In the 2004 wave, this characteristic was differentiated by work requiring a completed apprenticeship or comparable vocational training and work requiring a higher education qualification. The two characteristics have been compiled into one (cf. footnote 11).
Total working proprietors/ directors/ managers ( <i>inhaber</i> )	This variable contains the group of working proprietors, directors and managers (cf. footnote 11).
Total trainees/apprentices ( <i>azubi</i> )	This variable covers the employee group of trainees and apprentices, not including candidates for civil service (cf. footnote 11).  (Continued overleaf)

<b>Variable</b> (Variable name)	<b>Description</b>
Total candidates for civil service ( <i>beanw</i> )	This variable contains the employee group of candidates for civil service. Please note that trainees/apprentices and candidates for civil service were polled as a single characteristic in 1996. However, the number of trainees/apprentices was also polled separately. Thus, the number of trainees/apprentices was subtracted from this total sum to calculate the number of candidates for civil service. (cf. footnote 11).
Total female employees ( <i>ges_frau</i> )	This variable describes the total number of women employed.
Total part-time employees ( <i>teilzeit</i> )	This variable refers to the number of employees in the surveyed company working part time. In the codebook, only those establishments are included under this variable (from 1996), which employed part-time staff at all according to the previous question. In this syntax, the variable is coded differently: establishments without part-time employees are now also included and coded 0. Establishments that employ part-time staff but do not state a number are coded -9 or -8. (cf. footnote 11).
Female part-time employees ( <i>tz_frau</i> )	This variable contains the total number of women in part-time employment. In the panel dataset, this number refers not only to part-time employees. Establishments with no part-time employees are coded 0 for this variable (cf. footnote 11).

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Variable (Variable name)	Description
Employees with fixed-term employment contracts ( <i>befrist</i> )	This variable is used to describe the number of employees working on fixed-term contracts. Since 1996 these cases have been extracted in advance with the aid of a filter question and only enterprises actually employing workers on fixed-term contracts in the relevant period have been included in the variable. In the panel dataset, enterprises without fixed-term employees are coded 0. Enterprises that state they do employ fixed-term employees but do not provide information on their numbers are coded -9 or -8. Please also note that this characteristic was not surveyed in 1995. Trainees or apprentices are not included in this variable (cf. footnote 11).
Female employees with fixed-term employment contracts ( <i>bef_frau</i> )	This variable refers to the number of women employed on the basis of fixed-term contracts. Enterprises that do not employ any staff on fixed-term contracts are coded 0 for this variable. As with the previous variable, no trainees are included. In the 1995 wave, this characteristic was not surveyed (cf. footnote 11).
New recruitments ( <i>einstell</i> )	This variable contains the total number of new employees recruited in the company surveyed, with reference to the first half of the survey year. Please note that the case numbers deviate from the information in the codebook, as those enterprises are also included that did not employ new recruits in the period in question and thus display the value 0.
Employees leaving the enterprise ( <i>entlass</i> )	This variable covers the total number of employees leaving the company, in relation to the first half-year of the respective survey year. This figure includes dismissals, resignations, retirement, expiry of fixed-term contracts and death. Please note that the case numbers deviate from the information in the codebook, as they include those enterprises in which no employees left the company in the period in question, coded 0.

(Continued overleaf)

<b>Variable</b> (Variable name)	<b>Description</b>
Total vacancies (offen)	This variable covers the number of employees the enterprise in question is seeking as of the date of the survey. Please note that the case numbers deviate from the information in the codebook, as they include those enterprises in which no vacancies were available in the period in question. This variable was not included in the survey year 1999.
<b>II Labour organisation and qualification behaviour within the establishment</b>	
Overtime in the previous financial year (uebstundv)	<p>This variable describes whether employees worked overtime in the enterprise surveyed in the previous financial year. Please note that this variable was only polled in 1999 and from 2001 to 2003.</p> <p>Values (value labels): 1 "Yes", 2 "No", -9 "No response/don't know", -8 "Don't know"</p>
Overtime in 1 <sup>st</sup> half of current financial year (uebstund)	<p>This variable contains information on whether staff worked overtime in the first half of the current financial year or not. Please note that the variable was only included in the surveys from 1993 to 1998. The response category "No response/don't know" was not available in 1994.</p> <p>Values (value labels): 1 "Yes", 2 "No", -9 "No response/don't know", -8 "Don't know"</p>
Financing of further training (weiterb)	<p>This variable contains information on whether the enterprise's employees were released for participation in in-house or external further training courses or the costs of external further training courses were borne by the enterprise. The variable was not polled in the years 1996, 1998 and 2002.</p> <p>Values (value labels): 1 "Yes", 2 "No", -9 "No response/don't know", -8 "Don't know"</p>
Collective wage agreement (tarif)	<p>This variable states whether the enterprise abides by a collective wage agreement. It was not polled in 1993 or 1994.</p> <p>Values (value labels): 1 "Industry-wide wage agreement", 2 "Company agreement", 3 "No collective wage agreement", -9 "No response/don't know", -8 "Don't know"</p>

(Continued overleaf)

Variable (Variable name)	Description
Wages/salaries above collectively agreed level ( <i>uebtarif</i> )	<p>This variable addresses whether wages and salaries are paid above the collectively agreed level in the enterprise surveyed. It was not polled in 1994 and the category "No response/don't know" was unavailable in 1998. Please also note that, in contrast to the codebook, a further category is included: "Not applicable, as no collective agreement". The information in the codebook thereby differs from the information in the panel dataset.</p> <p><i>Values (value labels):</i> 1 "Yes", 2 "No", 3 "Not applicable, as no collective agreement", -9 "No response/don't know", -8 "Don't know"</p>
Total gross wages/salaries ( <i>lohn</i> )	<p>This variable contains the total gross wages and salaries, not including the employer contribution towards social security, in euro, for the month of June of the survey year. The value has been sampled in EURO since 2002. Due to the standardisation of variables for this panel dataset, sums in DM have been converted into euro to ensure identical units across all waves of the panel.</p>
Weekly working hours ( <i>arbeitszeit</i> )	<p>This variable contains the average weekly working hours of full-time employees. For the survey years 1993 and 1999, the original values were multiplied by 10, in order to guarantee comparison with the subsequent years. Please note that this data was not polled in the years 1994, 2000 or 2003.</p>
Reduction of hierarchy levels ( <i>abbau</i> )	<p>This variable states whether an enterprise has undertaken organisational changes of the type "reduction of hierarchy levels". However, this was only polled in 1995. It is possible to extend this value to the previous year, as the question refers to a two-year period.</p> <p><i>Values/value labels:</i> 0 "No", 1 "Yes", -9 "No response/don't know", -8 "Don't know"</p>

(Continued overleaf)

Variable (Variable name)	Description
Reallocation of responsibilities ( <i>verlag</i> )	<p>This variable indicates whether an enterprise has undertaken organisational changes of the type "reallocation of responsibilities" in the previous two years. It is possible to extend this value to the previous year, as the question refers to a two-year period. In the years 1995 and 1998, the response categories "No" and "No response/don't know" were not included in the dataset. For the years 1995 and 1998, a no category was formed if the enterprises had not undertaken any organisational changes. The variable was polled in the years 1995, 1998, 2000, 2001 and 2004.</p> <p><i>Values/value labels:</i> 0 "No", 1 "Yes", -9 "No response/don't know", -8 "Don't know"</p>
Introduction of group work ( <i>gruppe</i> )	<p>This variable indicates whether an enterprise has undertaken organisational changes of the type "introduction of group work" in the previous two years. Due to the period, it is possible to extend the value to the previous year. In the years 1995 and 1998, the response categories "No" and "No response/don't know" were not included in the dataset. For the years 1995 and 1998, a no-category was formed if the enterprises had not undertaken any organisational changes. The variable was polled in the years 1995, 1998, 2000, 2001 and 2004.</p> <p><i>Values/value labels:</i> 0 "No", 1 "Yes", -9 "No response/don't know", -8 "Don't know"</p>
Establishment of units with independent costing ( <i>einheit</i> )	<p>The variable indicates whether an enterprise has undertaken organisational changes of the type "establishment of units with own costing" in the previous two years. Due to the period, it is possible to extend the value to the previous year. In the years 1995 and 1998, the response categories "No" and "No response/don't know" were not included in the dataset. For the years 1995 and 1998, a no category was formed if the enterprises had not undertaken any organisational changes. The variable was polled in the years 1995, 1998, 2000, 2001 and 2004.</p> <p><i>Values/value labels:</i> 0 "No", 1 "Yes", -9 "No response/don't know", -8 "Don't know"</p>

(Continued overleaf)

<b>Variable</b> (Variable name)	<b>Description</b>
More own production/own services ( <i>eigen</i> )	<p>The variable indicates whether an enterprise has undertaken organisational changes of the type "more own production/own services" in the previous two years. This was surveyed in the years 1998, 2000 and 2001. Due to the period, it is possible to extend the value to the previous year. In 1998, there were no response categories "No" or "No response/don't know". A no category was formed if the enterprises had not undertaken any organisational changes.</p> <p><i>Values/value labels:</i> 0 "No", 1 "Yes", -9 "No response/don't know", -8 "Don't know"</p>
More acquisition of products/services ( <i>zukauf</i> )	<p>The variable indicates whether an enterprise has undertaken organisational changes of the type "more acquisition of products/services" in the previous two years. It is possible to extend the value to the previous year, as the question refers to a two-year period. It was polled in the years 1998, 2000 and 2001. In 1998, there were no response categories "No" or "No response/don't know". A no category was formed if the enterprises had not undertaken any organisational changes.</p> <p><i>Values/value label:</i> 0 "No", 1 "Yes", -9 "No response/don't know", -8 "Don't know"</p>
New design of purchasing/sales channels, customer relations ( <i>neugest</i> )	<p>The variable indicates whether an enterprise has undertaken organisational changes of the type "new design of purchasing/sales channels, customer relations" in the previous two years. It is possible to extend the value to the previous year, as the question refers to a two-year period. The variable is included in the dataset for 1998, 2000 and 2001. In 1998, there were no response categories "No" or "No response/don't know". A no category was formed if the enterprises had not undertaken any organisational changes.</p> <p><i>Values/value labels:</i> 0 "No", 1 "Yes", -9 "No response/don't know", -8 "Don't know"</p>

(Continued overleaf)

Variable (Variable name)	Description
Reorganisation of departments/functional sectors ( <i>reorg</i> )	<p>The variable indicates whether an enterprise has undertaken organisational changes of the type “reorganisation of departments/functional sectors” in the previous two years. The 1995 wave only questioned participants on mergers of departments. As department mergers constitute a form of reorganisation, the variable was included in the characteristic reorganisation of departments/functional sectors from 1995 on. This variable is thus included in the dataset for 1995, 1998, 2000 and 2001. For the years 1995 and 1998, a no category was formed if the enterprises had not undertaken any organisational changes. The value of the variable can be extended to the previous year, as the question refers to a two-year period.</p> <p><i>Values/value labels:</i> 0 “No”, 1 “Yes”, -9 “No response/don’t know”, -8 “Don’t know”</p>
Environment-related organisational measures ( <i>umwelt</i> )	<p>The variable indicates whether an enterprise has undertaken organisational changes of the type “environment-related organisational measures” in the previous two years. It is included in the dataset for 1998, 2000 and 2001. In 1998, there were no response categories “No” or “No response/don’t know”. A no category was formed if the enterprises had not undertaken any organisational changes. It is possible to extend this value to the previous year, as the question refers to a two-year period.</p> <p><i>Values/value labels:</i> 0 “No”, 1 “Yes”, -9 “No response/don’t know”, -8 “Don’t know”</p>
Improvement of quality assurance ( <i>qualität</i> )	<p>This variable refers to the existence of organisational change of the type “improvement of quality assurance” in the previous two years. It is included in the dataset for 1998, 2000 and 2001. In 1998, there were no response categories “No” or “No response/don’t know”. A no category was formed if the enterprises had not undertaken any organisational changes. It is possible to extend this value to the previous year, as the question refers to a two-year period.</p> <p><i>Values/value labels:</i> 0 “No”, 1 “Yes”, -9 “No response/don’t know”, -8 “Don’t know”</p>

(Continued overleaf)

Variable (Variable name)	Description
Other organisational changes ( <i>sonst</i> )	<p>This variable indicates the existence of other organisational changes in the past two years. In 1995 and 1998, the response categories “No” and “No response/don’t know” were not included in the dataset. For the years 1995 and 1998, a no category was formed if the enterprises had not undertaken any organisational changes. The variable was sampled in the years 1995, 1998, 2000, 2001 and 2004. It is possible to extend this value to the previous year, as the question refers to a two-year period.</p> <p><i>Values/value labels:</i> 0 “No”, 1 “Yes”, -9 “No response/don’t know”, -8 “Don’t know”</p>
<b>III Establishment structure</b>	
Insourced establishments ( <i>insource</i> )	<p>This variable covers whether organisational changes were made involving integrating establishments or parts of establishments. This variable has only been polled since 1994. In 1998, there was no category for “No response/don’t know”. A no category was formed if the establishments had not undertaken any organisational changes.</p> <p><i>Values (value labels):</i> 1 “Yes”, 2 “No”, -9 “No response/don’t know”, -8 “Don’t know”</p>
Type of business volume ( <i>geschart</i> )	<p>This variable refers to the type of business volume in the last respective financial year. Please note that the category “No response/don’t know” was not available for the survey years 1998 and 2002, as it was not defined in the questionnaire. In 1993, the value labels had a different numerical order to the response options in the subsequent years. To ensure comparability between the years, the value labels have been adjusted correspondingly.</p> <p><i>Values (value labels):</i> 1 “Turnover”, 2 “Balance sheet total”, 3 “Contribution total”, 4 “Budget volume”, -9 “No response/don’t know”, -8 “Don’t know”</p>
Level of business volume ( <i>geschvol</i> )	<p>This variable describes the level of business volume in the last financial year or budget year, in euro. The value has been recorded in EURO from 2002. Due to the standardisation of variables for this panel dataset, sums in DM have been converted to euro, to ensure identical units across all panel waves.</p>

(Continued overleaf)

Variable (Variable name)	Description
Profitability in previous financial year ( <i>ertlagv</i> )	<p>This variable was only surveyed in the years 1998 to 2003 and describes the assessment of the establishment's profitability in the respective previous financial year.</p> <p><i>Values (value labels):</i> 1 "Very good", 2 "Good", 3 "Satisfactory", 4 "Sufficient", 5 "Insufficient", 6 "Not applicable; government body etc.", -9 "No response/don't know", -8 "Don't know"</p>
Profitability in current financial year ( <i>ertrlag</i> )	<p>This variable was only surveyed in the years 1994 to 1998 and describes the assessment of the establishment's profitability in the respective current financial year.</p> <p><i>Values (value labels):</i> 1 "Very good", 2 "Good", 3 "Satisfactory", 4 "Sufficient", 5 "Insufficient", 6 "Not applicable; government body etc.", -9 "No response/don't know", -8 "Don't know"</p>
Total of all investments ( <i>invest</i> )	<p>This variable describes the total investments. The stated values deviate from those in the codebook, as this panel dataset also includes cases that did not make any investments in the year in question.<sup>12</sup> The value has been calculated in EURO since 2002. Due to the standardisation of variables for this panel dataset, sums in DM have been converted to euro.</p>
Evaluation of status of technical equipment ( <i>tech</i> )	<p>This variable contains the evaluation of the status of the establishment's technical equipment, in comparison to other establishments in the respective branch of the economy.</p> <p><i>Values (value labels):</i> 1 "State of the art", 2 "Quite new", 3 "Medium", 4 "Quite old", 5 "Completely out of date", -9 "No response/don't know", -8 "Don't know"</p>

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<sup>12</sup> On the basis of a prior filter question, the total of all investments was coded 0 for all cases that did not make any investments in the year in question.



Variable (Variable name)	Description
Employee representation within establishment ( <i>betrrat</i> , <i>betr_and</i> )	<p>These variables indicate whether the establishment has an internal works/employee council or employee representation body. In the years 1993 to 2002, only the characteristic works/employee council was polled, and the values included in this appendix correspond with those in the codebook. In 2003 and 2004, participants were also asked about other forms of employee representation. Therefore, two variables were formed for the panel dataset. The first variable "betrrat" refers to the characteristic works or employee council, and the second variable "betr_and" to other employee representation.</p> <p>Values (value labels): 1 "Yes", 2 "No", -9 "No response/don't know", -8 "Don't know"</p>
Type of establishment/government agency ( <i>single</i> )	<p>This variable describes the type of enterprise or government agency. In the years 1998 to 2003, the value labels had a different numerical order to the response options in the previous years. To ensure comparability between the years, the value labels have been adjusted correspondingly.</p> <p>Values (value labels): 1 "Single-enterprise company", 2 "Branch/branch office", 3 "Headquarters/head office", 4 "Intermediate instance", -9 "No response/don't know", -8 "Don't know"</p>
Legal form ( <i>form</i> )	<p>This variable describes the respective legal form of the company. The category "Individual enterprise" includes companies with full liability of a single individual. "Partnerships" include the German business forms KG, OHG and GbR. "Limited liability companies" cover the legal forms AG and KGaA. The category "Corporation" implies corporations under public law, foundations, public institutions, public bodies and offices. "Other legal forms" include associations and cooperatives, for example.</p> <p>Values (value labels): 1 "Individual enterprise", 2 "Partnership", 3 "GmbH" 4 "Limited liability company", 5 "Corporation", 6 "Other legal form" -9 "No response/don't know", -8 "Don't know"</p>

(Continued overleaf)

Variable (Variable name)	Description
Ownership ( <i>eigentum</i> )	<p>This variable states the main or sole owner of the establishment. In the years 1993 to 1995, this variable was not sampled. The value "7", referring to a filtering error, only occurs in the survey years 1998 and 1999. In 2000 the value labels had a different numerical order to the response options in the previous and subsequent years. To ensure comparability between the years, the value labels have been adjusted correspondingly.</p> <p><i>Values (value labels):</i>            1 "East German ownership", 2 "West German ownership", 3 "Foreign ownership", 4 "Public ownership", 5 "No majority owner", 6 "Unknown", -9 "No response/don't know", -8 "Don't know", 7</p>
Member of Chamber of Trade and Industry ( <i>kammer</i> )	<p>The establishments state whether they are members of the Chamber of Trade and Industry. This variable was only surveyed in the years 1999, 2000, 2002 and 2003. In 1999 the only value was "Yes".</p> <p><i>Values (value labels):</i>            1 "Yes", 0 "Not crossed off", -9 "No response/don't know", -8 "Don't know"</p>
Foundation year from 1990 ( <i>grjahr</i> )	<p>This variable contains the year of foundation of the establishment, provided it was founded in 1990 or later. In the waves 1993 to 1995, this variable was not included and in 1996 only East German establishments were questioned. In 1997 this question was only put to the establishments participating for the first time. In the 1998 and 1999 waves, there were different questions regarding the foundation year for East and West German establishments; the values have been adjusted accordingly.</p> <p><i>Values (value labels):</i>            999 "Founded before 1990", -9 "No response/don't know", -8 "Don't know"</p>
West/East Germany ( <i>west</i> )	<p>This variable contains the location of the establishment surveyed. Please note that the location "East German states or East Berlin" was only introduced in 1996.</p> <p><i>Values (value labels):</i>            1 "West", 0 "East", -9 "No response/don't know", -8 "Don't know"</p>

(Continued overleaf)

Variable (Variable name)	Description
Outsourcing/closure of parts of establishment ( <i>outsourc</i> )	<p>This variable covers whether establishments or parts of establishments were closed, outsourced or formed new companies. The originally individual values “Yes, closed”, “Yes, outsourced”, “Yes, new company formed” have been compiled into a single “Yes” category, which explains the differences to the information in the codebook. In the survey year 1993, this variable was not included.</p> <p><i>Values (value labels):</i> 0 “No”, 1 “Yes”, -9 “No response/don’t know”, -8 “Don’t know”</p>
Industry ( <i>bran_n99</i> , <i>bran_n00</i> )	<p>This variable contains the branch of the economy in which the respective establishment operates. In the survey year 2000, the industry codes were adjusted to WZ93 codes. This means that establishments allocated to a particular industry before the conversion in 2000 are not necessarily registered in the same industry after 1999. Therefore, two variables were formed. One contains the classification prior to 1999 and one from 2000 on. For the 1999 wave, the values were divided by 10, as the classification of industries from the questionnaire did not correspond with the other waves.</p>
German state ( <i>bula</i> )	<p>This variable refers to the German state in which the establishments participating in the survey are located. Please note that East German states were only surveyed from 1996 on. In the years 1993 to 1999, the German states Rhineland-Palatinate and Saarland were combined. The two states have only been indicated separately since 2000. Accordingly, these two states are indicated in a single value in the waves 1993 to 1999.</p> <p><i>Values/value labels:</i> 0 “Berlin/West”, 1 “Schleswig-Holstein”, 2 “Hamburg”, 3 “Lower Saxony”, 4 “Bremen”, 5 “North Rhine- Westphalia”, 6 “Hesse”, 7 “Rhineland-Palatinate”, 8 “Baden-Württemberg”, 9 “Bavaria”, 10 “Saarland”, 11 “Berlin/East”, 12 “Brandenburg”, 13 “Mecklenburg-Western Pomerania”, 14 “Saxony”, 15 “Saxony-Anhalt”, 16 “Thuringia”, 18 “Rhineland-Palatinate/Saarland”</p>

## Appendix 2: Variables of the Panel Dataset and Frequency Counts

This appendix contains the variables of the panel dataset and the original variables of the individual waves in tabular form. This gives users the possibility to recognise all the used and altered variables of each wave directly. All original variables that have been altered are printed **in bold**. Alteration refers to any deviation from the original variable. The alterations can also be recognised by comparing the information in the codebook and the program codes, which are available in a separate document.

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## Overview 3: Variables of the Panel Dataset and the Original Variables used

Panel dataset variables	Original variables from the separate waves											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>idnum</b>	idnum	idnum	idnum	idnum	idnum	idnum	idnum	idnum	idnum	idnum	idnum	idnum
<b>hrf_quer</b>	hr1993q	hr1994q	hr1995q	hr1996q	hr1997q	hr1998q	hr1999q	hr2000q	hr2001q	hr2002q	hr2003q	hr2004q
<b>hr93_96p</b>	hr93_96p	hr93_96p	hr93_96p	hr93_96p	hr93_96p	hr93_96p	hr93_96p	hr93_96p	hr93_96p	hr93_96p	hr93_96p	hr93_96p
<b>hr93_00p</b>	hr93_00p	hr93_00p	hr93_00p	hr93_00p	hr93_00p	hr93_00p	hr93_00p	hr93_00p	hr93_00p	hr93_00p	hr93_00p	hr93_00p
<b>hr93_04p</b>	hr93_04p	hr93_04p	hr93_04p	hr93_04p	hr93_04p	hr93_04p	hr93_04p	hr93_04p	hr93_04p	hr93_04p	hr93_04p	hr93_04p
<b>hr96_00p</b>	hr96_00p	hr96_00p	hr96_00p	hr96_00p	hr96_00p	hr96_00p	hr96_00p	hr96_00p	hr96_00p	hr96_00p	hr96_00p	hr96_00p
<b>hr96_04p</b>	hr96_04p	hr96_04p	hr96_04p	hr96_04p	hr96_04p	hr96_04p	hr96_04p	hr96_04p	hr96_04p	hr96_04p	hr96_04p	hr96_04p
<b>hr00_04p</b>	hr00_04p	hr00_04p	hr00_04p	hr00_04p	hr00_04p	hr00_04p	hr00_04p	hr00_04p	hr00_04p	hr00_04p	hr00_04p	hr00_04p
<b>jahr</b>	not polled	not polled	not polled	not polled	not polled	not polled	not polled	not polled	not polled	not polled	not polled	not polled
<b>svbv</b>	a01svb92	<b>b01svb93</b>	<b>c01svb94</b>	d01svb95	e01svb96	f01svb97	g01svb98	h01svb99	i01svb00	j01svb01	k01svb02	l01svb03
<b>svb</b>	a01svb93	<b>b02svb94</b>	<b>c02svb95</b>	d01svb96	e01svb97	f01svb98	g01svb99	h01svb00	i01svb01	j01svb02	k01svb03	l01svb04
<b>son_vor</b>	a01son92	bz1son93	cz1son94	d01son95	e01son96	f01son97	g01son98	h01son99	i01son00	j01son01	k01son02	l01son03
<b>sonstige</b>	a01son93	bz1son94	cz1son95	d01son96	e01son97	f01son98	g01son99	h01son00	i01son01	j01son02	k01son03	l01son04

(Continued overleaf)

Panel dataset variables	Original variables from the separate waves											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>ges_vor</b>	a01ges92	<b>b01ges93</b>	<b>c01ges94</b>	d01ges95	e01ges96	f01ges97	g01ges98	h01ges99	i01ges00	j01ges01	k01ges02	l01ges03
<b>gesamt</b>	a01ges93	<b>b02ges94</b>	<b>c02ges95</b>	d01ges96	e01ges97	f01ges98	g01ges99	h02ges00	i01ges01	j01ges02	k01ges03	l01ges04
<b>unge</b>	a30ung	b40unge	c39unge	d34unge	e45unge	f45unge	g27unge	h47unge	i52unge	j41unge	k23unge	l30unge
<b>fach</b>	a30fach	b40fach	c39fach	d34fach	e45fach	f45fach	g27fach	h47fach	i52fach	j41fach	k23fach	l30fach
<b>bea_einf</b>	a30einf	b40einf	c39einf	d34einf	e45einf	f45einf	g27einf	h47einf	i52einf	j41einf	k23einf	l30einf
<b>bea_qual</b>	a30qual	b40qual	c39qual	d34qual	e45qual	f45qual	g27qual	h47qual	i52qual	j41qual	<b>k23ber</b> <b>k23uni</b>	<b>l30ber</b> <b>l30uni</b>
<b>inhaber</b>	a30inh	b40inh	c39inh	d34inh	e45inh	f45inh	g27inh	h47inh	i52inh	j41inh	k23inh	l30inh
<b>azubi</b>	a30aus	b40aus	c39aus	not polled	e45aus	f45aus	g27aus	h47aus	i52aus	j41aus	k23aus	l30aus
<b>beanw</b>	a30anw	b40anw	<b>c39anw</b>	d34anw	e45anw	f45anw	g27anw	h47anw	i52anw	j41anw	k23anw	l30anw
<b>ges_frau</b>	a30ges_f	b41ges_f	c40ges_f	d35ges_f	e45ges_f	f45ges_f	g27ges_f	h47ges_f	i52ges_f	j41ges_f	k23ges_f	l30ges_f
<b>teilzeit</b>	a31ges	b42tz	c41tz	<b>d36tz</b>	<b>e46tz</b>	<b>f46tz</b>	<b>g28tz</b>	<b>h48tz</b>	<b>i53tz</b>	<b>j42tz</b>	<b>k24tz</b>	<b>l31tz</b>
<b>tz_frau</b>	a31frau	b42tz_f	c41tz_f	<b>d36tz_f</b>	<b>e46tz_f</b>	<b>f46tz_f</b>	<b>g28tz_f</b>	<b>h48tz_f</b>	<b>i53tz_f</b>	<b>j42tz_f</b>	<b>k24tz_f</b>	<b>l31tz_f</b>
<b>befrist</b>	a32ges	b43bef	not polled	<b>d36bef</b>	<b>e46bef</b>	<b>f46bef</b>	<b>g28bef</b>	<b>h48bef</b>	<b>i54bef</b>	<b>j43bef</b>	<b>k25bef</b>	<b>l32bef</b>

(Continued overleaf)

Panel dataset variables	Original variables from the separate waves											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>bef_frau</b>	a32frau	b43bef_f	not polled	d36bef_f	e46bef_f	f46bef_f	g28bef_f	h48bef_f	i54bef_f	j43bef_f	k25bef_f	l32bef_f
<b>einstell</b>	a45ges	b47ages	c45ages	d43ages	e53ages	f49ages	g30ges	h5201	i57ges	j54ges	k41ages	l42ages
<b>entlass</b>	a55ges	b52ges	c50ges	d48ges	e56ges	f58ges	g33ges	h65ges	i65ges	j58ges	k45ges	l50ges
<b>offen</b>	a51ages	b57ages	c54ages	d39ages	e49ages	f52ages	not polled	h61ages	i61ages	j60ages	k48ages	l39ages
<b>uebstundv</b>	not polled	not polled	not polled	not polled	not polled	not polled	g45	not polled	i74	j27	k28	l62
<b>uebstund</b>	a67	b54	c61	d63	e62	f64	not polled	not polled	not polled	not polled	not polled	not polled
<b>weiterb</b>	a70	b60	c51	not polled	e31	not polled	g54	h66	i33	not polled	k34	not polled
<b>tarif</b>	not polled	not polled	c62	d49	e57	f59	g50	h42	i67	j30	k72	l64
<b>uebtarif</b>	a57	not polled	c63	d50	e58	f60	g52	h44	i69	j32	k73	l66
<b>lohn</b>	a60	b25	c64	d51	e59	f61	g53	h45	i71	j34	k77	l68
<b>arbeitszeit</b>	a61	not polled	c57	d52	e60	f62	g38	not polled	i72	j20	not polled	l51

(Continued overleaf)

Panel dataset variables	Original variables from the separate waves											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>abbau</b>	not polled	not polled	<b>c26aa</b>	not polled	not polled	not polled	not polled	not polled	not polled	not polled	not polled	not polled
<b>verlag</b>	not polled	not polled	<b>c26ab</b>	not polled	not polled	<b>f26e</b>	not polled	h08e	i17ae	not polled	not polled	l26ae
<b>gruppe</b>	not polled	not polled	<b>c26ac</b>	not polled	not polled	<b>f26f</b>	not polled	h08f	i17af	not polled	not polled	l26af
<b>einheit</b>	not polled	not polled	<b>c26af</b>	not polled	not polled	<b>f26g</b>	not polled	h08g	i17ag	not polled	not polled	l26ag
<b>eigen</b>	not polled	not polled	not polled	not polled	not polled	<b>f26a</b>	not polled	h08a	i17aa	not polled	not polled	l26aa
<b>zukauf</b>	not polled	not polled	not polled	not polled	not polled	<b>f26b</b>	not polled	h08b	i17ab	not polled	not polled	l26ab
<b>neugest</b>	not polled	not polled	not polled	not polled	not polled	<b>f26c</b>	not polled	h08c	i17ac	not polled	not polled	l26ac
<b>reorg</b>	not polled	not polled	c26ad	not polled	not polled	<b>f26d</b>	not polled	h08d	i17ad	not polled	not polled	l26ad
<b>umwelt</b>	not polled	not polled	not polled	not polled	not polled	<b>f26h</b>	not polled	h08h	i17ah	not polled	not polled	l26ah
<b>qualität</b>	not polled	not polled	not polled	not polled	not polled	<b>f26i</b>	not polled	h08i	i17ai	not polled	not polled	l26ai

(Continued overleaf)



Panel dataset variables	Original variables from the separate waves											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>sonst</b>	not polled	not polled	c26ag	not polled	not polled	<b>f26j</b>	not polled	h08j	i17aj	not polled	not polled	l26aj
<b>insource</b>	not polled	b05	c05	d04	e04	f04	g03	h03	i03	j03	k03	l03
<b>geschart</b>	<b>a06a</b>	b12	c12	d11	e11	f10	g10	h11	i06	j05	k08	l08
<b>geschvol</b>	<b>a06b</b>	<b>b13</b>	<b>c13</b>	<b>d12</b>	<b>e12</b>	<b>f11</b>	<b>g11</b>	<b>h12</b>	<b>i07</b>	<b>j06</b>	<b>k09</b>	<b>l09</b>
<b>ertrlagv</b>	not polled	not polled	not polled	not polled	not polled	f08b	g09	h10	i09	j08	k11	l11
<b>ertrlag</b>	not polled	b11	c11	d09	e09	f08a	not polled	not polled	not polled	not polled	not polled	not polled
<b>invest</b>	<b>a15b</b>	<b>b21</b>	<b>c21</b>	<b>d22</b>	<b>e27a</b>	<b>f19a</b>	<b>g23a</b>	<b>h19</b>	<b>i25</b>	<b>j14</b>	<b>k17</b>	<b>l16</b>
<b>tech</b>	a10	bz13	c24	d25	e30	f22	g26	h09	i30	j19	k22	not polled
<b>betrrat</b>	a75	bz06	cz06	d80	e71	f67	g79	h79	<b>i82</b>	j76	<b>k80</b>	l88a
<b>betr_and</b>	not polled	not polled	not polled	not polled	not polled	not polled	not polled	not polled	not polled	not polled	not polled	l88b
<b>single</b>	a73	bz04	cz04	d78	e69	<b>f79</b>	<b>g77</b>	<b>h77</b>	<b>i79</b>	<b>j80</b>	<b>k82</b>	<b>l89</b>
<b>form</b>	a74	bz05	cz05	d79	e70	f69	g78	h78	i80	j81	k83	l90

(Continued overleaf)

Panel dataset variables	Original variables from the separate waves											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>eigentum</b>	not polled	not polled	not polled	d77	ez4	f76	g85	h80	i81	j82	k84	l91
<b>kammer</b>	not polled	not polled	not polled	not polled	not polled	not polled	g75b	h76b	not polled	j83b	k85b	not polled
<b>grjahr</b>	not polled	not polled	not polled	d74b	e73b	f71j f77	g81j g86	h74	i90	j85	k87	l93
<b>west</b>	not polled	not polled	not polled	westost4	westost5	westost6	wo_99	wo_00	wo_01	wo2002	wo2003	wo2004
<b>outsourc</b>	not polled	b03a, b03b, b03c	c03a, c03b, c03c	d02a, d02b, d02c	e02a, e02b, e02c	f02a, f02b, f02c	g02a, g02b, g02c	h02a, h02b, h02c	i02a, i02b, i02c	j02a, j02b, j02c	k02a, k02b, k02c	l02a, l02b, l02c
<b>bran_n99</b>	a76b	bz07b	cz07b	d81b	e76b	f78b	bra41_99	not polled	not polled	not polled	not polled	not polled
<b>bran_n00</b>	not polled	not polled	not polled	not polled	not polled	not polled	not polled	h81b	i92b	j87b	k89b	l95b
<b>bula</b>	bula93	bula94	bula95	bula96	bula97	bula98	bula99	bula00	bula01	bula2002	bula2003	bula2004

## Overview 4: Codes and Frequency Counts of the Individual Variables

NB: The values -9 and -8 are defined as missing values and therefore not included in the counts.

Codes and number of observances	Counts of variables by year											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>N total establishments surveyed</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
	<b>Employees liable for social security (previous year)/svbv</b>											
<b>Mean</b>	715.4	666.9	558.3	354.7	292.7	271.1	237.3	186.4	180.2	175.8	165.5	168.4
<b>Median</b>	112.0	101.0	74.0	51.0	30.0	34.0	30.0	26.0	27.0	24.0	20.0	22
<b>Std. Dev.</b>	2,134.2	2,374.5	1,646.6	1,127.8	1,054.8	953.9	900.0	759.3	823.6	811.5	780.0	920.9
<b>N</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
	<b>Employees liable for social security (current year)/svb</b>											
<b>Mean</b>	685.9	639.5	545.8	340.8	282.5	267.8	234.3	184.2	180.1	173.0	153.7	166.1
<b>Median</b>	111.5	95.0	73.0	50.0	30.0	33.5	30.0	26.0	27.0	24.0	19.0	21
<b>Std. Dev.</b>	2,027.2	2,226.3	1,556.1	1,084.7	1,023.8	956.2	881.9	741.2	822.6	794.7	769.5	910.7
<b>N</b>	4,264	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,407	15,857	15,689
	<b>Other employees (previous year)/son_vor</b>											
<b>Mean</b>	18.1	10.4	5.0	8.6	7.0	6.2	6.7	5.9	6.2	6.1	5.5	6.2
<b>Median</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Std. Dev.</b>	131.3	58.8	28.4	80.6	69.4	50.2	62.4	51.2	49.6	45.7	43.5	48.9
<b>N</b>	4,251	569	500	8,333	8,847	9,194	9,762	13,931	15,536	15,408	15,857	15,689
	<b>Other employees (current year)/sonstige</b>											
<b>Mean</b>	18.1	11.0	8.5	9.0	6.9	6.9	6.2	5.9	6.5	6.0	5.7	6.4
<b>Median</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Std. Dev.</b>	132.6	61.9	72.3	78.2	64.8	54.8	56.3	47.2	53.6	44.9	44.4	50.0
<b>N</b>	4,257	573	510	8,340	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689

(Continued overleaf)

Codes and number of observances	Counts of variables by year											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>N total establishments surveyed</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
	<b>Total employees (previous year)/ges_vor</b>											
<b>Mean</b>	768.5	716.4	603.2	381.7	317.0	292.2	258.6	203.2	196.7	191.9	170.9	184.6
<b>Median</b>	123.0	108.5	81.0	54.0	33.0	38.0	34.0	30.0	30.0	28.0	23.0	25
<b>Std. Dev.</b>	2,202.9	2,435.2	1,730.2	1,227.1	1,148.0	990.8	952.3	800.2	855.6	845.4	813.8	961.4
<b>N</b>	4,261	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
	<b>Total employees (current year)/gesamt</b>											
<b>Mean</b>	741.1	688.2	589.6	368.9	307.0	289.4	254.9	201.0	196.9	190.0	168.5	182.4
<b>Median</b>	124.0	106.0	83.0	53.0	33.0	37.0	33.0	30.0	30.0	27.0	23.0	25
<b>Std. Dev.</b>	2,101.0	2,291.4	1,641.7	1,186.5	1,117.0	993.5	932.4	779.5	855.6	839.6	805.1	951.0
<b>N</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
	<b>Total unskilled/semi-skilled workers/unge</b>											
<b>Mean</b>	158.4	144.0	121.0	60.8	48.8	48.8	41.6	35.6	34.5	29.7	25.2	28.2
<b>Median</b>	10.0	8.0	6.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0
<b>Std. Dev.</b>	559.8	545.5	429.7	276.1	269.2	288.6	246.5	241.4	315.7	178.3	168.6	194.4
<b>N</b>	4,249	4,087	4,079	8,287	8,826	9,185	9,762	13,929	15,527	15,407	15,850	15,686
	<b>Total skilled workers/fach</b>											
<b>Mean</b>	173.6	165.7	131.9	90.5	75.8	71.7	63.2	47.0	43.8	45.1	38.1	41.9
<b>Median</b>	9.0	8.0	7.0	8.0	5.0	5.0	5.0	4.0	4.0	3.0	2.0	2
<b>Std. Dev.</b>	837.0	1110.8	579.2	412.3	396.3	376.5	359.2	278.5	265.2	301.7	263.6	374.2
<b>N</b>	4,252	4,089	4,074	8,288	8,825	9,185	9,762	13,929	15,526	15,407	15,850	15,686
	<b>Employees/civil servants (menial)/bea_einf</b>											
<b>Mean</b>	52.3	43.2	44.9	27.5	18.4	15.7	13.5	11.1	9.3	10.1	6.9	6.8
<b>Median</b>	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Std. Dev.</b>	280.9	224.4	260.2	202.8	139.1	116.2	113.1	113.4	70.3	125.3	92.6	88.2
<b>N</b>	4,252	4,089	4,074	8,288	8,824	9,185	9,762	13,929	15,527	15,407	15,849	15,686

(Continued overleaf)

Codes and number of observances	Counts of variables by year											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>N total establishments surveyed</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
	<b>Employees/civil servants (skilled)/bea_qual</b>											
<b>Mean</b>	315.2	297.4	259.1	169.6	145.8	137.4	123.4	96.5	96.0	93.7	60.9	93.6
<b>Median</b>	31.0	29.0	22.0	10.0	7.0	8.0	7.0	7.0	7.0	7.0	5.0	7
<b>Std. Dev.</b>	873.3	878.3	782.6	623.9	617.4	493.8	499.6	429.3	439.4	435.7	319.1	519.6
<b>N</b>	4,254	4,093	4,075	8,291	8,825	9,185	9,762	13,929	15,527	15,407	15,846	15,686
	<b>Total active partners/inhaber</b>											
<b>Mean</b>	0.6	0.5	0.5	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.2
<b>Median</b>	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
<b>Std. Dev.</b>	2.5	0.9	0.9	5.6	3.9	1.9	1.9	2.7	3.6	3.4	1.4	1.2
<b>N</b>	4,255	4,109	4,072	8,298	8,831	9,189	9,762	13,930	15,531	15,407	15,852	15,687
	<b>Total trainees/azubi</b>											
<b>Mean</b>	30.1	27.0	22.1	-	11.9	12.4	11.5	9.3	9.5	8.8	7.9	8.6
<b>Median</b>	2.0	2.0	2.0	-	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0
<b>Std. Dev.</b>	91.8	88.1	69.4	-	45.2	53.9	57.1	50.4	59.8	44.0	43.6	50.2
<b>N</b>	4,260	4,118	4,087	-	8,834	9,190	9,762	13,930	15,530	15,407	15,855	15,689
	<b>Total candidates for civil service/beanw</b>											
<b>Mean</b>	2.8	2.2	1.7	15.0	0.9	0.5	0.5	0.4	0.4	0.5	0.6	0.5
<b>Median</b>	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Std. Dev.</b>	36.4	36.3	32.8	57.6	17.6	8.7	9.7	7.3	8.3	10.6	15.7	12.6
<b>N</b>	4,255	4,103	4,065	8,304	8,831	9,189	9,762	13,930	15,530	15,407	15,852	15,687
	<b>Total female employees/ges_frau</b>											
<b>Mean</b>	246.8	232.0	206.2	149.3	120.5	113.1	102.4	80.7	78.5	75.7	66.8	71.3
<b>Median</b>	33.0	28.0	24.0	15.0	9.0	10.0	10.0	8.0	8.0	8.0	7.0	7.0
<b>Std. Dev.</b>	658.6	655.0	621.6	492.3	424.4	340.8	366.4	300.5	303.6	297.4	287.6	308.3
<b>N</b>	4,159	4,103	4,065	8,231	8,821	9,171	9,750	13,899	15,467	15,384	15,826	15,679

(Continued overleaf)

Codes and number of observances	Counts of variables by year											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>N total establishments surveyed</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
	<b>Total part-time employees/teilzeit</b>											
<b>Mean</b>	69.0	73.1	72.3	46.4	38.2	38.9	37.3	29.1	30.4	30.8	28.1	30.4
<b>Median</b>	6.0	7.0	6.0	3.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2
<b>Std. Dev.</b>	221.4	245.3	265.5	196.1	163.5	146.3	153.6	124.0	124.7	126.0	124.4	142.1
<b>N</b>	4,145	4,009	3,950	8,087	8,784	9,164	9,729	13,853	15,429	15,348	15,780	15,586
	<b>Female part-time employees/tz_frau</b>											
<b>Mean</b>	58.9	64.6	62.2	38.6	32.2	31.7	30.4	24.0	24.7	25.1	21.8	24.6
<b>Median</b>	5.0	6.0	5.0	2	2	2	2	1	2	2	2	2
<b>Std. Dev.</b>	179.3	203.0	216.0	162.5	133.4	114.2	120.5	100.0	98.7	99.0	96.6	110.1
<b>N</b>	4,028	3,799	3,797	8,10	8,735	9,106	9,86	13,784	15,372	15,275	15,704	15,60
	<b>Total fixed-term employees/befrist</b>											
<b>Mean</b>	26.8	28.7	-	23.4	20.8	23.4	20.4	15.1	14.2	12.7	11.1	13.0
<b>Median</b>	0.0	1.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Std. Dev.</b>	165.6	166.0	-	140.8	128.0	127.2	108.4	88.7	81.5	76.5	82.5	90.8
<b>N</b>	3,945	3,625	-	8,256	8,697	9,159	9,717	13,871	15,498	15,368	15,783	15,625
	<b>Female fixed-term employees/bef_frau</b>											
<b>Mean</b>	13.4	14.3	-	11.5	10.0	11.0	9.7	7.2	6.9	6.2	5.6	6.1
<b>Median</b>	0.0	0.0	-	0	0	0	0	0	0	0	0	0.0
<b>Std. Dev.</b>	70.5	79.9	-	67.4	60.5	62.1	55.0	40.3	39.0	35.8	40.9	40.9
<b>N</b>	3,698	3,329	-	8,096	8,561	9,027	9,602	13,634	15,386	15,209	15,658	15,538
	<b>Total recruitments/einstell</b>											
<b>Mean</b>	19.0	19.5	21.6	12.7	10.1	14.6	11.5	9.6	10.1	7.9	6.0	0
<b>Median</b>	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	6.3
<b>Std. Dev.</b>	68.6	80.0	76.8	53.8	49.6	76.2	56.0	45.4	46.3	37.5	30.8	41.5
<b>N</b>	4,208	4,091	4,055	8,272	8,815	9,169	9,719	13,819	15,459	15,345	15,786	15,636

(Continued overleaf)

Codes and number of observances	Counts of variables by year											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>N total establishments surveyed</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
	<b>Total employees leaving establishment/entlass</b>											
<b>Mean</b>	38.4	34.9	28.4	19.6	15.5	13.5	15.0	10.6	10.7	9.6	7.9	8.1
<b>Median</b>	4.0	3.0	3.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
<b>Std. Dev.</b>	117.3	143.0	101.0	71.9	73.9	59.1	69.2	51.8	50.9	46.1	36.4	42.8
<b>N</b>	4,207	4,106	4,072	8,290	8,806	9,172	9,739	13,889	15,494	15,383	15,800	15,651
	<b>Total vacancies/offen</b>											
<b>Mean</b>	2.5	2.3	2.5	1.4	1.3	1.7	-	1.9	1.9	1.1	0.8	0.8
<b>Median</b>	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
<b>Std. Dev.</b>	13.7	11.8	9.9	11.8	10.0	10.1	-	10.0	12.1	7.3	5.9	7.6
<b>N</b>	4,238	4,121	4,084	8,325	8,829	9,186	-	13,883	15,514	15,388	15,832	15,658
	<b>Overtime in previous financial year/uebstundv</b>											
<b>Yes</b>	-	-	-	-	-	-	6,351	-	10,304	1,609	9,832	9,718
<b>No</b>	-	-	-	-	-	-	3,402	-	5,197	4,765	5,999	5,862
<b>N</b>	-	-	-	-	-	-	9,753	-	15,501	15,374	15,831	15,580
	<b>Overtime in 1<sup>st</sup> half of current financial year/uebstund</b>											
<b>Yes</b>	2,823	2,456	2,292	4,749	4,581	4,805	-	-	-	-	-	-
<b>No</b>	1,421	1,682	1,783	3,582	4,245	4,363	-	-	-	-	-	-
<b>N</b>	4,244	4,138	4,075	8,331	8,826	9,168	-	-	-	-	-	-
	<b>Financing of further training/weiterb</b>											
<b>Yes</b>	2,825	2,631	2,569	-	5,680	-	6,501	8,535	9,767	-	10,139	-
<b>No</b>	1,436	1,507	1,520	-	3,164	-	3,258	5,332	5,710	-	5,691	-
<b>N</b>	4,261	4,138	4,089	-	8,844	-	9,759	13,867	15,477	-	15,830	-

(Continued overleaf)

Codes and number of observances	Counts of variables by year											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>N total establishments surveyed</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
	<b>Collective wage agreement/tarif</b>											
<b>Industry-wide wage agreement</b>	-	-	2,942	5117	4,925	5,089	4,978	7,043	7,733	7,623	7,518	7,320
<b>Company agreement</b>	-	-	416	1,166	1,283	883	883	1,075	1,211	1,115	1,149	1,164
<b>No wage agreement</b>	-	-	727	2,029	2,589	3,183	3,893	5,762	6,521	6,614	7,159	7,163
<b>N</b>	-	-	4,085	8,312	8,797	9,155	9,754	13,880	15,465	15,352	15,826	15,647
	<b>Wages/salaries above collectively agreed level/uebtarif</b>											
<b>Yes</b>	2,197	-	1,841	2,198	2,057	2,010	1,963	3,256	3,675	3,202	3,123	2,967
<b>No</b>	1,527	-	1,464	4,024	4,080	3,962	3,860	4,837	5,259	5,508	5,526	5,497
<b>Not applicable, as no agreement</b>	511	-	727	2,029	2,589	3,183	3,893	5,762	6,521	6,614	7,159	7,496
<b>N</b>	4,235	-	4,032	8,251	8,726	9,155	9,716	13,855	15,455	15,324	15,808	15,960
	<b>Total gross wages/salaries in euro/lohn</b>											
<b>Mean</b>	1,692,320.6	1,597,938.5	1,396,568.1	840,767.0	692,823.9	678,427.7	603,538.1	474,188.8	459,422.9	466,974.2	403,754.0	461,242.4
<b>Median</b>	216,276.5	198,943.7	157,781.6	84,317.1	50,125.8	58,798.6	52,663	50,617.9	51,574.0	47,155	39,601	45,000
<b>Std. Dev.</b>	5,952,615.5	6,263,232.5	3,811,305.9	3,618,327.1	3,304,074.6	3,291,780.6	3,220,807.6	2,529,494.6	2,597,504.0	2,588,300.2	2,069,257.9	2,971,196.7
<b>N</b>	3,356	3,656	3,621	7,188	7,672	8,124	8,721	12,496	13,891	13,704	13,830	13,606
	<b>Weekly working hours full-time employees/arbeit</b>											
<b>Mean</b>	376.8	-	383.3	389.9	389.2	390.6	391.0	-	389.1	388.7	-	389.7
<b>Median</b>	380.0	-	385.0	390.0	400.0	390.0	400.0	-	390.0	390.0	-	390.0
<b>Std. Dev.</b>	45.5	-	28.1	28.2	30.1	25.5	25.7	-	26.5	26.6	-	28.5
<b>N</b>	4,265	-	4,023	8,214	8,576	9,026	9,652	-	15,298	15,211	-	15,457
	<b>Reduction of hierarchies/abbau</b>											
<b>Yes</b>	-	629	750	-	-	-	-	-	-	-	-	-
<b>No</b>	-	1,561	1,888	-	-	-	-	-	-	-	-	-
<b>N</b>	-	2,190	2,638	-	-	-	-	-	-	-	-	-

(Continued overleaf)



Codes and number of observances	Counts of variables by year											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>N total establishments surveyed</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
	<b>Reallocation of responsibilities/verlag</b>											
<b>Yes</b>	-	1,136	1,321	-	1,646	2,304	1,410	2,795	2,701	-	1,492	1,940
<b>No</b>	-	1,561	1,888	-	2,589	3,222	6,712	11,074	12,742	-	11,243	13,562
<b>N</b>	-	2,697	3,209	-	4,235	5,526	8,122	13,869	15,443	-	12,735	15,502
	<b>Introduction of group work/gruppe</b>											
<b>Yes</b>	-	697	808	-	1,154	1,602	889	1,654	1,590	-	818	1,068
<b>No</b>	-	1,561	1,888	-	2,589	3,222	7,233	12,215	13,853	-	11,917	14,434
<b>N</b>	-	2,258	2,696	-	3,743	4,824	8,122	13,869	15,443	-	12,735	15,502
	<b>Establishment of units with independent costing/einheit</b>											
<b>Yes</b>	-	499	592	-	951	1,375	819	1,462	1,487	-	815	1,089
<b>No</b>	-	1,561	1,888	-	2,589	3,222	7,303	12,407	13,956	-	11,920	14,413
<b>N</b>	-	2,060	2,480	-	3,540	4,597	8,122	13,869	15,443	-	12,735	15,502
	<b>More own production/services/eigen</b>											
<b>Yes</b>	-	-	-	-	813	1,126	564	1,133	1,438	-	948	1,203
<b>No</b>	-	-	-	-	2,589	3,222	7,558	12,736	14,005	-	11,787	14,299
<b>N</b>	-	-	-	-	3,402	4,348	8,122	13,869	15,443	-	12,735	15,502
	<b>More acquisition of products/services/zukauf</b>											
<b>Yes</b>	-	-	-	-	944	1,358	801	1,662	1,631	-	964	1,213
<b>No</b>	-	-	-	-	2,589	3,222	7,321	12,207	13,812	-	11,771	14,289
<b>N</b>	-	-	-	-	3,533	4,580	8,122	13,869	15,443	-	12,753	15,502
	<b>New design of purchasing/sales channels, customer relations/neugest</b>											
<b>Yes</b>	-	-	-	-	1,434	2,039	1,198	2,339	2,624	-	1,899	2,393
<b>No</b>	-	-	-	-	2,589	3,222	6,924	11,530	12,819	-	10,836	13,109
<b>N</b>	-	-	-	-	4,023	5,261	8,122	13,869	15,443	-	12,735	15,502

(Continued overleaf)

Codes and number of observances	Counts of variables by year											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>N total establishments surveyed</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
	<b>Reorganisation of departments/functional sectors/reorg</b>											
<b>Yes</b>	-	844	957	-	2,081	2,804	1,815	3,295	3,904	-	2,684	3,470
<b>No</b>	-	1,561	1,888	-	2,589	3,222	6,307	10,574	11,539	-	10,051	12,032
<b>N</b>	-	2,405	2,845	-	4,670	6,126	8,122	13,869	15,443	-	12,735	15,502
	<b>Environment-related organisational measures/umwelt</b>											
<b>Yes</b>	-	-	-	-	992	1,364	758	1,357	1,461	-	798	1,003
<b>No</b>	-	-	-	-	2589	3,222	7,364	12,512	13,982	-	11,937	14,499
<b>N</b>	-	-	-	-	3,581	4,586	8,122	13,869	15,543	-	12,735	15,502
	<b>Improvement of quality assurance/qualität</b>											
<b>Yes</b>	-	-	-	-	2,734	3,711	2,497	4,621	4,999	-	3,714	4,664
<b>No</b>	-	-	-	-	2589	3,222	5,625	9,248	10,444	-	9,021	10,838
<b>N</b>	-	-	-	-	5,323	6,933	8,122	13,869	15,443	-	12,735	15,502
	<b>Other organisational changes/sonst</b>											
<b>Yes</b>	-	78	103	-	157	203	366	366	587	-	425	539
<b>No</b>	-	1,561	1,888	-	2589	3,222	13,503	13,503	14,856	-	12,310	14,963
<b>N</b>	-	1,639	1,991	-	2,746	3,425	13,869	13,869	15,443	-	12,735	15,502
	<b>Insource establishments/insource</b>											
<b>Yes</b>	-	182	133	376	312	336	396	490	520	520	457	461
<b>No</b>	-	3,375	3,422	7,943	8,517	8,858	9,333	13,266	14,884	14,760	15,291	15,112
<b>N</b>	-	3,557	3,555	8,319	8,829	9,194	9,729	13,756	15,404	15,280	15,748	15,573
	<b>Type of business volume/geschäft</b>											
<b>Turnover</b>	2,137	3,095	3,139	6,228	6,795	7,022	7,440	11,001	12,319	12,122	12,688	12,528
<b>Balance sheet total</b>	125	167	153	207	188	201	197	248	270	304	293	294
<b>Total contributions</b>	52	72	65	91	99	105	103	125	139	139	145	144
<b>Budget volume</b>	525	764	686	1,765	1,745	1,866	2,020	2,550	2,805	2,843	2,729	2,720
<b>N</b>	2,839	4,098	4,043	8,291	8,827	9,194	9,760	13,924	15,533	15,408	15,855	15,686

(Continued overleaf)

Codes and number of observances	Counts of variables by year											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>N total establishments surveyed</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
	<b>Level of business volume in euro/geschvol</b>											
<b>Mean</b>	401,115,334.0	380,992,429.3	420,602,527.9	192,123,590.4	184,005,290.7	211,935,759.8	179,323,500.3	124,432,996.0	171,192,462.2	165,747,453.4	134,181,140.7	112,521,996.2
<b>Median</b>	15,338,756.4	12,168,746.8	9,588,825.2	4,090,335.0	2,521,180.3	2,760,976.2	2,556,459.4	2,403,071.8	2,403,071.8	2,203,903	1,900,000	2,085,698
<b>Std. Dev.</b>	3,163,828,100.1	3,489,252,745.0	4,157,070,733.7	2,609,927,082.7	2,669,307,698.0	4,103,843,507.5	4,312,553,525.3	2,845,707,726.7	5,118,583,048.9	5,331,106,493.3	4,751,236,629.3	3,489,263,299.7
<b>N</b>	2,805	3,507	3,489	7,110	7,596	8,035	8,516	12,134	13,670	13,310	13,470	13,229
	<b>Profitability in previous financial year/ertrlag</b>											
<b>Very good</b>	-	-	-	-	-	297	300	649	610	463	404	418
<b>Good</b>	-	-	-	-	-	2,267	2,146	3,510	3,589	3,183	3,072	3,027
<b>Satisfactory</b>	-	-	-	-	-	2,569	2,692	3,958	4,320	4,253	4,408	4,475
<b>Sufficient</b>	-	-	-	-	-	1,385	1,385	1,933	2,413	2,619	2,940	2,889
<b>Insufficient</b>	-	-	-	-	-	847	982	1,206	1,621	1,764	2,161	2,057
<b>Not applicable; gov. body etc.</b>	-	-	-	-	-	1,700	1,974	2,558	2,759	2,691	2,730	2,710
<b>N</b>	-	-	-	-	-	9,065	9,479	13,814	15,312	14,973	15,715	15,576
	<b>Profitability in current financial year/ertrag</b>											
<b>Very good</b>	-	139	115	194	148	242	-	-	-	-	-	-
<b>Good</b>	-	942	929	1,620	1,721	2,030	-	-	-	-	-	-
<b>Satisfactory</b>	-	1,184	1,278	2,341	2,578	2,717	-	-	-	-	-	-
<b>Sufficient</b>	-	663	662	1,363	1,497	1,449	-	-	-	-	-	-
<b>Insufficient</b>	-	433	385	954	999	951	-	-	-	-	-	-
<b>Not applicable; gov. body etc.</b>	-	747	678	1,806	1,864	1,700	-	-	-	-	-	-
<b>N</b>	-	4,108	4,047	8,278	8,807	9,089	-	-	-	-	-	-
	<b>Investment/invest in euro</b>											
<b>Mean</b>	10,492,085.7	7,475,369.8	5,479,355.9	3,938,692.0	3,176,920.0	2,986,266.5	2,509,361.1	2,075,790.0	2,335,223.1	2,037,313.6	1,685,378.0	1,809,050.8
<b>Median</b>	<b>204,516.8</b>	153,387.6	127,823.0	76,693.8	35,790.4	38,346.9	36,813.0	35,790.4	30,677.5	20,000	15,000	12,000
<b>Std. Dev.</b>	130,974,831.1	39,555,279.5	27,173,720.0	22,576,710.5	17,929,506.5	16,274,417.0	15,358,556.0	16,182,270.8	49,276,112.2	16,682,575.8	16,562,883.80	20,171,175.8
<b>N</b>	3,256	3,831	3,818	7,847	8,476	8,825	9,355	13,403	14,945	14,853	15,295	15,120

(Continued overleaf)

Codes and number of observances	Counts of variables by year											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>N total establishments surveyed</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
	<b>Evaluation of technical status of equipment/tech</b>											
<b>State of the art</b>	1,177	164	861	1,786	1,784	1,860	1,908	2,902	2,681	2,562	2,551	-
<b>Quite new</b>	1,873	236	1,829	3,576	3,908	4,236	4,548	6,505	7,430	7,488	7,545	-
<b>Medium</b>	1,033	138	1,213	2,481	2,671	2,678	2,851	3,908	4,734	4,665	4,964	-
<b>Quite old</b>	124	/	134	347	340	341	357	499	549	512	621	-
<b>Out of date</b>	23	/	21	51	66	44	40	63	59	67	78	-
<b>N</b>	4,230	547	4,058	8,241	8,769	9,159	9,704	13,877	15,453	15,294	15,759	-
	<b>Employee representation within establishment/betrrat</b>											
<b>Yes</b>	2,580	241	162	4,122	170	4,003	4,139	5,485	6,033	6,033	5,293	5,643
<b>No</b>	1,665	328	340	4,163	1,486	5,102	5,489	7,887	8,816	9,326	9,719	9,995
<b>N</b>	4,245	569	502	8,285	1,656	9,105	9,628	13,372	14,849	15,359	15,012	15,638
	<b>Other establishment-specific form of employee representation/betr_and</b>											
<b>Yes</b>	-	-	-	-	-	-	-	-	-	-	702	1,517
<b>No</b>	-	-	-	-	-	-	-	-	-	-	14,310	13,274
<b>N</b>	-	-	-	-	-	-	-	-	-	-	15,012	14,791
	<b>Type of establishment/government agency/single</b>											
<b>Single enterprise</b>	2,328	352	346	5,306	1,361	6,174	6,595	9,465	10,537	10,397	10,868	10,840
<b>Branch/branch office</b>	989	129	92	1,731	192	809	842	1,333	1,463	1,392	1,366	2,759
<b>Headquarters</b>	716	53	40	818	35	1,705	1,722	2,370	2,602	2,594	2,631	1,252
<b>Interm. instance</b>	190	24	18	371	25	413	436	520	577	589	572	564
<b>N</b>	4,223	558	496	8,226	1,613	9,101	9,595	13,688	15,179	14,972	15,437	15,415

(Continued overleaf)

Codes and number of observances	Counts of variables by year											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>N total establishments surveyed</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
	<b>Legal form/form</b>											
<b>Individual enterprise</b>	745	152	127	1,621	794	2,112	2,287	3,267	3,601	3,608	3,976	3,855
<b>Partnership</b>	410	64	30	576	160	705	739	1,176	1,132	1,064	994	695
<b>GmbH</b>	1,566	240	284	3,508	474	3,678	3,883	5,940	6,757	6,561	6,788	7,177
<b>Limited liability</b>	515	40	25	599	35	548	510	633	701	681	674	688
<b>Corporation</b>	779	47	14	1,350	78	1,407	1,489	1,820	2,008	2,109	1,998	2,030
<b>Other legal form</b>	227	19	25	617	113	673	733	956	1,105	1,096	1,151	1,123
<b>N</b>	4,242	562	505	8,271	1,654	9,123	9,641	13,792	15,304	15,119	15,581	15,568
	<b>Ownership/eigentum</b>											
<b>East German</b>	-	-	-	2,103	207	2,228	2,580	3,127	3,270	3,081	3,356	3,339
<b>West German</b>	-	-	-	869	41	814	897	7,400	8,354	8,459	8,782	8,630
<b>Foreign</b>	-	-	-	89	8	87	106	660	755	674	677	826
<b>Public</b>	-	-	-	889	32	817	843	1,459	1,581	1,625	1,496	1,474
<b>No majority owner</b>	-	-	-	206	42	211	225	737	860	820	837	882
<b>Unknown</b>	-	-	-	-	13	74	89	280	280	260	261	242
<b>7</b>	-	-	-	-	-	551	437	-	-	-	-	-
<b>N</b>	-	-	-	4,156	343	4,782	5,177	13,663	15,100	14,919	15,409	15,393
	<b>Member of Chamber of Trade and Industry/kammer</b>											
<b>Not crossed off</b>	-	-	-	-	-	-	-	6,303	1,776	6,862	7,032	-
<b>Yes</b>	-	-	-	-	-	-	4,835	7,482	7,995	8,191	8,468	-
<b>N</b>	-	-	-	-	-	-	4,835	13,785	9,771	15,053	15,500	-

(Continued overleaf)

Codes and number of observances	Counts of variables by year											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>N total establishments surveyed</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
	<b>Foundation year from 1990/grjahr (count without value 999)</b>											
<b>Mean</b>	-	-	-	1991.6	1993.7	1992.6	1992	1993.2	1993.8	1994.1	1994.3	1995.0
<b>Median</b>	-	-	-	1991	1995	1992	1992	1993	1993	1994	1994	1994
<b>Std. Dev.</b>	-	-	-	1.6	2.1	2.2	2.2	2.6	3.0	3.2	3.4	4.1
<b>N</b>	-	-	-	3887	1386	2682	4876	4,756	5,434	5,432	6,159	6,690
	<b>West/East Germany/west</b>											
<b>East</b>	-	-	-	4,313	4,748	4,905	5,335	5,515	5,688	5,303	5,767	5,585
<b>West</b>	4,265	4,138	4,096	4,029	4,102	4,289	4,427	8,416	9,849	10,105	10,090	10,104
<b>N</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
	<b>Outsourcing/closure of parts/outsourc</b>											
<b>No</b>	-	3,776	3,790	7,576	8,217	8,653	9,144	13,224	14,721	14,604	15,090	14,867
<b>Yes</b>	-	362	306	766	633	541	618	707	816	804	767	822
<b>N</b>	-	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
	<b>Industry allocation up to 1999/bran_n99</b>											
<b>Agriculture and forestry</b>	68	68	63	235	379	243	264	-	-	-	-	-
<b>Mining/energy</b>	82	75	73	169	154	152	146	-	-	-	-	-
<b>Chemical industry</b>	87	83	85	115	102	116	172	-	-	-	-	-
<b>Plastics/rubber</b>	81	72	67	90	80	105	111	-	-	-	-	-
<b>Quarrying</b>	62	63	66	114	114	130	158	-	-	-	-	-
<b>Iron/steel ore</b>	136	135	136	190	183	202	246	-	-	-	-	-
<b>Steel/light metals</b>	67	69	65	145	140	180	262	-	-	-	-	-
<b>Manufacture of machinery</b>	201	194	180	268	241	261	278	-	-	-	-	-
<b>Road vehicle manufacture</b>	143	127	118	158	175	212	310	-	-	-	-	-
<b>Ships and aircraft</b>	21	21	17	32	25	23	21	-	-	-	-	-

(Continued overleaf)

Codes and number of observances	Counts of variables by year											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>N total establishments surveyed</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
<b>Electrotechnology</b>	213	190	200	263	249	271	282	-	-	-	-	-
<b>Precision mechanics</b>	95	91	83	128	132	145	239	-	-	-	-	-
<b>Wood processing</b>	72	76	70	125	130	181	207	-	-	-	-	-
<b>Paper, printing</b>	76	68	69	87	85	94	101	-	-	-	-	-
<b>Clothing, textiles</b>	72	78	75	105	103	106	120	-	-	-	-	-
<b>Food/beverages</b>	137	135	140	253	229	257	282	-	-	-	-	-
<b>Construction</b>	159	142	145	553	545	656	577	-	-	-	-	-
<b>Building completion</b>	99	92	102	327	369	446	408	-	-	-	-	-
<b>Wholesale &amp; retail trade</b>	568	570	567	1024	1133	1091	1077	-	-	-	-	-
<b>Transport/comm.</b>	198	183	176	344	354	347	337	-	-	-	-	-
<b>Financial</b>	160	162	150	213	196	203	200	-	-	-	-	-
<b>Insurance</b>	65	65	60	94	100	92	94	-	-	-	-	-
<b>Restaurants</b>	110	117	129	278	359	334	323	-	-	-	-	-
<b>Homes</b>	66	65	74	130	132	152	166	-	-	-	-	-
<b>Laundry</b>	71	62	56	168	193	188	189	-	-	-	-	-
<b>Education</b>	120	117	128	379	389	406	430	-	-	-	-	-
<b>Publishing</b>	53	56	54	81	82	75	80	-	-	-	-	-
<b>Health</b>	295	293	269	512	545	543	576	-	-	-	-	-
<b>Legal/business consultancy</b>	84	83	97	142	186	189	188	-	-	-	-	-
<b>Architecture/labs</b>	57	62	65	168	215	204	197	-	-	-	-	-
<b>Real estate</b>	29	34	27	88	120	117	103	-	-	-	-	-
<b>Commercial advertising</b>	19	16	18	24	37	33	32	-	-	-	-	-
<b>Hygiene</b>	26	24	24	72	70	74	70	-	-	-	-	-
<b>Pawn shops</b>	7	/	/	17	16	15	15	-	-	-	-	-
<b>Other services</b>	56	49	68	158	162	174	181	-	-	-	-	-

(Continued overleaf)

Codes and number of observances	Counts of variables by year											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>N total establishments surveyed</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
<b>Associations</b>	68	67	71	295	340	332	384	-	-	-	-	-
<b>Churches</b>	42	44	43	69	78	94	99	-	-	-	-	-
<b>Private households</b>	-	/	/	6	19	10	14	-	-	-	-	-
<b>Public administration</b>	212	198	178	571	547	580	648	-	-	-	-	-
<b>Public safety</b>	39	34	28	51	53	56	61	-	-	-	-	-
<b>Social security</b>	49	48	49	101	89	105	114	-	-	-	-	-
<b>N</b>	4.265	4.138	4.096	8.342	8850	9194	9762	-	-	-	-	-
	<b>Industry allocation from 2000/bran_n00</b>											
<b>Agriculture and forestry</b>	-	-	-	-	-	-	-	297	329	373	351	337
<b>Mining/energy</b>	-	-	-	-	-	-	-	169	194	278	302	296
<b>Food/beverages</b>	-	-	-	-	-	-	-	409	456	471	454	443
<b>Clothing, textiles</b>	-	-	-	-	-	-	-	145	165	146	143	121
<b>Paper, printing</b>	-	-	-	-	-	-	-	217	253	258	251	255
<b>Wood processing</b>	-	-	-	-	-	-	-	250	254	229	247	230
<b>Chem. industry</b>	-	-	-	-	-	-	-	247	253	244	241	230
<b>Plastics, rubber</b>	-	-	-	-	-	-	-	205	219	222	203	204
<b>Quarrying</b>	-	-	-	-	-	-	-	218	235	220	227	226
<b>Manufacture/processing of metals</b>	-	-	-	-	-	-	-	265	284	261	266	280
<b>Recycling</b>	-	-	-	-	-	-	-	62	53	/	48	37
<b>Steel, light metals</b>	-	-	-	-	-	-	-	450	520	511	512	500
<b>Manufacture of machinery</b>	-	-	-	-	-	-	-	490	501	494	513	495
<b>Road vehicle manufacture</b>	-	-	-	-	-	-	-	177	190	187	170	169

(Continued overleaf)



Codes and number of observances	Counts of variables by year											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>N total establishments surveyed</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
Other vehicle manufacture	-	-	-	-	-	-	-	81	87	70	67	74
Electrotechnology	-	-	-	-	-	-	-	278	325	290	273	270
Precision mechanics/optical instruments	-	-	-	-	-	-	-	214	234	216	224	235
Furniture, jewellery, toys	-	-	-	-	-	-	-	163	178	173	165	135
Construction	-	-	-	-	-	-	-	673	714	649	610	598
Building completion	-	-	-	-	-	-	-	762	788	741	766	760
Car retail/repair/fuel retail	-	-	-	-	-	-	-	429	452	431	434	439
Wholesale trade	-	-	-	-	-	-	-	585	642	586	575	587
Retail trade/repair	-	-	-	-	-	-	-	893	991	950	1057	1054
Transport	-	-	-	-	-	-	-	493	555	463	531	540
Communication	-	-	-	-	-	-	-	42	51	47	43	43
Financial	-	-	-	-	-	-	-	251	273	308	300	298
Insurance	-	-	-	-	-	-	-	123	141	146	162	165
Data processing	-	-	-	-	-	-	-	126	172	234	287	264
Research/development	-	-	-	-	-	-	-	72	97	204	251	216
Legal consulting, advertising	-	-	-	-	-	-	-	347	447	414	476	446
Real estate	-	-	-	-	-	-	-	148	178	230	282	285

(Continued overleaf)

Codes and number of observances	Counts of variables by year											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>N total establishments surveyed</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
Renting/other services	-	-	-	-	-	-	-	597	694	637	685	753
Restaurants	-	-	-	-	-	-	-	447	506	503	554	546
Education	-	-	-	-	-	-	-	489	568	570	602	578
Health/veterinary /social work	-	-	-	-	-	-	-	1232	1382	1405	1457	1442
Hygiene	-	-	-	-	-	-	-	93	95	98	94	99
Culture/sport/entertainment	-	-	-	-	-	-	-	181	221	192	199	222
Other services	-	-	-	-	-	-	-	259	308	302	326	333
Membership org.	-	-	-	-	-	-	-	365	419	412	401	383
Private households	-	-	-	-	-	-	-	9	0	/	0	-
Public administration /social security	-	-	-	-	-	-	-	978	1113	1195	1108	1101
<b>N</b>	-	-	-	-	-	-	-	13.931	15.537	15.408	15.857	15.689

(Continued overleaf)

Codes and number of observances	Counts of variables by year											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>N total establishments surveyed</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15,689
	<b>German state/bula</b>											
<b>Berlin/West</b>	121	118	115	125	325	345	416	440	471	425	445	444
<b>Schleswig-Holstein</b>	160	147	163	149	151	142	144	146	154	827	822	874
<b>Hamburg</b>	126	120	125	128	114	120	111	934	1,001	241	249	243
<b>Lower Saxony</b>	478	477	498	500	491	501	518	1,062	972	1,038	1,041	1,080
<b>Bremen</b>	63	61	54	57	52	54	53	908	1000	894	895	953
<b>North Rhine-Westphalia</b>	1,130	1,104	1,096	1,028	1,022	1,094	1,133	1,638	1,542	1,495	1,565	1,503
<b>Hesse</b>	404	363	364	364	347	364	346	399	993	1,016	1,014	1,013
<b>Rhineland-Palatinate</b>	-	-	-	-	-	-	-	813	726	917	810	813
<b>Baden-Württemberg</b>	764	728	691	663	600	619	641	1,169	1,086	1,255	1,184	1,170
<b>Bavaria</b>	760	745	703	716	716	748	763	828	1,104	1,222	1,239	1,196
<b>Saarland</b>	-	-	-	-	-	-	-	79	800	775	826	815
<b>Berlin/East</b>	-	-	-	383	441	393	522	471	508	481	527	446
<b>Brandenburg</b>	-	-	-	807	818	863	964	952	983	877	1,020	993
<b>Mecklenburg-Western Pomerania</b>	-	-	-	696	967	891	872	989	999	943	993	961
<b>Saxony</b>	-	-	-	832	841	883	955	1,047	1,111	1,020	1,106	1,094
<b>Saxony-Anhalt</b>	-	-	-	791	813	898	979	984	990	947	1,005	979
<b>Thuringia</b>	-	-	-	804	868	977	1,043	1,072	1,097	1,035	1,116	1,112
<b>Rhineland-Palate/Saarland</b>	259	275	287	299	284	302	302	-	-	-	-	-
<b>N</b>	4,265	4,138	4,096	8,342	8,850	9,194	9,762	13,931	15,537	15,408	15,857	15689

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