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Documentation of labor market data

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New Opportunities for Comparative Cross-Country Research in France and Germany

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

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

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Zusammenfassung

Dieser Datenreport beschreibt die Zusammenarbeit des deutschen „Forschungsdatenzentrums der Bundesagentur für Arbeit im Institut für Arbeitsmarkt- und Berufsforschung“ (FDZ) und des französischen Forschungsdatenzentrums „Centre d’Accès Sécurisé aux Données“ (CASD). Diese länderübergreifende Zusammenarbeit hat sich zum Ziel gesetzt den Datenzugang, sowie ländervergleichende Forschung zu erleichtern. In enger Zusammenarbeit haben beide Institute die Vergleichbarkeit verschiedener Datensätze ermittelt. Des Weiteren wurde ein Vergleich der Variablen zweier großer administrativer Datensätze, der deutschen „Stichprobe der Integrierten Arbeitsmarktbioografien“ (SIAB) und dem französischen „Panel tous salariés“ (All Employee Panel), ange stellt.

Anmerkung: Der Vergleich der Datensätze ist allgemein gehalten und die tatsächliche Vergleichbarkeit kann mit dem Forschungsvorhaben variieren. Der Variablenvergleich stellt einen Ausgangspunkt für vergleichende Analysen dar, aber die tatsächliche Vergleichbarkeit kann von der spezifischen Forschungsfrage abhängen. Erarbeiten Forscherinnen und Forscher eine Harmonisierung der Variablen, bieten wir die Möglichkeit relevante do-files in einem zitationsfähigen Format zu veröffentlichen.

Abstract

This Data Report is the result of the cooperation between the German research data center „Forschungsdatenzentrum der Bundesagentur für Arbeit im Institut für Arbeitsmarkt- und Berufsforschung“ (FDZ) and the French research data centre „Centre d’Accès Sécurisé aux Données“ (CASD). This cooperation aims at facilitating data access and comparative research between Germany and France. Working closely together, both institutions determined the comparability of labor market data to which they provide access. Further, they introduced a comparison tool at the variable level for two large administrative datasets, the German “Sample of Integrated Labor Market Biographies” (SIAB) and the French “Panel tous salariés” (All Employee Panel).

Disclaimer: The comparison of data sources is a general one and actual comparability may vary with research projects. The comparison tool at the variable level provides a starting point for comparative research, but actual comparability may depend on specific research questions. Should researchers develop a harmonization program, we offer the possibility to publish relevant do-files in a citable format.

Résumé

Ce rapport est le fruit de la collaboration entre le Centre de Données et de Recherche Allemand « Forschungsdatenzentrum der Bundesagentur für Arbeit im Institut für Arbeitsmarkt- und Berufsforschung » (FDZ) et le « Centre d’Accès Sécurisé aux Données » (CASD) en France ; une collaboration qui a pour but de faciliter l’accès aux données confidentielles d’un pays à l’autre, et les

comparaisons entre l'Allemagne et la France. Travaillant ensemble en étroite collaboration, les deux institutions ont évalué la comparabilité des sources de données auxquelles ils peuvent donner accès dans le domaine de l'emploi. Une comparaison détaillée a été conduite pour deux des sources de données administratives: La source allemande « Echantillon des biographies du marché intégré du travail » (Sample of Integrated Labor Market Biographies, SIAB) et la source française « Panel tous salariés » (All Employee Panel).

Remarque : Il s'agit d'une comparaison d'ordre général, la comparabilité réelle étant fonction des projets de recherche. L'outil de comparaison proposé est un point de départ pour une recherche comparative, la comparabilité précise restant dépendante des questions spécifiques de recherche. Pour les chercheurs qui souhaiteraient développer un programme d'harmonisation, nous offrons la possibilité de publier les do-files pertinents dans un format citable.

Keywords

Research data centre, comparative studies, cross-country research, France, Germany, administrative data, survey data, labor market data, variable comparison

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We would like to thank Kamel Gadouche, Dana Müller and Roxane Silberman for their efforts with the IDAN project and for facilitating data access to make internationally comparative work feasible, as well as for their feedback on this data report. We would like to thank Sandra Dummert for feedback on the report. We would like to thank Jonas Trommer for his assistance with the comparison of variables.

1 Introduction

The German research data centre “Forschungsdatenzentrum der Bundesagentur für Arbeit im Institut für Arbeitsmarkt- und Berufsforschung” (FDZ) and the French research data centre “Centre d’Accès Sécurisé aux Données” (CASD) are closely cooperating as part of a larger European-wide network, the “International Data Access Network” (IDAN). The goal of this partnership is to facilitate access to confidential data across borders. Therefore, the cooperation’s first success was setting up data access points in our respective institutions in Palaiseau-Paris and Nuremberg.

In a second step, we want to increase and simplify the feasibility of cross-country comparative research between Germany and France. For this purpose, we developed two comparison tools: The first tool provides an overview of datasets available at the FDZ with similar datasets available at the CASD according to their topical focus. The second tool compares two similar administrative datasets in more detail. Thereby we provide an overview of the two datasets’ characteristics and then compare them at the variable-level.

This data report is structured as follows: Chapter 2 describes the CASD-FDZ cooperation in more detail. It introduces German and French data sources and describes how and where researchers can access them. Chapter 3 demonstrates which data sources are comparable. Chapter 4 compares two administrative data sources at the variable-level: The French 2015 “All Employee Panel” and the German “Sample of Integrated Labor Market Biographies” (SIAB – version 7517). Chapter 5 concludes.

2 The CASD-FDZ Cooperation

2.1 The CASD-FDZ Cooperation

The CASD-FDZ cooperation is part of the “International Data Access Network”. IDAN in turn is a spin-off network from the large-scale Data without Boundaries (DwB) project that was funded for four years by the European Union’s Seventh Framework Programme and included a large consortium of partners in different European countries. DwB’s aim was to “support equal and easy access to [...] official microdata for the European Research Area” and build a “comprehensive European service with better and friendly metadata, a more harmonized transnational accreditation and a secure infrastructure that would allow transnational access to the highly detailed and confidential microdata” (DwB, 2019).

IDAN was founded in 2018 and its mission is to facilitate controlled data access between six research data centers from France (CASD), Germany (Institut für Arbeitsmarkt- und Berufsforschung - IAB and Gesis Leibniz-Institut für Sozialwissenschaften), the Netherlands (Centraal Bureau voor de Statistiek - CBS) and the UK (UK Data Service - UKDS and Office for National Statistics - ONS) (IDAN, 2019). The objective of the network is to enable researchers to work remotely on data from all partners through access points in the same physical location of each of the six participating research data centers.

The agreement between the CASD and the IAB was the first within the larger-scale IDAN network to allow a reciprocal setup of data access points in the respective institutions in Palaiseau-Paris and Nuremberg. Moreover, the “First French-German Conference on research based on confidential administrative and survey data” in Palaiseau-Paris in March 2019 - which brought together researchers using both countries’ data to discuss similarities and differences, cross-country comparability and improvements for data access (CASD, 2019a) - was an important milestone in the collaboration.

In addition to data access, the CASD-FDZ cooperation wants to enable partnerships between researchers from different countries using both French and German data sources for cross-country comparative work. Therefore, both institutions worked closely together to determine the comparability of their respective data sources. As a result, we first evaluated which datasets were of high demand in their respective country and which contain similar topics and structures. Second, we chose one administrative data set from each country to exemplify the possibility of comparing different countries’ datasources at the variable-level.

2.2 Data at the FDZ and its Access Procedures

2.2.1 Data at the FDZ

Established in 2004, the FDZ provides researchers access to micro data for non-commercial research in the fields of social security and employment. The provision of data is mandated by the law, specifically by the German Social Code Book (SGB). The FDZ’s core functions are threefold: First, the FDZ is a data provider offering data and related services to the research community. Thereby, the FDZ focuses on data for labor market research and provides access to micro data ranging from administrative data to survey data (Müller & Möller, 2019). Thereby, the proximity to the German Federal Employment Agency (BA) enables the use of administrative data sources at the individual and establishment levels, which include social security notifications and process-generated data. The survey and administrative data are anonymized by the FDZ and made available to the research community. Second, the FDZ is a data producer, processing administrative data, running (and processing other department’s) individual, household and establishment surveys and linking administrative and survey data increase the data’s research potentials (Antoni & Schmucker, 2019). Third, the FDZ staff does research and publishes papers, amongst others to ensure data quality and to be able to better advise external data users.

2.2.2 Data Access at the FDZ

The data offered at the FDZ is subject to the German data protection legislation (German Social Code Books) and access to the data must be in concordance with certain conditions and requirements (Hochfellner et al., 2014). Therefore, access to confidential microdata is only available for non-commercial researchers working for scientific institutions after a successful application.¹

Three access modes are available depending on the degree of anonymity of the data: First, researchers can access the data on-site in a secure room at the FDZ in Nuremberg or its outpost around the world. This is the case for the IAB access point at the CASD safe room. Note, that for

¹ More information on data acces is available on our website: https://fdz.iab.de/en/FDZ_Data_Access.aspx

data access in our outposts in the US, Canada and the UK, the FDZ has to take additional anonymizing measures due to different data protection rules. Second, researchers can use remote data access through a software application (Job Submission Application – JoSuA), in which case they submit their programs and access the results after approval for compliance with the data protection legislation (Eberle et al., 2017). Note, that the on-site option also uses JoSuA, such that researchers do not need to switch between different software applications. Third, researchers can access factually anonymous datasets in their scientific institutions through scientific use files (SUF). Additionally, the FDZ offers campus files for teaching purposes.

To apply for data access, researchers need to fill out a request form describing their research project and its relationship to labor market research, data requirements and information about the data users submitting the request and their institutions. After having submitted the request form, the FDZ assesses the feasibility of the research project before approving the request. After the request's approval, the FDZ concludes a use agreement with the researcher's institutions and the researcher can access the data free of charge.

2.3 Data at the CASD and its Access Procedures

2.3.1 Data at the CASD

The core role of the CASD is that of a third party for providing highly secure access to confidential data. The CASD offers a wide range of data for research purposes not only limited to the labor market. Thus, the data available at the CASD cover diverse subjects and come from many different sources (CASD, 2019b). Data from the public sector, surveys and administrative data are mainly sourced from the French National Institute of Statistics and Economic Studies (Institut National de la Statistique et des Études Économiques – INSEE), the statistical departments in ministries plus other public and private institutions. These institutions include the Department of the Animation of Research, Studies and Statistics (Direction de l'Animation de la Recherche, des Etudes et des Statistiques – DARES) affiliated to the Ministry of Labor that produces data related to labor and work conditions; and the Public Finances General Directorate (Direction Générale des Finances Publiques – DGFiP) affiliated to the Ministry of Finance and Public Accounts that holds important tax data. Additionally, the CASD also provides access to health data. Due to the variety of data offered by the CASD, research projects cover a wide range of topics not only limited to the labor market, for example research projects on taxes, ecology and the environment (CASD, 2019c). Possibilities to link selected survey and administrative datasources, on names as well as on the National Registration Number/Social Security Number (Numéro d'inscription au répertoire/Numéro de sécurité sociale – NIR) also exist.

2.3.2 Data Access at the CASD

The CASD provides remote access to a highly secured infrastructure where confidential data are stored. The CASD commonly refers to this infrastructure as “the bubble”. Access to this “bubble” is provided through a dedicated hardware thin client, the “SD-Box”, that maintains a permanent link with the CASD infrastructure (or the “bubble”). The SD-Box only provides access to this secure environment, however the data themselves are not stored on the SD-Box and cannot be downloaded from the “bubble”. The CASD provides remote access across borders for universities and

research centers in the European Union and associated countries (it is also possible to access certain data from North America).

Researchers can gain access to the CASD's data through two different procedures, whereas the type of procedure to follow depends on the data requested. For a large part of the data, particularly INSEE's data, the "habilitation" or the access authorization, requires an opinion from the Statistical Secrecy Committee (Comité du Secret Statistique – CSS)² while some other data need a direct agreement with the data producer (CASD, 2019d). The final agreement for all government data is given by the National Archives. For personal or household data, the procedure also requires the agreement of the National Commission on Informatics and Liberty (Commission Nationale de l'Informatique et des Libertés – CNIL).

In any case, the process includes a discussion between the data producers and the researchers. Researchers wishing to access data should first contact the data producers so that they can guide and advise them on data adequacy and/or orient them towards other data.

Once accredited, every project member must sign a contract with the CASD (CASD, 2019e). The contracting procedure can be done in parallel with the finalization of the habilitation procedure. Finally, project members must attend a training session organized at the CASD premises and consisting of two parts. The first one is a presentation of: 1) the legal frameworks and the researchers' responsibilities on confidentiality; 2) the rules for outputs anonymisation (CASD, 2019f); 3) technical issues like the use of SD-Box and the research environment. The second part consists of collecting the fingerprints of users in order to give them a personal biometric card. Note, that the fingerprints are not stored at the CASD.

2.4 Reciprocal Access to CASD and FDZ Data

IDAN's first goal is to facilitate transnational access to confidential data, implementing all partners' access points in all partners' premises (safe rooms). This implementation enables researchers to work on data of the various partners' institutions from the same physical location. Since 2018, researchers can therefore remotely access German data available at the IAB and French data available at the CASD in the same safe rooms at Nuremberg and Palaiseau-Paris. Note that the FDZ's data accessed from the CASD premises have the same level of detail as the data available in Nuremberg. When researchers want to work on data from both the CASD and IAB, they have to apply to and be granted data access by each country's procedure separately. Then they can choose any location in which they can access both country's data. Researchers can move from one place to the other as necessary. Reciprocal access also facilitates cooperative work for researchers sitting in two different locations, but wanting to co-author.

²The Statistical Secrecy Committee ensures that the statistical secrecy rules are respected. It expresses its opinion on the projects requesting access to data issued from public statistics. It covers a big part of data coming from the public sector (CSS, 2017).

3 Comparison of German and French Data Sources on Social Security and Labor

While data sources from the FDZ and CASD differ, several datasets are rather similar and can be used for comparative research, particularly where it concerns highly detailed data with a labor market research focus. Note, that we cannot offer access to pooled data currently. Instead, researchers will obtain access to the German data within the FDZ environment (on-site, JoSuA) and access to the French data within the CASD environment (remotely through the SD-Box). However, in the context of IDAN, a first improvement has been achieved and researchers may access both secured environments from one single physical place, either in the IAB safe room or the CASD safe room. Based on the development of research projects, IDAN will work on further steps to facilitate data access from both institutions.

We provide two different overviews of comparable datasets in Table 1 and Table 2, with the goal to provide a first tool for researchers to facilitate the process of beginning a new comparative research endeavor. However, actual comparability may depend on the particular research question.³ Table 1 sorts the available data sources according to the data category of the units in the data source. Column 1 of Table 1 describes the category of data, i.e. establishment, individual/personal or linked data. Columns 2 and 3 list the data sources available at the FDZ and CASD, respectively. Due to the more limited number of datasets at the FDZ, we use the German data sources as a starting point and identify similar datasets at the CASD. We base the comparison on a similar topical focus of the dataset. In Table 1, one German dataset is usually paired with several French ones, as one French data may not match all German data's topics in their entirety. Note that the comparisons represent all the datasets currently available at the FDZ, but only a limited number of those available at the CASD.⁴

Table 1: Comparable German and French Data Sources According to Level of Observation

Data category	FDZ Data	CASD Data
Establishment Data	- Establishment History Panel (BHP)	- Annual Declaration of Social Data (DADS) - Local Knowledge on Establishment production (CLAP) - Survey on Employment Structure (ESE)
	- IAB Establishment Panel Survey	- Labor Force activity and Working Conditions (ACEMO) - Labor Conditions Psychosocial Risks (CT-RPS)
	- German Job Vacancy Survey	- Labor Movements (MMO) - Monthly Labor Market Statistics (STMT)
	- German Management and Organizational Practices Survey (GMOP)	- Labor Relations and Agreement Negotiations Survey (REPONSE) - Labor Conditions Psychosocial Risks (CT-RPS)
	- Public Release Data of the Administrative Wage and Labor Market Flow Panel (AWFP) - The FDZ Sample of the Administrative Wage and Labor Market Flow Panel (FDZ-AWFP)	- Labor Force Survey (EE) - Labor Movements (MMO) - Monthly Labor Market Statistics (STMT)

³ Note that the Tables are not exhaustive. If you find additional data sources that we should add, please contact us.

⁴ The CASD's website provides an exhaustive list of data available at the CASD (CASD, 2019b).

	<ul style="list-style-type: none"> - Sample of Integrated Labor Market Biographies (SIAB) - Panel Study Labor Market and Social Security (PASS) - PASS-ADIAB 	<ul style="list-style-type: none"> - Annual Declaration of Social Data (DADS) - Labor Force Survey (EE) - Labor Force Survey (EE) - Labor Conditions Psychosocial Risks (CT-RPS) - Labor Force Activity and Working Conditions (ACEMO)
	<ul style="list-style-type: none"> - Working and Learning in a Changing World (ALWA) - ALWA Literacy and Numeracy Data (ALWA-LiNu) - ALWA-ADIAB 	<ul style="list-style-type: none"> - Permanent Demographic Sample (EDP) - Survey on Vocational Training and Qualification (FQP) - Survey on Employees Itineraries and Training (DEFIS) - Apprenticeship Information System (SIFA) - Apprenticeship Contracts
Individual/ Personal Data	<ul style="list-style-type: none"> - National Educational Panel Study (NEPS), Starting Cohort 6 (SC6) Survey Data Linked to Administrative Data of the IAB (NEPS-SC6-AD-IAB) - Biographical Data of Social Insurance Agencies in Germany (BASiD) - Migration Sample (IAB-SOEP-MIG) - IAB-SOEP-MIG-ADIAB - IAB-BAMF-SOEP Survey of Refugees - Administrative Evaluation Dataset (IZA / IAB AED / LED) - German Cohort Study on Work, Age and Health (lidA) - The Study on Mental Health at Work (S-MGA) - Sample of Integrated Welfare Benefit Biographies (SIG) 	<ul style="list-style-type: none"> - Matching of the Job-Seekers History File and the Annual Declaration of Social Data (FH-DADS) - Population Census (RP) - Survey on Trajectories and Origins (TeO) - Migration Survey Related to Overseas Department (EMIGDOM) - Labor force Survey (EE) - Unique Integration Contract (CUI) - Job for the Future Program Survey (EA) - Labor Conditions Psychosocial Risks (CT-RPS) - Information System on Sick Leaves Benefits (HYGIE) - Matching of the job-seekers history file and the Annual Declaration of Social Data (FH-DADS)
Linked Em- ployer-Em- ployee Data	<ul style="list-style-type: none"> - Linked Employer-Employee Data from the IAB (LIAB) - Linked Personnel Panel (LPP) - LPP-ADIAB - Employee Survey for the Project Further Training as a Part of Lifelong Learning (Panel WeLL) - WeLL-ADIAB 	<ul style="list-style-type: none"> - Annual Declaration of Social Data (DADS) - Survey on the Cost of Labor and Wage Structure (ECMOSS) - Labor Conditions Psychosocial Risks (CT-RPS) - Labor Relations and Agreement Negotiations Survey (REONSE) - Survey on Employees Itineraries and Training (DEFIS) - All Employee Panel Combination with the Vocational Training and Qualification (FQP-Panel Tous Salariés)

Notes: "ADIAB" refers to a linkage of survey data with administrative data from the IAB. Note that ADIAB data is not the same as the original survey, particularly concerning the sample (see Appendix 7.4.1). All dataset titles are translated into English but the abbreviations are based on the titles in the original language making them easy to find on the respective websites. See Appendix 7.4.2 for details on the DADS structure.

Source: Own comparative work.

In Table 2, we sort comparable data sources according to topical focus. Column 1 of Table 2 indicates these topics. Columns 2 and 3 list the data sources available at the FDZ and CASD, respectively. All chosen datasets have a labor market research focus with different recurrent topics between them. The classifications are not mutually exclusive and some datasets touch upon multiple topics at the same time, therefore we list them in more than one category. Note that the level of observation from a dataset to another may differ in this table.

Table 2: Comparable German and French Data Sources According to Topics

Topics	FDZ Data	CASD Data
Professional Itineraries	<p><i>Individual level information:</i></p> <ul style="list-style-type: none"> - Sample of Integrated Labor Market Biographies (SIAB) - Biographical Data of Social Insurance Agencies in Germany (BASiD) - Linked Employer-Employee Data from the IAB (LIAB) - Linked Personnel Panel (LPP) - LPP-ADIAB - ALWA-ADIAB - National Educational Panel Study (NEPS), Starting Cohort 6 (SC6) Survey Data Linked to Administrative Data of the IAB (NEPS-SC6-ADIAB) - WeLL-ADIAB - <p><i>Establishment level information:</i></p> <ul style="list-style-type: none"> - Establishment History Panel (BHP) - IAB Establishment Panel Survey - German Job Vacancy Survey - Linked Employer-Employee Data from the IAB (LIAB) - Linked Personnel Panel (LPP) - German Management and Organizational Practices Survey (GMOP) - Public Release Data of the Administrative Wage and Labor Market Flow Panel (AWFP) - The FDZ Sample of the Administrative Wage and Labor Market Flow Panel (FDZ-AWFP) 	<ul style="list-style-type: none"> - Annual Declaration of Social Data (DADS) - Labor Force Survey (EE) - Survey on Employment Structure (ESE) - Labor Conditions Psychosocial Risks (CT-RPS) - Labor Force Activity and Working Conditions (ACEMO) - Local Knowledge on Production Systems (CLAP) - Labor Relations and Agreement Negotiations Survey (REPONSE) - European Community Households Panel (ECHP) - Labor Movements (MMO)
Unemployment, Benefits and Active Labor Market Policies	<ul style="list-style-type: none"> - Sample of Integrated Labor Market Biographies (SIAB) - Panel Study Labor Market and Social Security (PASS) - PASS-ADIAB - Biographical Data of Social Insurance Agencies in Germany (BASiD) - Administrative Evaluation Dataset (IZA/IAB AED/ LED) - Sample of Integrated Welfare Benefit Biographies (SIG) 	<ul style="list-style-type: none"> - Labor Force Survey (EE) - Matching of the job-seekers history file and the Annual Declaration of Social Data (FH-DADS) - Survey on Employment Structure (ESE) - Labor Movements (MMO) - Survey on Labor Costs and Wage Structure (ECMOSS) - Labor Conditions Psychosocial Risks (CT-RPS)
Employment and Work Conditions	<ul style="list-style-type: none"> - Sample of Integrated Labor Market Biographies (SIAB) - Biographical Data of Social Insurance Agencies in Germany (BASiD) - Linked Personnel Panel (LPP) - LPP-ADIAB - IAB Establishment Panel Survey 	<ul style="list-style-type: none"> - Labor Force Activity and Working Conditions (ACEMO) - Labor Relations and Agreement Negotiations Survey (REPONSE) - Apprenticeship Contracts
Education, Vocational Training and Further Training	<ul style="list-style-type: none"> - Working and Learning in a Changing World (ALWA) - ALWA-ADIAB - ALWA Literacy and Numeracy Data - National Educational Panel Study (NEPS), Starting Cohort 6 (SC6) Survey Data Linked to Administrative Data of the IAB (NEPS-SC6-ADIAB) - Employee Survey for the Project Further Training as a Part of Lifelong Learning (WeLL) - WeLL-ADIAB 	<ul style="list-style-type: none"> - Permanent Demographic Sample (EDP) - All employee Panel combination with the Vocational training and qualification (FQP-Panel Tous Salariés) - Survey on Employees Itineraries and Training (DEFIS) - Apprenticeship Contracts - Unique Integration Contract (CUI) - Apprenticeship Information System (SIFA)
Health	<ul style="list-style-type: none"> - German Cohort Study on Work, Age and Health (Iida) - The Study on Mental Health at Work (S-MGA) 	<ul style="list-style-type: none"> - Labor Conditions – Psychosocial Risks (CT-RPS) - Information System on Sick Leaves Benefits (HYGIE)

Migration	<ul style="list-style-type: none"> - Migration Sample (IAB-SOEP-MIG) - IAB-SOEP-MIG-ADIAB - IAB-BAMF-SOEP Survey of Refugees 	<ul style="list-style-type: none"> - Population Census (RP) - Survey on Trajectories and Origins (TeO) - Migration Survey Related to Overseas Department (EMIGDOM)
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Notes: “ADIAB” refers to a linkage of survey data with administrative data from the IAB. Note that ADIAB data is not the same as the original survey, particularly concerning the sample (see Appendix 7.4.1). All dataset titles are translated into English but the abbreviations are based on the titles in the original language making them easy to find on the respective websites.

Source: Own comparative work.

4 Comparison of a German and a French Administrative Data Source: The Sample of Integrated Labor Market Biographies and the All Employee Panel

Knowing which data sources contain similar topics is an important first step in comparative research. We want to go further by providing a comparison tool for two administrative datasets, the German “Sample of Integrated Labor Market Biographies” (SIAB) and the French “All employee panel” (Panel tous salariés). These data are not harmonized, but are comparable at the variable-level.⁵ For explanations of terminology and comparisons of relevant classifications, such as for example industry or geography, refer to Appendix Table A3.

We chose these two data sets according to their popularity among data users and their potential comparability. Both are administrative data sets at the individual-level concerning employment and wages. They both provide information about employees subject to the social security system and allow researchers to follow the same individual over time. Through close collaboration and describing variables and content to each other, we were able to evaluate overall comparability in Table 3⁶ and identify variables in the 2015 version of The All Employee Panel and the SIAB 7517 that are closer matches (Tables 4 to 6).

The German SIAB allows researchers to track the employment status of an individual exact to the day (Antoni et al., 2019). The SIAB is based on employer’s social security notifications and process-generated data of the German Federal Employment Agency. The SIAB is a 2% random sample of the population covered in the Integrated Employment Biographies (IEB) of the IAB. The IEB cover individuals in employment subject to social security contributions, in marginal part-time employment, receiving benefits in accordance with SGB III or SGB II, registered with the Federal Employment Agency as a jobseeker or participating in an employment or training measure. Depending on the source, the data is available from 1975 onwards.⁷

The All Employee Panel is a data source generated from an administrative formality: The Annual Declaration of Social Data (DADS). The DADS is a mandatory declarative formality for all companies

⁵ Should researcher working with the data develop harmonization programs, we are happy to publish them as FDZ-Methoden-report, so that the research community can cite this contribution.

⁶ For a description of each variable, refer to Appendix Table A1 for the SIAB and Appendix Table A2 for the All Employee Panel.

⁷ For a detailed description of the data, see the SIAB data report (Antoni et al., 2019).

with employees in application of the Social Security Code and the General Tax Code. The All Employee Panel follows employees from 1976 onwards. It is a process-generated data source and it is extracted from two administrative sources: The Annual Declaration of Social Data (see Appendix 7.4.2) and the State Payroll Record. It provides information on employment periods, on the characteristics of employers, on wages and it renders possible to follow the same individual over time.

Table 3 describes the main features of the SIAB and the All Employee Panel, including particularities, limitations and prerequisites of data access.

Table 3: Comparison of Main Features of the Data

	Sample of Integrated Labor Market Biographies	All Employee Panel (Panel tous salariés)
Main content of the data	<p>The SIAB is a random sample of employees subject to the social security system or appearing in the process-generated data of the German Federal Employment Agency. The SIAB is based on social security notifications that employers have to make for their employees.</p> <p>The data depicts employment or unemployment statuses of individuals exact to the day. The SIAB contains information on the socio-demographic background of individuals and their employment and unemployment histories, along with information on the establishments they work in.</p> <p>The SIAB allows researchers to follow the same individual over time.</p>	<p>The All Employee Panel tracks employment periods, characteristics of employers and wages of a sample of 1/24th of the salaried population from 1976 to 2001 and of a sample of 1/12th of the salaried population since 2002.</p> <p>For each “poste”^a held by an employee in the sample in a given company during a year, the All Employee Panel gives information, in particular on the net remuneration paid by the employer, the number of paid days in the relevant year, as well as the sex, year of birth and employment status of the employee. The number of paid hours is also indicated, but only since 1995.</p> <p>The All Employee Panel makes it possible to follow the same individual over time.</p>
Available years	<p>The period covered depends on the data source:</p> <ul style="list-style-type: none"> - Employee History (BeH): 1 Jan. 1975 - 31 Dec. 2017 - Benefit Recipient History (LeH): 1 Jan. 1975 - 31 Dec. 2017 - Jobseeker History (ASU): 1 Jan. 1997 - 31 Dec. 2017 <p>- Unemployment Benefit II Recipient History (LHG): 1 Jan. 2005 - 31 Dec. 2017</p> <p>- Jobseeker History from XSozial-BA-SGB II (XASU): 1 Jan. 2005 - 31 Dec. 2017</p> <p>- Participants-in-Measures History File (MTH): 1 Jan. 2000 - 31 Dec. 2017</p> <p>- Participants-in-Measures History File from XSozial-BA-SGB II (XMTH): 1 Jan. 2005 - 31 Dec. 2017</p>	Period covered: 1976 - 2015
Source	<p>Sample of all individuals in Germany, being part of one of the following employment statuses:</p> <ul style="list-style-type: none"> - Employment subject to social security contributions (since 1975) - Marginal part-time employment (since 1999) - Benefit receipt according to SGB III (since 1975) or SGB II (since 2005) - Officially registered as job-seeking at the BA or at an institution responsible for implementing SGB II (since 1997) - (Planned) participation in programs of active labor market policies (since 2000) 	<p>This longitudinal file is extracted from the following administrative sources:</p> <ul style="list-style-type: none"> - The DADS - The State Payroll Records <p>Initially, in 1976, the All Employee Panel covered all employees in the private sector (excluding agriculture), including employees of public companies (“enterprises”), i.e. all employees subject to an annual declaration of social data (DADS). The hospital public service was integrated in 1984 and territorial authorities in 1988. Part of the Public Social Action (Action Publique Sociale),^b on the frontier between the hospital public service and the territorial authorities, is present since 1976, while another part was included the same year as territorial authorities (1988). The state civil service was integrated in 1988, although it comes from a separate source, namely the State Payroll Records.</p>

Frequency of information	Daily	Annual
Population	<p>2% random sample of the IEB, which combine administrative and process-generated data (see Appendix 7.4.1).</p> <p>The SIAB 7517 covers the employment histories of 1,875,439 individuals.</p>	<p>Existing since 1976 in the private sector, the All Employee Panel covers the entire salaried field since 1988, i.e. the private sector and the civil service (state civil service, territorial civil service and hospital public service).</p> <p>The sample corresponds to the historical sample of the panel, i.e. 1/24th of the salaried population from 1976 to 2001 and 1/12th of the salaried population since 2002.</p> <p>The 2015 version of the All Employee Panel covers the employment of more than 7 million individuals.</p>
Particularities	<p>Information available depends on the individual's employment statuses and the data source:</p> <ul style="list-style-type: none"> - BeH: Annual notifications and end-of-employment notifications submitted to the social security agencies for employees covered by social security and employees in marginal part-time employment - LeH: Information on benefit receipt in accordance with SGB III for recipients of unemployment benefit, unemployment assistance and maintenance allowance - LHG: Data on individuals in receipt of basic social security benefits in accordance with SGB II - ASU: Information on job search activity - XASU: Information on job search activity reported via the transmission standard XSozial-BA-SGBII to the BA by authorized municipalities - MTH: Information on participation in employment and training measures (not including measures of the authorized municipalities) - XMTH: Information on participation in employment and training measures reported via the transmission standard XSozial-BA-SGBII to the BA by authorized municipalities 	<p>The All Employee Panel comes from annual files at the "poste" level (individual * establishment identifier SIRET) that are aggregated at the level of the company. Therefore, the file we obtain is at the level of individual (individual * company identifier SIREN * year). The 2015 file contains 68 million observations. Each observation corresponds to the employment of an individual during a year.</p> <p>To aggregate the "postes" of an individual who has worked at least in two different establishments of the same company in a given year, the characteristics of the establishment for which the pay period is the longest and, in the event of a tie, the highest salary was retained. The net wages and gross taxable wages, hours and pay periods (in days) are added together. The earliest start date of remuneration and the latest end date of remuneration is retained. The payroll duration is then made consistent with these date. : If it is higher than the interval, it is adjusted (this could happen, for example, in the case of a person having two part-time positions).</p>
Limits	<ul style="list-style-type: none"> - Restricted to information concerning the labor market - No subjective information unless combined with survey data (see the FDZ's linked data products (FDZ, 2019)) - No civil servants or self-employed persons - No information on hours worked - Not all socio-demographic information (marital status, number of children) is available in the BeH data source 	<ul style="list-style-type: none"> - Three major changes in the panel's production took place in 1993, 2002 and 2009. These changes mainly concern the population covered by the All Employee Panel and the collection methodology and explain series breaks. - When an individual's identifier is badly or not filled, it is replaced by a fictitious identifier. Afterwards one can no longer connect this observation with other observations of the same individual. The years 1994, 2003 and 2004 had higher rates of fictitious identifiers than other years. The years 2003 to 2005 experienced a problem of data integration from temporary employment agencies. - Due to an increase in activities related to the population census, INSEE did not process the DADS in 1981, 1983 and 1990. Therefore, no observations for these years exist in the panel. - From 2008, the panel integrates unemployment benefits. - Not much information about unemployment periods or education is available, but other data can be linked to the All Employee Panel (see Appendix 7.4.2): All Employee Panel - Permanent Demographic Sample (CASD, 2019g) and All Employee Panel - Job Seekers History File (CASD, 2019h). - The All Employee Panel documentation is only available in French.

<p>Confidentiality rules</p> <p>To safeguard the anonymity of statistical units (individuals or establishments) statistical disclosure control is exerted. All results from weakly anonymous data must contain at least 20 individuals or establishments in each cell. For more detail see Hochfellner et al. (2012).</p>	<p>The confidentiality rules' purpose is that no published information can lead to the direct or indirect identification of an employee or an establishment.</p> <p>On the “poste” level the rules are:</p> <ul style="list-style-type: none"> - No cell can contain less than 5 employees - No employee can represent more than 80% of the total of the cell <p>On the establishment level, and in addition to the rules above:</p> <ul style="list-style-type: none"> - No cell can contain less than 3 companies (or establishments) - No company (or establishment) can represent more than 85% of the total of the cell
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Notes: ^aIn this document, the French term “poste” describes the work of the same individual in the same establishment. See Appendix Table A3 for an explanation as used in the French language.

^bThe public social action (Action Sociale Publique) is a general orientation towards the enhancement of work and life conditions of state civil servants and their families (Service Public, 2019).

Source: Antoni et al. (2019) for the SIAB and the documentation for the 2015 All Employee Panel (unavailable online).

Though the two datasets are comparable, differences exist as well. For example, researchers gain access to all years and all employed individuals in the All Employee Panel, whereas the German data is based on a 2% sample. Moreover, all French data are available in yearly tranches. Researchers get access to spell data for individuals and cross-sectional data for establishments in the German administrative datasets. Finally, the French data provides information on both companies and establishments, whereas the German data is based on establishments only (see Appendix Table A3).

As similarities between the two sources outweigh the differences, we proceed to compare variables within the datasets. To facilitate the overview, we generate three tables according the content of the variables. The three tables provide a list of corresponding variable names in German, French and English. The variable lists are organized in categories that the information in the variable belongs to, such that Table 4 presents information on socio-demographics and (un-)employment histories, Table 5 presents information on the individual’s place of work and Table 6 presents information on technical variables.

Table 4 shows socio-demographics and information on the unemployment and employment histories of the individuals.

Table 4: Comparison of Variables in the SIAB 7517 and the 2015 All Employee Panel: Information on Socio-Demographics and (Un-)Employment History

Description of Variable (EN / GER / FR)	SIAB 7517	2015 All Employee Panel
SOCIO-DEMOGRAPHICS		
Gender / Geschlecht / Sexe	frau	sx
Year of birth / Geburtsjahr / Année de naissance	gebjahr	annai
Month of birth / Geburtsmonat / Mois de naissance	gebmon	N/A
Employee age in the current year / Alter des Beschäftigten im aktuellen Jahr / Age du salarié durant l’année courante	N/A	age
Nationality / Nationalität / Nationalité	nation	N/A
Aggregated nationality / vergrößerte Nationalität / Nationalité groupée	nation_gr	N/A
State of birth / Geburtsbundesland / Département de naissance	N/A	depnai
Marital status / Familienstand / Statut familial	famst	N/A
Number of children / Kinderzahl / Nombre d’enfants	kind	N/A

EDUCATION			
Vocational training / Ausbildung / Formation professionnelle	ausbildung ausbildung_imp	N/A	
School leaving qualification / Schulausbildung / Diplôme à la sortie de l'école	schule	N/A	
EMPLOYMENT			
Daily wage, daily benefit rate / Tagesentgelt, täglicher Leistungssatz / Salaire journalier, taux d'indemnités journalières	tentgelt	N/A	
Generalized social contribution base / Verallgemeinerter Sozialversicherungsbeitrag / Base de contribution sociale généralisée (CSG)	N/A	bascsg (in constant Euros: bacsgsr)	
Taxable gross salary / Steuerpflichtiges Brutto-Einkommen / Salaire brut fiscal	N/A	sb (in constant Euros: sbr)	Netnet (in constant Euros: netnetr)
Net salary / Netto-Einkommen / Salaire net	N/A	netnet_corrps0 (netnet taking the patronal cosisations into account) (in constant Euros: netnet_corrps0r)	
Occupation / Beruf / Catégories socio-professionnelles	3-digit code according to KldB1988: beruf 3-digit code according to KldB2010: beruf2010_3 4-digit code according to KldB2010: beruf2010_4 5th digit according to KldB2010: niveau ^a	cat ech ens grade ce N/A	cs1 (1-figure code) ^b cs2 (2-figure code) ^c csk (includes qualification pcs4 (4-figure code) pcs_v2 (4-figure code, only 2008 and only private sector)
Occupation in public or private sector / Öffentlicher Dienst / Catégorie d'agent	N/A		
Salary grade / Lohngruppe / Echelon dans le grade	N/A		
Occupation in education sector / Beruf im Bildungssektor / Code d'enseignant	N/A		
Civil service level / Stellung im öffentlichen Dienst / Grade dans la fonction publique	N/A		
Part-time / Teilzeit / Temps partiel	teilzeit		
Occupational status / Stellung im Beruf / Type de contrat	stib	N/A	
Employment status / Erwerbsstatus / Statut de l'employé	erwstat		contrat_travail
Transition zone (subsidized employment) / Gleitzone / Emploi aidé	gleitz		contrat_travail
Temporary worker / Leiharbeit / Travailleur temporaire	leih		contrat_travail
Fixed-term contract / Befristung / Contrat à durée déterminée	befrist		contrat_travail
Non-annexed « poste » indicator ^d / Indikator für Normalarbeitsverhältnis / Indicatrice de poste non annexé	N/A		filtre
Payroll period in the year (in days) / Anzahl der entlohten Tage im Jahr / Durée de paie dans l'année (en jours)	N/A	dp dpc	
Reason of cancellation, notification, termination ^e / Abmeldegrund, Abgabegrund, Beendigungsgrund / Raison de la rupture, changement, arrêt	grund	N/A	

UNEMPLOYMENT, BENEFIT RECEIPT and JOB SEARCH		
Start date of unemployment / Beginndatum der Arbeitslosigkeit / Date de début de chômage	alo_beg	N/A
Duration of unemployment / Dauer der Arbeitslosigkeit / Durée de chômage	alo_dau	N/A
Employment status prior to job search / Erwerbsstatus vor Arbeitsuche / Statut d'emploi avant la recherche d'emploi	estatvor	N/A
Employment status after job search / Status nach Arbeitsuche / Statut d'emploi après la recherche d'emploi	estatnach	N/A
Client profile / Profilage / Profil client	profil	N/A
Type of termination of last job / Art der Kündigung der letzten Tätigkeit / Type d'arrêt du dernier emploi	art_kuend	N/A
Desired working hours of the job sought / Arbeitszeit des Stellengesuchs / Heures de travail souhaitées pour l'emploi recherché	arbzeit	N/A
Residual claim / Restanspruch, geplante Dauer / Reven-dication	restanspruch	N/A
Type of institution / Trägerart / Type d'institution	traeger	N/A
GEOGRAPHIC INFORMATION		
Place of residence / Wohnort / Lieu de résidence	District: wo_kreis Federal state: wo_bula	comr (Municipality (commune) ^f regr (Region) depr (State -department)
Place of residence: Employment agency / Wohnort : Arbeitsagentur / Lieu de résidence : agence d'emploi	wo_aa	N/A
Place of residence: Regional directorate / Wohnort: Regionaldirektion / Lieu de résidence: agence locale	wo_rd	N/A

Notes: The variable lists are a tool for researchers trying to develop a comparative empirical research question. The actual comparability of each variable depends on the specific research question. See Appendix Tables A1 and A2 for explanations of the German and French variables and Table A3 for explanations of relevant terminology.

^aThe fifth digit of the Classification of Occupations (KldB2010) shows skill level required for a job (=niveau).

^bBased on the first level of PCS-ESE (INSEE, 2018a).

^cBased on the second level of the PCS-ESE. The panel follows the 2003 update of the classification.

^dNon-annexed refers to jobs that are full-time, with regular pay and subject to social security contributions.

^eReason for the social security notification issued, such as amongst others change in salary and maternity leave.

^fAll French geographical variables are in codes (INSEE, 2018b).

Source: Own comparative work, based on the SIAB 7517 and the documentation for the 2015 All Employee Panel.

Table 4 incicates that the All Employee Panel includes limited information on education and unemployment. However, merging this dataset with other data sources allows the addition of supplementary information. There are currently three combinations of the All Employee Panel with other data sources available at the CASD, namely the linkage with the Permanent Demographic Sample (EDP), the Job Seekers History File (FH-DADS) and the Vocational Training and Qualification (FQP) (see Appendix 7.4.2).

Table 5 describes information on the individual's place of work. Note that the French data provides information on the company ("entreprise") and the establishment ("établissement"), while the German data only provides information on the establishments ("Betrieb"), but not the overlying company ("Unternehmen").

Table 5: Comparison of Variables in the SIAB 7517 and the 2015 All Employee Panel: Information on the Individual's Place of Work

Description of Variable (EN/ GER/ FR)	SIAB 7517	2015 All Employee Panel
PLACE OF WORK: COMPANY INFORMATION (COMPANY / UNTERNEHMEN / ENTREPRISE)		
Company identifier / Unternehmensidentifikator / Identifiant entreprise	N/A	sir
Company size categories / Unternehmensgröße kategorisiert / Tranche de taille de l'entreprise	N/A	tain
Status of the company or administration / Status des Unternehmens oder der Administration / Statut de l'entreprise ou de l'administration	N/A	st
Number of regrouped establishment lines in the enterprise observation / Anzahl gruppierter Betriebszeilen in der Unternehmensbeobachtung / Nombre de lignes établissement regroupées dans l'observation entreprise	N/A	nblig
Total number of employees in the company / Anzahl der Beschäftigten im Unternehmen / Nombre de salariés dans l'entreprise	N/A	nbsa_ent
Mass of gross taxable wages in the company / Brutto steuerpflichtiger Löhne / Masse des salaires bruts fiscaux dans l'entreprise	N/A	msb_ent msb_ent in constant Euros: msbr_ent
Economic activity of the company / Wirtschaftszweig / Activité économique de l'entreprise	N/A	A38 (Since 1994) ^a ape40 (NAP73 regrouped in 40 levels, until 1192) Apen (Until 2008) Apen2 (NAF rev. 2, since 2008) From 1995-2001: nes36 ^b
PLACE OF WORK: ESTABLISHMENT INFORMATION (ESTABLISHMENT / BETRIEB / ETABLISSEMENT)		
Establishment identifier / Betriebsnummer / Identifiant de l'établissement	betnr	nic4 ^c
Year of first appearance of the establishment ID / Jahr des ersten Auftretens der Betriebsnummer / Année de première apparition de l'ID d'établissement	grd_jahr	N/A
First appearance of the establishment number / Erstes Auftreten Betriebsnummer / Première apparition du numéro d'établissement	grd_dat	N/A
Year of last appearance of the establishment ID / Jahr des letzten Auftretens der Betriebsnummer / Dernière apparition de l'ID de l'établissement	lzt_jahr	N/A
Last appearance of establishment number / Letztes Auftreten betriebsnummer / Dernière apparition du numéro de l'établissement	lzt_dat	N/A
Total number of employees / Anzahl Beschäftigte gesamt / Nombre de salariés dans l'établissement	az_ges	nbsa_et
Size categories of the establishment / Betriebsgröße kategorisiert / Tranche de taille de l'établissement	N/A	tait
Number of full-time employees / Anzahl in Vollzeit / Nombre d'employés à temps plein	az_vz	N/A
Number marginal part-time employees / Anzahl geringfügig Beschäftigte / Nombre d'employés en emploi marginal à temps partiel	az_gf	N/A
Employer's field of work / Arbeitgeber Kategorie / Domaine d'emploi	N/A	domempl
Economic activity / Wirtschaftszweig / Activité économique	Classification of 1973 (3-digit, generated, grouped): w73_3, w73_3_gen, group_w73_3 Classification of 1993 (3-, 5-digit, generated, grouped): w93_5, w93_3, w93_3_gen, group_w93_3 Classification of 2003 (3-, 5-digit): w03_5, w03_3 Classification of 2008 (3-, 5-digit, generated, grouped): w08_5, w08_3, w08_3_gen, group_w08_3	nes5 (5 groups) nes36 (From 1994 to 2007) nes36 Apet (Until 2008) NAF rev.2, since 2008: apet2

Private or public sector / Privatwirtschaft oder öffentlicher Dienst / Secteur d'emploi	N/A	Sect
Ministry / Ministerium / Ministère	N/A	min
France Telecom and the French Postal Office / Französische Post und französische Telekom / Indicatrice de France Telecom et de La Poste	N/A	ptt
Assignment in the state's civil service / Stellung im öffentlichen Dienst des Staates / Service d'affectation dans la fonction publique de l'Etat	N/A	ser
Legal category of employer/ Rechtsform des Arbeitgebers / Catégorie juridique	N/A	catjur
Collective bargaining agreement code / Tarifvertrag / Code de convention collective de branche	N/A	conv_coll
Mean imputed wages of full-time employees / Mittelwert imputiertes Brutto-Tagesentgelt Vollzeitbeschäftigte / Salaire moyen imputé aux employés à temps plein	te_imp_mw	N/A
Number of paid hours per year/ Anzahl bezahlter Tage im Jahr / Nombre d'heures rémunérées dans l'année	N/A	nbheur
Place of work / Arbeitsort / Lieu de travail	District: ao_kreis Federal state: ao_bula	comt (Municipality, commune) regt (Region) dept (State, department)

Notes: The variable lists are a tool for researchers trying to develop a comparative empirical research question. The actual comparability of each variable may depend on the specific research question. See Appendix Tables A1 and A2 for explanations of the German and French variables, respectively and Table A3 for explanations of relevant terminology.

^aThe economic activity in the All Employee Panel followed different official classifications (nomenclatures). From 1976 to 1993, it followed the 1973 classification, the NAP73. In 1993, a part of the economy activity was declared according to the NAP73 while the other part was declared according to the new classification, the NAF of 1993. In 2003, the original NAF was revised. From 2003 until 2008 the panel followed NAF revision 1, and from 2008 on NAF revision 2.

^bIt is impossible to use the Nomenclature Economique de Synthèse (NES) code for international comparison. The Statistical Classification of Economic Activities in the European Community (NACE code or the NAF code) can be used instead.

^cnic4: Variable permits the reconstitution of the establishment identifier (SIRET).

Source: Own comparative work, based on the SIAB 7517 and the documentation for the 2015 All Employee Panel.

Table 6 provides information on technical variables and periods of validity.

Table 6: Comparison of Variables in the SIAB 7517 and the 2015 All Employee Panel: Technical Variables and Period of Validity

Description of Variable (EN/ GER/ FR)	SIAB 7517	2015 All Employee Panel
IDENTIFIER		
Identifier / Identifikator / Identifiant	persnr	nniouv
TECHNICAL VARIABLES AND PERIOD OF VALIDITY		
Observation counter per person / Satzzähler pro Konto / Compteur d'observation par personne	spell	N/A
Indicator of inclusion in the sample / Indikator für Stichprobe / Indicatrice d'appartenance à l'échantillon	N/A	Before 2002: pan25 Since 2002: pannouv
Source of spell / Quelle des Satzes / Filtre sur les sources de données	quelle	N/A
Original start date of observation / Beginndatum Originalbeobachtung / Date de début d'observation	begorig	entpan ^a
Original end date of observation / Enddatum Originalbeobachtung / Date de fin d'observation	endorig	N/A
Year / Jahr / Année	jahr	an ^b
Start date of split episode / Beginndatum der Episode / Date de début de poste	begepi	debremu
End date of split episode / Enddatum der Episode / Date de fin de poste	endepi	finremu
Fictitious national registration number (social security number (NIR)) / Fiktive Sozialversicherungsnummer / Indicateur de numéro d'inscription au répertoire (Numéro de sécurité sociale (NIR) fictifs)	N/A	Nnifict ^c

Out of scope NIR indicator / Fiktive Sozialversicherungsnummer außerhalb der Stichprobe / Indicatrice de NIR hors champ	N/A	Nnihc ^d
Pseudo-SIRET indicator / Pseudo SIRET ^e Indikator / Indicatrice de pseudo SIRET	N/A	pseudosir
Fictitious SIREN indicator / Fiktiver SIREN ^e Indikator / Indicatrice de SIREN fictif	N/A	sirfict

Notes: The variable lists are a tool for researchers trying to develop a comparative empirical research question. The actual comparability of each variable may depend on the specific research question. See Appendix Tables A1 and A2 for explanations of the German and French variables, respectively and Table A3 for explanations of relevant terminology.

^aYear of entry in the panel.

^bYear of validity of the job position (= année de validité du poste).

^cUnique identifier for observations with an invalid NIR.

^dIndividuals that are considered out of scope are the individuals who are not born in October of an even year.

^eSIRET is an establishment identifier and SIREN is a company identifier. For more information refer to Appendix Table A3.

Source: Own comparative work, based on the SIAB 7517 and the documentation for the 2015 All Employee Panel.

5 Conclusion

The IDAN Network makes data more accessible across Europe and allows researchers to work securely on confidential data from different countries from one single location. The CASD-FDZ cooperation was the first to implement this kind of reciprocal data access. Thus, data users no longer have to visit multiple locations and incur high travel costs to do cross-country comparative research, but can remain in Palaiseau-Paris or Nuremberg for their research endeavors. This data report describes the collaborative work undertaken by the CASD in Palaiseau-Paris and the FDZ in Nuremberg with the goal to facilitate data access and cross-country comparative work.

Because we believe that many research opportunities arise from cooperating across countries, we provide comparison tools for German and French data in this report. We expect that cross-country comparisons will provide many benefits for the research community and for evidence-based policy advice. Countries can learn from each other when implementing new laws and policies and researchers can benefit from different perspectives and fruitful discussions. Thus, cross-country cooperations should lead to new research output and result in sound evidence-based policy advice.

6 References

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7 Appendix

7.1 Description of SIAB Variables

Table A1 provides an overview of the variables available in the SIAB in English and German for better orientation. Additionally, for a better understanding, short descriptions explain the source and content of each variable.

Table A1: SIAB Variable Description

Variable name	Description (EN)	Kurzbeschreibung (DE)
persnr	Individual ID: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Indicates which observations belong to the same person	Systemfreie Personennummer: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Zeigt an, welche Sätze zur gleichen Person gehören
betnr	Establishment ID: BeH: Indicates which observations belong to the same establishment	Systemfreie Betriebsnummer: BeH: Zeigt an, welche Sätze zum gleichen Betrieb gehören
spell	Counter per person: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Counts a person's observations, beginning with one	Satzzähler pro Konto: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Nummeriert aufsteigend die Sätze einer Person
quelle	Source of spell: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Indicates the data source	Quelle des Satzes: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Gibt die Datenquelle an
jahr	Year: BeH: Year of validity of the establishment data as of the reference date of 30 June	Jahr: BeH: Gültigkeitsjahr der Betriebsinformation zum Stichtag 30.06.
begorig	Original start date: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Original start date of the notification	Beginndatum Originalbeobachtung: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Ursprüngliches Beginndatum einer Meldung
endorig	Original end date: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Original end date of the notification	Enddatum Originalbeobachtung: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Ursprüngliches Enddatum der Meldung
begepi	Episode start date: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Start date of the split episode is always equal to or greater than the start date of the original observation	Beginndatum Episode: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Beginndatum der Episode ist gleich oder größer als das Beginndatum der Originalbeobachtung
endepi	Episode end date: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: End date of the split episode is always equal to or smaller than the end date of the original observation	Enddatum Episode: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Enddatum der Episode ist gleich oder kleiner als das Enddatum der Originalbeobachtung
frau	Gender: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Gender of the individual (0 - male, 1 - female)	Geschlecht: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Geschlecht der Person (0 - Mann, 1- Frau)
gebjahr	Year of birth: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Year of birth of individual	Geburtsjahr: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Geburtsjahr der Person
gebmon	Month of birth: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Month of birth of the individual Sensitive variable, thus only made available in well-founded cases	Geburtsmonat: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Geburtsmonat der Person Sensibles Merkmal, daher nur in begründeten Fällen bereitgestellt
nation	Nationality: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Nation codes used by the Federal Statistical Office Sensitive variable, thus only made available in well-founded cases	Staatsangehörigkeit: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Ausprägungen nach Staatschlüssel des Statistischen Bundesamtes Sensibles Merkmal, daher nur in begründeten Fällen bereitgestellt
nation_gr	Nationality, grouped: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Grouped version of the nation codes	Staatsangehörigkeit vergröbert: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Gruppierte Staatsangehörigkeit

famst	Marital status: LeH: 0 - not married, 1 - married LHG, ASU, XASU, MTH, XMTH: 6 values	Familienstand: LeH: 0 - nicht verheiratet, 1 - verheiratet LHG, ASU, XASU, MTH, XMTH: 6 Ausprägungen
kind	Number of children: LeH, LHG, ASU, XASU, MTH, XMTH: Number of children	Kinderzahl: LeH, LHG, ASU, XASU, MTH, XMTH: Anzahl der Kinder
ausbildung	Vocational training: BeH, ASU, XASU, MTH, XMTH: Variable has a different meaning depending on the data source: Vocational training and university with differing values	Ausbildung: BeH, ASU, XASU, MTH, XMTH: Merkmal hat je nach Quelle unterschiedliche Bedeutungen: Ausbildung und Universität mit unterschiedlichen Ausprägungen
ausbildung_imp	Vocational training imputed: BeH: Imputed vocational training for BeH-notifications	Ausbildung imputiert: BeH: Imputierte Ausbildung für BeH-Meldungen
schule	School leaving qualification: BeH, ASU, XASU, MTH, XMTH: Different values for the school leaving qualification possible depending on the data source	Schulausbildung: BeH, ASU, XASU, MTH, XMTH: Je nach Quelle sind unterschiedliche Ausprägungen für den Schulabschluss möglich
tentgelt	Daily wage/daily benefit: BeH: Employee's gross daily wage LeH: Daily benefit rate in Euros	Tagesentgelt/täglicher Leistungssatz: BeH: Bruttotagesentgelt eines Beschäftigten LeH: Täglicher Leistungssatz in Euro
beruf	Occupation - current / most recent (KldB 1988): BeH: Occupational title of the job performed by the employee encoded in accordance with the Classification of Occupations 1988 ASU, XASU, MTH: Occupation of the last job	Beruf - ausgeübte / letzte Tätigkeit (KldB 1988): BeH: Berufsbezeichnung der ausgeübten Tätigkeit verschlüsselt nach der Klassifikation der Berufe 1988 ASU, XASU, MTH: Beruf der letzten Tätigkeit
beruf2010_3	Occupational group - current / most recent (KldB 2010), 3-digit: BeH: Occupational title of the job performed by the employee encoded according to the Classification of Occupations 2010; the less detailed occupational group is recorded by the first three digits of the code LeH, ASU, XASU, MTH, XMTH: Occupation of the last job	Berufsgruppe - ausgeübte / letzte Tätigkeit (KldB 2010), 3-Steller: BeH: Berufsbezeichnung der ausgeübten Tätigkeit verschlüsselt nach der Klassifikation der Berufe 2010; die weniger detaillierte Berufsgruppe wird durch die ersten drei Stellen der Kennziffer erfasst LeH, ASU, XASU, MTH, XMTH: Beruf der letzten Tätigkeit
beruf2010_4	Occupational sub-group - current / most recent (KldB 2010), 4-digit: BeH: Occupational title of the job performed by the employee encoded in accordance with the Classification of Occupations 2010; the less detailed occupational group is recorded by the first four digits of the code LeH, ASU, XASU, MTH, XMTH: Occupation of the last job Sensitive variable, thus only made available in well-founded cases	Berufsgruppe - ausgeübte / letzte Tätigkeit (KldB 2010), 4-Steller: BeH: Berufsbezeichnung der ausgeübten Tätigkeit verschlüsselt nach der Klassifikation der Berufe 2010; die weniger detaillierte Berufsgruppe wird durch die ersten vier Stellen der Kennziffer erfasst LeH, ASU, XASU, MTH, XMTH: Beruf der letzten Tätigkeit Sensibles Merkmal, daher nur in begründeten Fällen bereitgestellt
niveau	Level of requirement - current / most recent job (KldB 2010): BeH: Occupational title of the job performed by the employee encoded according to the Classification of Occupations 2010; the fifth digit of the code describes the skill level required for the job LeH, ASU, XASU, MTH, XMTH: Occupation of the last job	Anforderungsniveau - ausgeübte / letzte Tätigkeit (KldB 2010): BeH: Berufsbezeichnung der ausgeübten Tätigkeit verschlüsselt nach der Klassifikation der Berufe 2010; an der fünften Stelle wird das Anforderungsniveau einer Tätigkeit erfasst LeH, ASU, XASU, MTH, XMTH: Beruf der letzten Tätigkeit
teilzeit	Part-time: BeH: Distinguishes between full-time and part-time employees	Teilzeit: BeH: Unterscheidet zwischen Vollzeit- und Teilzeitbeschäftigung
stib	Occupational status and working hours: BeH: Distinguishes between full-time and part-time employees; for full-time employees the occupation status is given (blue-collar / white-collar / apprentice / etc.); only filled for notifications which date back to before the introduction of KldB2010	Stellung im Beruf und Arbeitszeit: BeH: Unterscheidet zwischen Vollzeit- und Teilzeitbeschäftigung; bei Vollzeitbeschäftigen wird die berufliche Stellung (Arbeiter / Angestellter / Auszubildender / etc.) angegeben; nur gefüllt für Meldungen vor Einführung des KldB2010

erwstat	<p>Employment status: BeH: Indicates contribution- or benefit-related particularities of the employment relationship LeH: Contains the grouped benefit type (unemployment benefit / unemployment assistance / maintenance allowance / etc.) LHG: Shows whether the person is underage and able to work, adult and able to work, or unable to work and beyond the retirement pension limit ASU, XASU: Reports the job search status (unemployed and seeking work / not unemployed and seeking work / seeking advice / not seeking work) MTH, XMTM: Measure-type category</p>	<p>Erwerbsstatus: BeH: Weist beitrags- oder leistungsrechtliche Besonderheiten des Beschäftigungsverhältnisses aus LeH: Gibt gruppierte Leistungsart (Arbeitslosengeld / Arbeitslosenhilfe / Unterhaltsgeld / etc.) an LHG: Zeigt an, ob die Person minderjährig erwerbsfähig, volljährig erwerbsfähig oder nicht erwerbsfähig ab Altersrentengrenze geführt wird ASU, XASU: Zeigt Arbeitsvermittlungsstatus an (arbeitslos arbeitssuchend / nicht arbeitslos arbeitssuchend / ratsuchend / nicht arbeitssuchend) MTH, XMTM: Maßnahmeark-Kategorien</p>
gleitz	<p>Transition zone: BeH: Indicates whether the employment notification relates to employment in the low-wage sector within the transition zone; jobs in the transition zone have a gross monthly wage of € 400,01 to € 800,00 (midi jobs) for which the employee only has to pay a reduced overall social security contribution</p>	<p>Gleitzone: BeH: Zeigt an, ob es sich bei der Beschäftigungsmeldung um eine Beschäftigung im Niedriglohnbereich innerhalb der Gleitzone mit einem monatlichen Bruttoarbeitsentgelt von 400,01 bis 800,00 € handelt (Midi-Job), für die der Arbeitnehmer nur einen reduzierten Beitrag zum Gesamtsozialversicherungsbeitrag leisten muss</p>
leih	<p>Temporary agency work: BeH: Reports whether the person's employment is a temporary job via an employment agency</p>	<p>Leiharbeit: BeH: Gibt an, ob es sich bei der Beschäftigung der Person um ein Leiharbeitsverhältnis handelt</p>
befrist	<p>Fixed-term contract: BeH: Reports whether the person's employment relationship is fixed-term or permanent</p>	<p>Befristung: BeH: Gibt an, ob es sich bei der Beschäftigung der Person um ein befristetes oder unbefristetes Arbeitsverhältnis handelt</p>
grund	<p>Reason of cancellation / notification / termination: BeH: Reason why the employer submitted the employment notification in question to the social security agencies (for ex. changes in earnings) LeH: Reason for the end of the receipt of unemployment benefits, unemployment assistance, or maintenance allowance LHG: Contains the reason for discontinuation of Unemployment Benefit II and indicate the reason why current benefits have been discontinued ASU: Contains the deregistration or exit reason XASU: Contains the deregistration or exit reason</p>	<p>Abmeldegrund / Abgabegrund / Beendigungsgrund: BeH: Anlass, aus dem der Arbeitgeber den Sozialversicherungsträgern die betreffende Beschäftigungsmeldung übermittelt hat (z.B. Entgeltangaben) LeH: Grund für das Ende des Bezugs von Arbeitslosengeld, -hilfe oder Unterhaltsgeld LHG: Enthält Grund für SGB-II-Einstellung und gibt den Grund für die Beendigung von laufenden Leistungen ASU: Abmelde- bzw. Abgangsgrund XASU: Abmelde- bzw. Abgangsgrund</p>
estavor	<p>Employment status prior to job search: ASU, XASU: Shows the employment status prior to the job search activity</p>	<p>Erwerbsstatus vor Arbeitssuche: ASU, XASU: Gibt Erwerbsstatus vor der Arbeitssuche an</p>
estatnach	<p>Employment status after job search: ASU: Person's status after leaving unemployment, allows identification of longer periods of illness</p>	<p>Status nach Arbeitssuche: ASU: Status der Person nach Abgang aus der Arbeitslosigkeit, längere Krankheitsepisoden können identifiziert werden</p>
profil	<p>Client profile: ASU, MTH: Reports the client profile assigned to the client in the profiling process (list of client's skills, experiences and interests, in order to identify the client's position in the labor market), i.e. good integration prospects, complex, other</p>	<p>Profillage: ASU, MTH: Gibt die dem Kunden beim Profiling zugewiesene Profillage (Auflistung der arbeitsmarktrelevanten Fähigkeiten, Erfahrungen und Interessen dient der Verortung auf dem Arbeitsmarkt), d.h. integrationsnah, komplex, sonstiges</p>
art_kuend	<p>Reason for end of previous employment: ASU, MTH: Describes how the last employment or training relationship was terminated before a period of job search, can identify job-to-job placements</p>	<p>Art der Kündigung der letzten Tätigkeit: ASU, MTH: beschreibt die Art der Beendigung des letzten Arbeits- oder Ausbildungsverhältnisses vor einer Arbeitssuche, kann Job-to-Job-Vermittlungen identifizieren</p>

arbeit	Working hours of job application: ASU, MTH: jobseekers indicate how many working hours the job they are seeking should have	Arbeitszeit des Stellengesuchs: ASU, MTH: Arbeitssuchende geben zeitlichem Umfang der gesuchten Stelle an
restanspruch	Residual claim / planned duration: LeH: Contains the residual entitlement to unemployment benefit that remains after the end of the current benefit receipt period MTH: Contains the planned duration of the measure	Restanspruch / geplante Dauer: LeH: Enthält den Anspruch, der nach Ende des aktuellen Leistungsbezugs übrigbleibt MTH: Enthält die geplante Dauer der Maßnahme
traeger	Type of provider: LHG: Institution responsible for implementing Unemployment Benefit II ASU, XASU: Institution providing the measure MTH, XMTH: Institution responsible for managing the applicant profile	Trägerart: LHG: Träger der Grundsicherung ASU, XASU: Träger, der das Bewerbungsprofil verwaltet MTH, XMTH: Träger der Maßnahme
alo_beg	Start date of unemployment: LeH, LHG, ASU, XASU, MTH, XMTH: Reports the start date of an uninterrupted sequence of periods of unemployment	Beginndatum der Arbeitslosigkeit: LeH, LHG, ASU, XASU, MTH, XMTH: Gibt das Beginndatum einer ununterbrochenen Folge von Arbeitslosigkeitsperioden an
alo_dau	Duration of unemployment: LeH, LHG, ASU, XASU, MTH, XMTH: Reports the duration (in days) of an uninterrupted sequence of periods of unemployment	Dauer der Arbeitslosigkeit: LeH, LHG, ASU, XASU, MTH, XMTH: Gibt Dauer (in Tagen) einer ununterbrochenen Folge von Arbeitslosigkeitsperioden an
wo_kreis	Place of residence - district (Kreis): BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Indicates the district (urban district or rural district) in which the social security contributor lives (NUTS 3) Sensitive variable, thus only made available in well-founded cases	Wohnort – Kreis: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Gibt Kreis (kreisfreie Stadt oder Landkreis) an, in dem der Versicherte wohnt (NUTS 3) Sensibles Merkmal, daher nur in begründeten Fällen bereitgestellt
wo_bula	Place of residence - federal state (Bundesland): BeH, LeH, LHG, ASU, XASU, MTH, XMTH: 16 German Federal States	Wohnort - Bundesland: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: 16 deutschen Bundesländer
wo_aa	Place of residence - employment agency (Arbeitsagentur): BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Contains the agency district of the employment agency that is responsible for the employee's / BA client's place of residence Sensitive variable, thus only made available in well-founded cases	Wohnort - Arbeitsagentur: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Enthält ab 1999 den Agenturbereich der am Wohnort des Beschäftigten / Kunden zuständigen Arbeitsagentur Sensibles Merkmal, daher nur in begründeten Fällen bereitgestellt
wo_rd	Place of residence - regional directorate (Regionaldirektion): BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Aggregation of the variable 'place of residence: employment agency' at the level of the regional directorates	Wohnort - Regionaldirektion: BeH, LeH, LHG, ASU, XASU, MTH, XMTH: Aggregation aus dem Merkmal Wohnort - Arbeitsagentur auf die Ebene der Regionaldirektionen
w73_3	Classification of economic activities 73: BHP: Indicates the economic activity as a 3-digit code in accordance with the WS73 classification (available: 1975- 2002)	WZ73 3-Steller: BHP: Weist den Wirtschaftszweig gemäß der Klassifikation WS73 als 3-Steller aus (für 1975 - 2002 gefüllt)
w93_5	Classification of economic activities 93, sub-classes: BHP: Indicates the economic activity as a 5-digit code in accordance with the WZ93 classification (available: 1999-2003) Sensitive variable, thus only made available in well-founded cases	WZ93 5-Steller BHP: Weist den Wirtschaftszweig gemäß der Klassifikation WZ93 als 5-Steller aus (für 1999-2003 gefüllt) Sensibles Merkmal, daher nur in begründeten Fällen bereitgestellt
w93_3	Classification of economic activities 93, groups: BHP: Indicates the economic activity as a 3-digit code in accordance with the WZ93 classification (available: 1999-2003)	WZ93 3-Steller: BHP: Weist den Wirtschaftszweig gemäß der Klassifikation WZ93 als 3-Steller aus (für 1999-2003 gefüllt)

w03_5	Classification of economic activities 03, sub-classes: BHP: Indicates the economic activity as a 5-digit code in accordance with the WZ03 classification (available: 2003-2008) Sensitive variable, thus only made available in well-founded cases	WZ03 5-Steller: BHP: Weist den Wirtschaftszweig gemäß der Klassifikation WZ03 als 5-Steller aus (für 2003-2008 gefüllt) Sensibles Merkmal, daher nur in begründeten Fällen bereitgestellt
w03_3	Classification of economic activities 03, groups: BHP: Indicates the economic activity as a 3-digit code in accordance with the WZ03 classification (available: 2003-2008)	WZ03 3-Steller: BHP: Weist den Wirtschaftszweig gemäß der Klassifikation WZ03 als 3-Steller aus (für 2003-2008 gefüllt)
w08_5	Classification of economic activities 08, sub-classes: BHP: Indicates the economic activity as a 5-digit code in accordance with the WZ08 classification (available: since 2008) Sensitive variable, thus only made available in well-founded cases	WZ08 5-Steller: BHP: Weist den Wirtschaftszweig gemäß der Klassifikation WZ08 als 5-Steller aus (ab 2008 gefüllt) Sensibles Merkmal, daher nur in begründeten Fällen bereitgestellt
w08_3	Classification of economic activities 08, groups: BHP: Indicates the economic activity as a 3-digit code in accordance with the WZ08 classification (available: since 2008)	WZ08 3-Steller: BHP: Weist den Wirtschaftszweig gemäß der Klassifikation WZ08 als 3-Steller aus (ab 2008 gefüllt)
w73_3_gen	w73_3 completed by extrapolation/imputation: BHP: Time-consistent information on the economic activity based on the economic activity classification WS73 (1975-2002: Original values; since 2003: Continued or replaced with the help of recoding tables)	w73_3 vervollständigt durch Extrapolation/Imputation: BHP: Zeitkonsistente Wirtschaftszweigangabe auf Basis der Wirtschaftszweigklassifikation WS73 (1975-2002: Originalwerte; ab 2003: Fortgeschrieben oder mit Hilfe von Umschlüsselungstabellen ersetzt)
group_w73_3	Type of imputation w73_3: BHP: Indicates the type of completion for the w73_3_gen variable (original value, missing, extrapolated or imputed)	Art der Vervollständigung w73_3: BHP: Weist die Art der Vervollständigung für das Merkmal w73_3_gen aus (Originalwert, fehlend, extrapoliert, imputiert)
w93_3_gen	w93_3 completed by extrapolation/imputation: BHP: Time-consistent information on the economic activity based on the economic activity classification WZ93 (1998-2003: Original values; before 1998 and since 2003: Written back, continued or replaced with the help of recoding tables)	w93_3 vervollständigt durch Extrapolation/Imputation: BHP: Zeitkonsistente Wirtschaftszweigangabe auf Basis der Wirtschaftszweigklassifikation WZ93 (1998-2003: Originalwerte; vor 1998 und nach 2003: Rück- oder fortgeschrieben oder mit Hilfe von Umschlüsselungstabellen ersetzt)
group_w93_3	Type of imputation w93_3: BHP: Indicates the type of completion for the w93_3_gen variable (original value, missing, extrapolated or imputed)	Art der Vervollständigung w93_3: BHP: Weist die Art der Vervollständigung für das Merkmal w93_3_gen aus (Originalwert, fehlend, extrapoliert, imputiert)
w08_3_gen	w08_3 completed by extrapolation/imputation: BHP: Time-consistent information on the economic activity based on the economic activity classification WZ08 (2008-2017: Original values; before 2008: Written back or replaced with the help of recoding tables)	w08_3 vervollständigt durch Extrapolation/Imputation: BHP: Zeitkonsistente Wirtschaftszweigangabe auf Basis der Wirtschaftszweigklassifikation WZ08 (2008-2017: Originalwerte; vor 2008: Rückgeschrieben oder mit Hilfe von Umschlüsselungstabellen ersetzt)
group_w08_3	Type of imputation w08_3: BHP: Indicates the type of completion for the w08_3_gen variable (original value, missing, extrapolated or imputed)	Art der Vervollständigung w08_3: BHP: Weist die Art der Vervollständigung für das Merkmal w08_3_gen aus (Originalwert, fehlend, extrapoliert, imputiert)
grd_jahr	Year of first appearance: BHP: First appearance of the establishment number in the dataset	Jahr des ersten Auftretens der Betriebsnummer BHP: Erstes Auftreten der Nummer des Betriebes im Datensatz
grd_dat	First appearance: BHP: First appearance of the establishment number in the BeH exact to the day Sensitive variable, thus only made available in well-founded cases	Erstes Auftreten Betriebsnummer: BHP: Tagesgenaues erstes Auftreten der Nummer des Betriebes in der BeH Sensibles Merkmal, daher nur in begründeten Fällen bereitgestellt
lzt_jahr	Year of last appearance: BHP: Last appearance of the establishment number in the dataset	Jahr des letzten Auftretens der Betriebsnummer BHP: Letztmaliges Auftreten der Nummer des Betriebes im Datensatz

lzt_dat	Last appearance: BHP: Last appearance of the establishment number in the dataset exact to the day Sensitive variable, thus only made available in well-founded cases	Letztes Auftreten Betriebsnummer: BHP: Tagesgenaues letztmaliges Auftreten der Nummer des Betriebes im Datensatz Sensibles Merkmal, daher nur in begründeten Fällen bereitgestellt
az_ges	Total number of employees: BHP: Contains the total number of an establishment's employees reported to the social security agencies as of 30 June of a year	Anzahl Beschäftigte gesamt: BHP: Enthält die Anzahl aller zum 30.06. eines Jahres zur Sozialversicherung gemeldeten Mitarbeiter eines Betriebes
az_vz	Number of full-time employees: BHP: Contains the number of people in the establishment who are reported on 30 June of a year as full-time employees	Anzahl in Vollzeit (Normalbeschäftigte + sonstige) BHP: Enthält die Anzahl der Personen im Betrieb, die am 30.06. eines Jahres als Vollzeitbeschäftigte gemeldet sind
az_gf	Number of employees in marginal part-time employment: BHP: Number of employees in marginal part-time employment	Anzahl geringfügig Beschäftigte: BHP: Anzahl der geringfügig Beschäftigten
te_imp_mw	Mean imputed wage all full-time employees: BHP: Mean imputed gross daily wage of the full-time employees in an establishment in Euro	Mittelwert imputiertes Bruttotagesentgelt Vollzeitbeschäftigte: BHP: Mittelwert des imputierten Bruttotagesentgeltes der Vollzeitbeschäftigten eines Betriebes
ao_kreis	Place of work - district (Kreis) BHP: District in which the employee's establishment is located Sensitive variable, thus only made available in well-founded cases	Arbeitsort - Kreis BHP: Kreis, in dem der Betrieb des Beschäftigten angesiedelt ist Sensibles Merkmal, daher nur in begründeten Fällen bereitgestellt
ao_bula	Place of work - federal state (Bundesland): BHP: Federal State in which the establishment is located	Arbeitsort - Bundesland BHP: Bundesland, in dem der Betrieb angesiedelt ist

Notes: BeH / LeH / LHG / ASU / XASU / MTH / XMTH / BHP describes the data source and indicates for which an individual's information is available (for example, BeH information is only available for employed individuals). See the SIAB data report (Antoni et al., 2019) for a more detailed descriptions of the variables.

Source: Antoni et al. (2019).

7.2 Description of All Employee Panel Variables

Table A2 provides an overview of the variables available in the 2015 All Employee Panel in English and French for better orientation and understanding of the content of the dataset.

Table A2: The 2015 All Employee Panel Variable Description

Variable name	Description (EN)	Description (FR)
SIR	The company SIREN Number. It is a 9-figure code. Some SIREN are fictitious and they begin with a F. For state public agents, only State ("Etat") is indicated	Numéro SIREN de l'entreprise. C'est un code de 9 chiffres. Certains SIREN sont fictifs et commencent par un F. Pour les agents de l'Etat avant 2009, il est seulement indiqué "Etat"
NIC4	Internal classification number (NIC) of the establishment. For the DADS, it permits the reconstitution of the SIRET of the establishment	Numéro interne de Classement (NIC) de l'établissement. Uniquement pour les DADS, il permet de reconstituer le SIRET de l'établissement.
depr	Department of residence (i.e. of the establishment)	Département de résidence (i.e. de l'établissement)
dept	Department of work	Département de travail
An	The "poste" validity year	Année de la validité du poste
COMR	Geographic code of the commune of residence of the employee	Code géographique de la commune de résidence du salarié
COMT	Geographic code of the commune of work (i.e. the establishment)	Code géographique de la commune de travail (i.e. l'établissement)
ECH	Scale in the state civil service grade (only for State civil service - FPE)	Echelon dans le grade de la fonction publique (Fonction publique de l'Etat - FPE uniquement)
MIN	Ministry of affiliation in the state civil service (only for the FPE)	Ministère de rattachement dans la fonction publique (FPE uniquement)
SER	Assigned service in the ministry of affiliation (only for the FPE)	Service d'affectation au sein du ministère de rattachement (FPE uniquement)
ENS	Teacher's code for the state public agents, it determines if the agent is a teacher or not (only for the FPE)	Code enseignant pour les agents de la fonction publique et qui détermine si les agents sont des enseignants ou pas (FPE uniquement)
CSK	Socio-professional category with qualification (only for the FPE)	Catégorie socioprofessionnelle avec qualification (FPE uniquement)
DEPNAI	Geographical code of the department of birth	Code géographique du département de naissance
REGR	Geographical code of the region of residence	Code géographique de la région de résidence
ST	The company or the administration status (until 1992 and only for the DADS)	Statut de l'entreprise ou de l'administration (jusqu'en 1992, DADS uniquement)
AV	Benefits in cash	Avantages en nature
NETNET	Net remunerations of all mandatory social security workers contributions, and of the CSG and of the contribution for the repayment of social debt (CRDS). It is therefore a salary after deduction of social security contributions, pension plans and supplementary pension, unemployment insurance contributions and CSG and CRDS deductibles and non-deductibles	Rémunérations nettes de toutes cotisations sociales ouvrières obligatoires et de CSG et de Contribution pour le Remboursement de la Dette Sociale (CRDS): Il s'agit donc d'un salaire après déduction des cotisations de sécurité sociale, des régimes de retraite et prévoyance complémentaire des contributions d'assurance chômage et des CSG et de CRDS déductibles et non déductibles
AGE	Age of the employee at the year in question	Âge du salarié durant l'année courante
ANNAI	Year of birth of the employee	Année de naissance du salarié
DEBREMU	Start date of the salary of the "poste", determined in days from the start of the year of the "poste"	Date de début de rémunération du poste en jours depuis le début de l'année du poste
FINREMU	End date of the salary of the "poste", determined in days from the start of the year of the post	Date de fin de rémunération du poste en jours depuis le début de l'année du poste
DP	Duration of the payroll in days	Durée de paie dans l'année en jours
dpc	Duration of the payroll corresponding to a full salary at full time, in days (only for FPE)	Durée de paie en jours, convertie en équivalent temps plein et plein salaire (FPE uniquement)
CE	Work condition	Condition d'emploi
CS1	Level 1 of the PCS-ESE code	Niveau 1 de la nomenclature PCS-ESE
SX	Sexe of the employee	Sexe du salarié

filtre	Indicator to determine if a “poste” is not annexed	Indicatrice pour déterminer si un poste est non-annexe
GRADE	An 8-figure code to determine the grade in the state civil service (only for FPE)	Code à 8 caractères qui détermine le grade dans la FPE (FPE uniquement)
SB	Gross tax salary (from 1993, was estimated in the DADS before 1993) Gross remuneration in the meaning of the payroll tax. Gross pay is the sum of all cash and benefits in kind received by employees under their employment contract. This salary is calculated before any deduction of compulsory contributions	Salaire brut fiscal (depuis 1993, estimé avant 1993 dans les DADS) Rémunération brute entendue au sens de la taxe sur les salaires: Le salaire brut correspond à l'intégralité des sommes en espèces et les avantages en nature perçus par le salarié au titre de son contrat de travail. Ce salaire s'entend avant toute déduction de cotisations obligatoires
SN	Net tax salary	Salaire net fiscal
cat	Agent category (public or private sector)	Catégorie d'agents (secteur public ou privé)
statut	Status of the state civil servant (office-holder, non-office-holder, intern...)	Statut (titulaire, non titulaire, stagiaire)
REGT	Geographical code of the region of work	Code géographique pour la région du travail
BASCSG	The salary that serves as a basis of calculation of the generalized social contribution (CSG). They generally correspond to the gross amount of remuneration, allowances, bonuses including benefits in kind or in cash paid to the employee in return for or in connection with work, employee savings, participation, the contribution to the Company Savings Plan (PERCO), after application of a standard deduction for professional expenses	Revenus servant de base au calcul de la CSG. Ils correspondent généralement au montant brut des rémunérations, indemnités, allocations, primes y compris les avantages en nature ou en espèce versés au salarié en contrepartie ou à l'occasion du travail, l'épargne salariale, la participation, l'abondement au Plan Epargne Entreprise (PEE) ou au Plan d'Epargne pour la Retraite collectif (PERCO), après application d'une déduction forfaitaire pour frais professionnels
A38	The economic activity aggregated into 38 levels	Activité économique agrégée en 38 postes
APE40	The economic activity aggregated into 40 levels (only for the DADS and only until 1992)	Activité économique agrégée en 40 postes (DADS uniquement et jusqu'en 1992)
APEN	The economic activity of the company (the NAP73, the NAF and the NAF rev.1, until 2008)	Activité économique de l'entreprise (NAP73, NAF NAF rev.1)
APET	The economic activity of the establishment (the NAP73, the NAF and the NAF rev.1, until 2008)	Activité économique de l'établissement (NAP73, NAF rev.1, jusqu'en 2008)
APEN2	The economic activity of the company (the NAF rev.2, from 2008)	Activité économique de l'entreprise en NAF rev. 2 (depuis 2008)
APET2	The economic activity of the establishment (the NAF rev.2, from 2008)	Activité économique de l'établissement en NAF rev. 2 (depuis 2008)
catjur	Legal category (from 1986 and only for the DADS)	Catégorie juridique (depuis 1986, DADS uniquement)
contrat_travail	Type of the work contract in effect (from 2005 and only for the DADS)	Type de contrat de travail en vigueur (depuis 2005, DADS uniquement)
conv_coll	Code of the collective bargaining agreement (from 2005 and only for the DADS)	Code de la convention collective (depuis 2005, DADS uniquement)
cs1_anc	1-figure code of the socio-professional category (until 1982 and only for the DADS)	Code de la catégorie socioprofessionnelle à 1 chiffres (jusqu'en 1982, DADS uniquement)
cs2	Level 2 of the PCS-ESE code	Niveau 2 de la nomenclature PCS-ESE
cs2_anc	2-figure code of the socio-professional category (until 1982 and only for the DADS)	Catégorie socioprofessionnelle (CS) à 2 chiffres (jusqu'en 1982, DADS uniquement)
domempl	A 10 possibilities variable to determine the employer categories	Variable de synthèse pour déterminer les différentes catégories d'employeur
MSB_ent	Total gross fiscal wages in the company	Masse des salaires bruts fiscaux dans l'entreprise
nbheur	Number of paid hours	Nombre d'heures rémunérées
nblig	Number of establishment lines regrouped in the company observation	Nombre de lignes établissement regroupées dans l'observation entreprise
nbsa_ent	Number of employees in the company on 31/12	Nombre de salariés dans l'entreprise au 31/12
nbsa_et	Number of employees in the establishment on 31/12	Nombre de salariés dans l'établissement au 31/12
NES36	The economic activity of the establishment (from 1994 to 2007, only for the DADS)	Activité économique établissement (de 1994 à 2007, DADS uniquement)
NES36N	The economic activity of company (from 1994 to 2007, only for the DADS)	Activité économique entreprise (de 1995 à 2007, DADS uniquement)
NES5	The economic activity of the establishment aggregated into 5 “postes”	Activité économique établissement agrégée en 5 postes

netnet_corrCPSO	Net salary of 2012 estimated to take into account the patronal contribution for mandatory health insurance	Salaire net de l'année 2012 estimé pour prendre en compte les cotisations patronales pour complémentaire santé obligatoire
nnifict	Indicator of fictitious NIR The NIR is a 13-figure identifier number of an individual. It is used mostly by medical insurance authorities. It is unique and is commonly known as the “social security number”	Indicatrice de NIR fictifs Le numéro d'inscription au répertoire / numéro de sécurité sociale (NIR) est identifiant individuel à 13 caractères. Il est utilisé par les autorités d'assurance médicale. Il est unique et il est connu comme le “numéro de sécurité sociale”
nnihc	Indicator of NIR out of scope	Indicatrice de NIR hors champ
PCS4	Level 4 of the PCS-ESE	Niveau 4 du PCS-ESE
PCS_v2	The 2008 PCS-ESE 4-figure code according to the 2009 method	Code PCS-ESE de l'année 2008 à 4 chiffres selon la méthode de 2009
pseudoSIR	Indicator of a pseudo SIRET (only for the DADS)	Indicatrice de pseudo SIRET (DADS uniquement)
PTT	Indicator of France Telecom and of La poste (only for the DADS)	Indicatrice de France Telecom et La Poste (DADS uniquement)
regN	The region of the company	Région de l'entreprise
sirfict	Indicator of fictitious SIREN (only for the DADS)	Indicatrice de SIREN fictif (DADS uniquement)
SECT	Employment sector (private, administration...)	Secteur d'emploi (Privé, Administration...)
entpan	Year of entry in the panel	Année d'entrée dans le panel
nninouv	Individual identifier	Identifiant individu
entsir	Year of entry into the company	Année d'entrée dans l'entreprise
TaiN	Size category (number of employees) of the company	Tranche de taille (nombre de salariés) d'entreprise
TaiT	Size category (number of employees) of the establishment	Tranche de taille d'établissement
NETNETR	Net salary in constant Euros	Salaire net en euros constants
NETNET_corrCPSOR	Net salary of 2012 in constant euros, estimated to take into account the patronal contribution for mandatory health insurance	Salaire net en euros constants de l'année 2012 estimé pour prendre en compte les cotisations patronales pour complémentaire santé obligatoire
SBR	Gross fiscal salary in constant euros	Salaire brut fiscal en euros constants
BASCSGR	The salary in constant euros that serves as a basis of calculation of the CSG	Revenu en euros constants servant de base au calcul de la CSG
SNR	Net fiscal salary in constant euros	Salaire net fiscal en euros constants
AVR	Cash benefits in constant euros	Avantages en nature en euros constants
MSBR_ENT	Total gross fiscal wages in constant euros in the company	Masse des salaires bruts fiscaux dans l'entreprise en euros constants
pan25	Indicator of belonging to the 1/4 th sample	Indicatrice d'appartenance à l'échantillon au 25ème
pannouv	Indicator of birth on an EDP day (from 2002)	Indicatrice de naissance un jour (EDP) (à partir de 2002)

Source: Documentation of the 2015 All Employee Panel (INSEE).

7.3 Explanation of Relevant Terminology

As terminology may be similar in France and Germany, but refer to different units or classifications, we provide a short dictionary of relevant terminology with explanations in Table A3. By comparing definitions, researchers will be able to assess differences when comparing for example regions or industries.

Table A3: Explanations of Relevant Terminology

Terminology in English	Explanation for Germany	Explanation for France
Company	Unternehmen	Entreprise
	<p><i>EN:</i> In Germany, a company is defined as an independent unit with a specific legal form, which incorporates one or more establishments.</p> <p><i>DE:</i> Eine unabhängige Einheit mit einer bestimmten Rechtsform, die ein oder mehrere Betriebe umfasst.</p>	<p><i>EN:</i> In the French law, “an enterprise is the smallest combination of legal units that is an organizational unit producing goods and services, enjoying a certain decision-making autonomy especially for the allocation of its current resources” (INSEE, 2016b).</p> <p><i>FR:</i> “L’entreprise est la plus petite combinaison d’unités légales qui constitue une unité organisationnelle de production des biens et de services jouissant d’une certaine autonomie de décision notamment pour l’affection de ses ressources courantes” (INSEE, 2016a).</p>
Company Identifier	<i>Variable:</i> N/A Unternemensidentifikator	<i>Variable :</i> SIR Identifiant d’entreprise: SIREN
	N/A	<p><i>EN:</i> The SIREN number is a 9-figure identifier of legal units (companies or “enterprises”). The first 8 figures have no meaning, except for public organisms (for example communes) of which the SIREN begins by 1 or 2. The 9th number is a number that allows to control the validity of the SIREN.</p> <p><i>FR:</i> “Le numéro SIREN est un identifiant de neuf chiffres attribué à chaque unité légale. Les huit premiers chiffres n’ont aucune signification, excepté pour les organismes publics (communes,...) dont le numéro SIREN commence obligatoirement par 1 ou 2. Le neuvième chiffre est un chiffre de contrôle de validité du numéro” (INSEE, 2016f).</p>
Establishment	Betrieb	Établissement
	<p><i>EN:</i> In Germany, an establishment is a regionally and economically distinct unit, in which employees work. An establishment number is assigned for a unit within one municipality and one industry sector. This unit can be part of a larger company or a solitary unit.</p> <p><i>DE:</i> Ein Betrieb ist eine regional und wirtschaftlich abgegrenzte Einheit, in der Beschäftigte tätig sind. Eine Betriebsnummer wird für eine regional (Gemeinde) und ökonomisch (Wirtschaftszweigklassifikation) tätige Einheit vergeben.</p>	<p><i>EN:</i> In the French Law, “an establishment is a production unit that is individual on the geographic level but legally dependent on an enterprise. The establishment, a production unit, is the most suitable level for a geographical approach to the economy” (INSEE, 2016d).</p> <p><i>FR:</i> “L’établissement est une unité de production géographiquement individuelle, mais juridiquement dépendante de l’entreprise. L’établissement, unité de production, constitue le niveau le mieux adapté à une approche géographique de l’économie » (INSEE, 2016c).</p>

Establishment Identifier	Betriebsidentifikator: betnr	Identifiant d'établissement: SIRET
	<p><i>EN:</i> Establishment ID based on the ID allocated by the BA.</p> <p><i>DE:</i> Systemfreie Betriebsnummer basierend auf der von der BA vergebenen Betriebsnummer.</p>	<p><i>EN:</i> The SIRET number is a 14-figure numerical identifier of establishments. It can be divided into two parts: The first one corresponds to the SIREN number to which the SIRET number belongs and the second to the Internal Number of Classification (NIC). The NIC is composed of a 4-figure code attribute to the establishment and of a control number that can verify the validity of the whole SIRET number.</p> <p><i>FR:</i> "Le numéro SIRET est un identifiant d'établissement. Cet identifiant numérique de 14 chiffres est articulé en deux parties : la première est le numéro SIREN de l'unité légale à laquelle appartient l'unité SIRET ; la seconde, habituellement appelée Numéro Interne de Classement (NIC), se compose d'un numéro d'ordre à quatre chiffres attribué à l'établissement et d'un chiffre de contrôle, qui permet de vérifier la validité de l'ensemble du numéro SIRET" (INSEE, 2016e).</p>
Industry Sectors	Klassifikation der Wirtschaftszweige	Nomenclature d'activités françaises (NAF)
International standards: 1. Classification of Economic Activities in the European community (NACE) 2. International Standard Industrial Classification of All Economic Activities (ISIC)	<p><i>EN:</i> The German system updates the industry sector classifications regularly:</p> <ol style="list-style-type: none"> Classification of Economic Activities for the Statistics of the Federal Employment Services, edition 1973 ("Klassifikation der Wirtschaftszweige für die Statistik der Bundesanstalt für Arbeit, Ausgabe 1973"), WS73: 3-digit code with 269 classes of economic activity („Wirtschaftsklassen“); first digit defines 10 different divisions of economic activity („Wirtschaftsabteilungen“) and first two digits define 95 groups of economic activity ("Gruppen"). Classification of Economic Activities for the Statistics of the Federal Employment Services, edition 1993" ("Klassifikation der Wirtschaftszweige für die Statistik der Bundesanstalt für Arbeit, Ausgabe 1993"), WZ93: 5-digit code based on NACE Rev. 1 with four levels of which the first two are based on ISIC Rev. 3. Classification of Economic Activities, Edition 2003 of the Federal Statistical Office ("Klassifikation der Wirtschaftszweige Ausgabe 2003"), WZ03: 5 digit code is based on NACE Rev. 1 and the classification was updated while maintaining the structure of WZ93. Classification of Economic Activities, Edition 2008 of the Federal Statistical Office ("Klassifikation der Wirtschaftszweige Ausgabe 2008"), WZ08: 5-digit code based on NACE Rev.2. <p><i>DE:</i> Die Klassifikation der Wirtschaftszweige wird regelmäßig aktualisiert:</p> <ol style="list-style-type: none"> Klassifikation der Wirtschaftszweige für die Statistik der Bundesanstalt für Arbeit, Ausgabe 1973, WS73: Dreistelliger Zahlencode für 269 Wirtschaftsklassen; erste Stelle definiert die Wirtschaftsabteilung und die beiden ersten Stellen 95 Gruppen. Klassifikation der Wirtschaftszweige für die Statistik der Bundesanstalt für Arbeit, Ausgabe 1993, WZ93: Fünfstelliger Zahlencode, der auf dem vierstelligen NACE Rev.1 basiert 	<p><i>EN:</i> The French Classification of Activities (NAF) is a classification of economic activities of production. It was mainly elaborated to simplify the organization of social and economic information. In order to facilitate international comparison it has the same structure as the European classification of activities, the NACE.</p> <p><i>FR:</i> "La NAF, nomenclature d'activités française, est une nomenclature des activités économiques productives, principalement élaborée pour faciliter l'organisation de l'information écono-mique et sociale. Afin de faciliter les comparaisons internationales, elle a la même structure que la nomenclature d'activités européenne NACE." (INSEE, 2019a).</p> <p><i>Variables:</i> APEN, APET, APEN2 and APET2</p> <p>Nomenclature d'activités et de produits de 1973 (NAP)</p> <p><i>EN:</i> The Classification of Activities and Products (NAP) was in effect from 1973 until 1992. In 1993, its "activities" version was replaced by the French classification of activities (NAF) and its "products" version was replaced by the French classification of products (CPF).</p> <p><i>FR:</i> La nomenclature d'activités et de produits (NAP) a été en vigueur en France de 1973 à 1992. Sa version „activités“ a été remplacée par la NAF et sa version produits par la CPF (classification des produits français).</p> <p><i>Variable:</i> APE40</p> <p>Nomenclature économique de synthèse (NES)</p> <p><i>EN:</i> The Summary Economic Classification</p>

	<p>und von diesem die ersten beiden auf ISIC Rev. 3 aufbauen.</p> <p>3. Klassifikation der Wirtschaftszweige Ausgabe 2003, WZ03: Fünfstelliger Zahlencode basierend auf NACE Rev. 1 unter Beibehaltung der Struktur von WZ93.</p> <p>4. Klassifikation der Wirtschaftszweige Ausgabe 2008, WZ08: Fünfsteller basierend auf NACE Rev. 2.</p>	<p>(NES) was is effect from 1994 until 2007. It corresponded to the NAF Rév.1. It was replaced in the NAF rév.2 by 7 aggregated specific levels.</p> <p><i>FR:</i> La Nomenclature Économique de Synthèse (NES) était en vigueur de 1994 jusqu'à 2007. “Elle correspondait à la NAF Rév.1. Elle a été remplacée en NAF rév.2 par un ensemble de 7 niveaux d’agrégation spécifiques.” (INSEE, 2016g).</p>
Geographic Codes	<p><i>Variables :</i> WS73, WZ93, WZ03, WZ08</p> <p>Nomenclature of Territorial Units for Statistics (NUTS)</p> <p><i>EN:</i> The NUTS is the standard of the European Union, dividing a country into geographic units. For Germany the NUTS codes are:</p> <ul style="list-style-type: none"> - NUTS-1: Bundesland (Federal State) - NUTS-2: Regierungsbezirk (Regional Authority) - NUTS-3: Kreis (Districts) - LAU: Gemeinde (Municipality) <p>In Germany the 5-digit district code („Kreisschlüssel“) follows the NUTS-classification:</p> <ul style="list-style-type: none"> - Digits 1-2: NUTS-1 - Digits 1-3: NUTS-2 (for federal states without a regional authority, the third digit contains a zero) <p><i>DE:</i> NUTS ist der geocodierte Standard der Europäischen Union, der ein Land in unterschiedliche geographische Einheiten unterteilt:</p> <ul style="list-style-type: none"> - NUTS-1: Bundesland - NUTS-2: Regierungsbezirk - NUTS-3: Kreis - LAU: Gemeinde <p>Der fünfstellige Kreisschlüssel folgt der NUTS-Klassifikation:</p> <ul style="list-style-type: none"> - Stelle 1-2: NUTS-1 - Stelle 1-3: NUTS-2 (für Bundesländer ohne Regierungsbezirk steht an dritter Stelle eine Null). 	<p><i>Variables:</i> APET, APEN, APEN2, APET2</p> <p>Code officiel géographique</p> <p><i>EN:</i> The official geographic code (COG) is a yearly updated code rendered available by INSEE. It gives the code and the labels for the different geographical levels of the French territory. The territories covered by the COG are the following:</p> <ul style="list-style-type: none"> - Cantons - Arrondissements - Communes - Departments - Regions - Countries and foreign territories <p>The COG does not follow the NUTS classification. However, the NUTS covers some geographical levels of the COG. The correspondence is as follows:</p> <ul style="list-style-type: none"> - NUTS-1: Regions - NUTS-2: old Regions - NUTS-3: Departments <p><i>FR:</i> Le Code Officiel Géographique (COG) est un code mis à disposition par l’INSEE. Il est mis à jour chaque année. Il rassemble les codes et les libellés des différents niveaux géographiques du territoire français. Les territoires couverts par le COG sont les suivants :</p> <ul style="list-style-type: none"> - Cantons - Arrondissements - Communes - Départements - Régions - Pays et territoires étrangers <p>Le COG ne suit pas la nomenclature NUTS. Par contre, la NUTS qui est un système hiérarchique de découpage du territoire économique de l’Union Européenne en 3 niveaux, couvre certains niveaux géographiques du COG. Les correspondances sont les suivantes :</p> <ul style="list-style-type: none"> - NUTS1 : Régions - NUTS2 : anciennes Régions - NUTS3 : Départements
Job position	<p><i>Variables:</i> wo_kreis , wo_bula , ao_kreis, ao_bula</p> <p>Stelle, Arbeitsplatz</p> <p>N/A</p>	<p><i>Variables:</i> comr, comt, depr, dept regr, regt</p> <p>Poste</p> <p><i>EN:</i> Cumulative period spent in one establishment by one employee. A “post” corresponds to the role of one employee in a company. An employee who works in two different companies (in the year or at a given date) corresponds to two posts. A post is considered as “non-annexed” (= regular employment) if the volume of work and the corresponding level of pay are “sufficient”. In most cases, if the pay is greater than 3 months of the minimum wage, or if the amount of time worked is greater</p>

		than 30 days or 120 hours and the ratio of number of hours to total duration is greater than 1.5, the post is considered non-annexed (INSEE, 2019c).
		<i>Fr:</i> “Un poste correspond à un salarié dans un établissement. Un salarié qui travaille dans deux établissements (dans l’année ou à une date donnée) occupe donc deux postes. Un poste est considéré comme non annexe si le volume de travail et le niveau de rémunération associés sont “suffisants”. Dans le cas général, si la rémunération est supérieure à 3 SMIC mensuels ou si la durée d’emploi dépasse 30 jours et 120 heures et que le rapport nombre d’heures/durée est supérieur à 1,5, on considère que l’on est en présence d’un poste non annexe.” (INSEE, 2019b).
Annual Statement of Social Data	Meldung zur Sozialversicherung	<i>Variable:</i> filre Declaration annuelle de données sociales

Source: Own comparative work.

7.4 Background Information on Data Sources and Linkage Opportunities

7.4.1 FDZ Data

The Integrated Employment Biographies as Data Source

The Integrated Employment Biographies (IEB) obtains its information from two main data sources. First, the process-generated data of the German Federal Employment Agency contains information concerning unemployment and benefit or measures receipts. Second, employers are required by law to notify the social security institutions on every employee and marginal worker covered by the social security system at least once a year or at certain points in time such as at the beginning or end of employment, employment interruptions or changes of health insurances. Information on employment and wages stem from this notification procedure to the social security institutions.

Combinations of Administrative and Survey Data

The individual-level administrative data from the IAB can be combined with the establishment-level administrative data (modules of the BHP). In addition, the FDZ offers a variety of linked administrative and survey data. These data are labelled as “ADIAB”, such as for example the PASS-ADIAB. Note that the underlying population is the same for all linked sources, i.e. all individuals

covered in the Integrated Employment Biographies, but the sample drawn is different for each data source, depending on the survey sample and the respondent's consent.

7.4.2 CASD Data

The Annual Declaration of Social Data (DADS) Sources

The Annual Declaration of Social Data is a mandatory declarative formality for all companies with employees in application of the Social Security Code and the General Tax Code. After statistical processing, INSEE currently produces and renders available five data sources: The Panel DADS (2002-2010) covers all employees except employees in the state civil service. The All Employee Panel (starting 2008) covers all employees in all sectors. Starting in 2011, the Panel DADS was integrated to the All Employee Panel. The second data source, the DADS: Establishment Data, contains the establishment as the statistical unit of observation. The third source is the DADS: Company Data, where the company is the statistical unit of observation. The fourth source is the DADS: Employee Data where an employee in his principal "poste" is the statistical unit of observation and finally DADS: Postes Data covers the "poste" of an employee.

Possible Combinations of the All Employee Panel

The All Employee Panel presents limited information when it comes to education and unemployment variables. However, it is possible to combine the All Employee Panel with three other data sources available at the CASD:

- The All Employee Panel combined with the Permanent Demographic Sample (EDP): This combination provides information on sociodemographic characteristics and education biographies of individuals. It is available from 2008 to 2015. The merged dataset includes all variables of the All Employee Panel and some variables from the EDP that provide information on, for example, the type of diplomas, month of birth, or matrimonial status (CASD, 2019g).
- The All Employee Panel combined with the Job Seekers History File provides data on unemployment biographies and benefits receipt. The linkage was only done for the year 2012. The merged dataset includes information on unemployment benefits (for example: duration of reception, amount), on unemployment support by The Employment Agency ("Pôle Emploi") (for example: number of encounters with the agency consultant, agency training) and on job search procedures (for example: duration of the job search, the type of contract that individuals are looking for) (CASD, 2019h).
- The All Employee Panel combined with the Vocational Training and Qualification (FQP) survey provides detailed information on education and vocational training, such as type of diplomas, number of years of education, or type of vocational training. It also provides information on sociodemographic characteristics and on the professional status of family members of the target individuals. The combination was only done for the year 2015. The merged dataset contains only the All Employee Panel variables. However, it also contains a common identifier with the FQP dataset. Users who have access to FQP and to the merged dataset, can easily match the two datasets in question and retrieve the information needed (CASD, 2019i).

Note that these combinations do not include all the individuals in the All Employee Panel, and even if we gain additional information concerning education and sociodemographic characteristics, we lose observations in the merged datasets.

List of Abbreviations

Table A4: List of Abbreviations in Original Language and in English

Abbreviation	Original language	English
ACEMO	Enquête Activité et Conditions d'Emploi de la Main d'Oeuvre	Labor Force Activity and Working Conditions
ALWA	Arbeiten und Lernen im Wandel	Working and Learning in a Changing World
ALWA-ADIAB	ALWA verknüpft mit administrativen Daten des IAB	ALWA Survey Data Linked to Administrative Data of the IAB
ALWA-LiNu	ALWA Literacy und Numeracy Data	ALWA Literacy und Numeracy Data
ASU	Arbeitsuchende-Historik	Jobseeker History
AWFP	Public Release Data of the Administrative Wage and Labor Market Flow Panel	Public Release Data of the Administrative Wage and Labor Market Flow Panel
BA	Bundesagentur für Arbeit	German Federal Employment Agency
BASID	Biografiedaten ausgewählter Sozialversicherungsträger in Deutschland	Biographical Data of Selected Insurance Agencies in Germany
BeH	Beschäftigtenhistorik	Employee History
BHP	Betriebshistorikpanel	Establishment History Panel
CASD	Centre d'Accès Sécurisé aux Données	The Secure Access Data Center
CBS	Centraal Bureau voor de Statistiek	Statistics Netherlands
CLAP	Connaissance Locale de l'Appareil Productif	Local Knowledge on Production Systems
CNIL	Commission Nationale de l'Informatique et des Libertés	National Commission on Informatics and Liberty
COG	Code Officiel Géographique	Official Geographic Code
CRDS	Contribution au Remboursement de la Dette Sociale	Contribution for the Repayment of Social Debt
CS	Catégorie socioprofessionnelle	Socio-professional category
CSG	Contribution Sociale Généralisée	Generalized Social Contribution
CSS	Comité du Secret Statistique	Statistical Secrecy Committee
CT	Conditions de Travail	Labor Conditions
CT-RPS	Conditions de Travail	Labor Conditions Psychosocial Risks
CUI	Contrat Uniques d'Insertion	Unique Integration Contract
DADS	Déclarations Annuelle de Données Sociales	Annual Declaration of Social Data
DARES	Direction de l'Animation de la Recherche, des Etudes et des Statistiques	Department of the Animation of Research, Studies and Statistics
DEFIS	Dispositif d'Enquêtes sur les Formations et Itinéraires des Salariés	Survey on Employees Itineraries and Training
DGFIP	Direction Générale des Finances Publiques	French Financial Administration
MMO	Mouvements de Main d'Oeuvre	Labor Movements
DwB	Data without Boundaries	Data without Boundaries
EA	Enquête Annuelle	Job for the Future Program Survey
ECMOSS	Enquête sur le Coût de la Main d'Oeuvre et la Structure des Salaires	Survey on the Cost of Labor and Wage Structure
EDP	Echantillon Démographique Permanent	Permanent Demographic Sample
EE	Enquête Emploi annuelle/ En continu	Labor Force Survey
EMIGDOM	Enquête sur les migrations des personnes nées ou résidant dans les départements d'outre-mer	Migration Survey Related to Overseas Department
ESE	Enquête sur la Structure de l'emploi	Survey on Employment Structure
FZD	Forschungsdatenzentrum der Bundesagentur für Arbeit im Institut für Arbeitsmarkt- und Berufsforschung	Research Data Centre of the German Federal Employment Agency at the Institute for Employment Research
FDZ-AWFP	Die FDZ Stichprobe des Administrative Wage and Labor Market Flow Panel	The FDZ Sample of the Administrative Wage and Labor Market Flow Panel
FH-DADS	Fichier Historique des demandeurs d'emploi – Déclarations Annuelles de Données Sociales	All Employee Panel - Job Seekers History File
FPE	Fonction publique de l'Etat	State civil service
FQP	Formation et Qualification Professionnelle	Training and Vocational Skills Survey
GMOP	German Management and Organizational Practices Survey	German Management and Organizational Practices Survey
HYGIE	Système d'Information sur les Indemnités Journalières	Information System on Sick Leaves Benefits
IAB	Institut für Arbeitsmarkt- und Berufsforschung	Institute for Employment Research
IAB-SOEP-MIG	IAB-SOEP Migrationsstichprobe	IAB-SOEP-Migration Sample

IAB-SOEP-MIG-ADIAB	IAB-SOEP Migrationsstichprobe verknüpft mit administrativen Daten des IAB	IAB-SOEP Migration Sample Linked to Administrative Data of the IAB
IDAN	International Data Access Network	International Data Access Network
IEB	Integrierte Erwerbsbiographien	Integrated Employment Biographies
INSEE	Institut National de la Statistique et des Études Économiques	French National Institute of Statistics and Economic Studies
IZA	Forschungsinstitut zur Zukunft der Arbeit	Institute of Labor Economics
IZA/IAB AED	IZA/IAB Administrativer Evaluationsdatensatz	IZA/IAB Administrative Evaluation Dataset
IZA/IAB LED	IZA/IAB Linked Evaluation Dataset 1993-2010	IZA/IAB Linked Evaluation Dataset 1993-2010
JoSuA	Job Submission Application	Job Submission Application
KldB	Klassifikation der Berufe	Classification of Occupations
LAU	Local Administrative Units	Local Administrative Units
LeH	Leistungsempfängerhistorik	Benefit Recipient History
LHG	Leistungshistorik Grundsicherung	Unemployment Benefit II Recipient History
LIAB	Linked Employer-Employee Daten des IAB	Linked Employer-Employee Data of the IAB
lidA	Leben in der Arbeit	German Cohort Study on Work, Age and Health
LPP	Linked Personnel Panel	Linked Personnel Panel
LPP-ADIAB	LPP verknüpft mit den administrativen Daten des IAB	LPP Survey Data Linked to Administrative Data of the IAB
MTH	Maßnahmeteilnehmer-Historik	Participants-in-Measures History File
NACE	Nomenclature générale des activités économiques dans les communautés européennes - Statistische Systematik der Wirtschaftszweige in der Europäischen Gemeinschaft	Classification of Economic Activities in the European Community
NAF	Nomenclature d'activités française	French classification of economic activities
NAP73	Nomenclature de produits et d'activités de 1973	Classification of products and activities of 1973
NEPS	Nationales Bildungspanel	National Educational Panel Study
NEPS-SC6-ADIAB	Erhebungsdaten des NEPS Startkohorte 6 verknüpft mit administrativen Daten des IAB	NEPS Starting Cohort 6 Survey Data Linked to Administrative Data of the IAB
NES	Nomenclature Economique de Synthèse	Aggregated economic classification
NIC	Numéro interne de classement	Internal classification number
NIR	Numéro d'inscription au répertoire/Numéro de sécurité sociale	National registration number/Social security number
NUTS	Nomenclature des unités territoriales statistiques	Nomenclature des unités territoriales statistiques
ONS	Office for National Statistics	Office for National Statistics
PASS	Panel Arbeitsmarkt und soziale Sicherung	Panel Study Labor Market and Social Security
PASS-ADIAB	PASS-Befragungsdaten verknüpft mit den administrativen Daten des IAB	PASS Survey Data Linked to Administrative Data of the IAB
PCS	Professions et catégories socio-professionnelles	Profession and socio-professional categories
PCS-ESE	Professions et catégories socio-professionnelles des emplois salariés des employeurs	Profession and socio-professional categories of salaried jobs of employers
PEE	Plan Epargne Entreprise	Company Savings Plan
PERCO	Plan d'Epargne pour la Retraite collectif	Collective savings plan for retirement
REPONSE	Enquête relations professionnelles et négociations d'entreprise	Labor Relations and Agreement Negotiations Survey
RP	Recensement de la Population	Population Census
SC6	Startkohorte 6	Starting Cohort 6
SC6		
SGB	Sozialgesetzbuch	German Social Code Book
SIAB	Stichprobe der Integrierten Arbeitsmarktbio- graphien	Sample of Integrated Labor Market Biographies
SIFA	Système d'Information sur la Formation des Apprentis	Apprenticeship Information System
SIG	Stichprobe der Integrierten Grundsicherungsbiografien	Sample of Integrated Welfare Benefit Biographies
S-MGA	Studie Mentale Gesundheit bei der Arbeit	The Study on Mental Health at Work
SMIC	Salaire minimum interprofessionnel de croissance	Legal Minimum Wage
SOEP	Sozio-ökonomischen Panel	German Socio-Economic Panel
STMT	Statistique Mensuelle du Marché du Travail	Monthly Labor Market Statistics
SUF	Scientific Use File	Scientific Use File
TeO	Trajectoires et Origines	Survey on Trajectories and Origins
UKDS	United Kingdom Data Service	United Kingdom Data Service
WeLL	Arbeitnehmerbefragung für das Projekt „Berufliche Weiterbildung als Bestandteil Lebenslangen Lernens“	Employee Survey for the Project “Further Training as a Part of Lifelong Learning”

WeLL-ADIAB	WeLL verknüpft mit den administrativen Daten des IAB	WeLL Survey Data Linked to Administrative Data of the IAB
WZ XASU	Wirtschaftszweig Arbeitsuchenden-Historik aus XSozial-BA-SGB II	Classification of Economic Activity Jobseeker History from XSozial-BA-SGB II

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