Key data: Business data







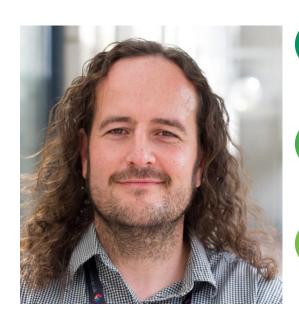
Introductions



Beate Lichtwardt
Senior Training and
Support Officer
(Secure Lab)



Christine Woods
Senior User Support
and Training Officer
(Secure Lab)



James Scott
Senior User Support
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What we will cover today

- 1. Business survey areas and data available
- 2. Examples of research
- 3. How to apply to access these data
- 4. Access to international business data



Business Microdata

- ONS conducts a range of business surveys
- Majority are collected under statute and are compulsory
- Some data for most business organisations in the UK
- Data are divided into 'reporting units', 'enterprises' and 'local units' (more later)
- Postcode-level, low-level geographies
- Business data can be linked together (more later)





Business survey areas

Innovation, research and development

Earnings and skills

Productivity and Employment relations

International trade and foreign direct investment

Environment



Innovation, research and development

- E-Commerce Survey, 2001-2017
- IIA: Investment in Intangible Assets Survey, 2009-2010
- BERD: Business Expenditure on Research and Development, 1995-2017
- UKIS: UK Innovation Survey, 1994-2016





UKIS: UK Innovation Survey, 1994-2016

- Europe-wide Community Innovation Survey
- Main source of information on business innovation in the UK looking at:
 - General business information
 - Goods, services and process innovation
 - Context for innovation
- Based on firms with more than 10 employees
- Approx. 16,000 enterprises



UK Innovation Survey: types of activity

- Internal and external R & D
- Computer hardware and software
- Training
- Changes to product or service design
- Changes to marketing methods
- Launch advertising
- Market research
- Advanced machinery
- Acquisition of external knowledge



UKIS based research topics

- Skilled Immigration and Strategically Important Skills in the UK Economy by George, A. et al, 2012
- Persistence and Change in UK Innovation 2002-2006 by Department for Innovation, Universities and Skills, 2008
- Is Money All? Financing Versus Knowledge and Demand Constraints to Innovation by Pellegrino, G. and Savona, M., 2013
- Universities as Sources of Information: Comparing the Role of 'Open Innovation' and Companies' Motivations by Volpi, M., 2014
- Private and External Benefits from Investment in Intangible
 Assets by Giovanetti, E. and Piga, C., 2014



Earnings and Skills

- New Earnings Survey (1986-2002 / 1975-2016)
- Occupational Pension Scheme Survey 2006-2015
- Monthly Wages and Salaries Survey 2000-2019
- National Employer Skills Survey 1999-2009
- Scottish Employer Skills Survey 2008 2010
- Annual Survey of Hours and Earnings 1997-2018



Annual Survey of Hours and Earnings 1997-2018 (ASHE)

- 1% sample of individuals (approx. 140,000 185,000) from NI records
- Can construct panel dataset
- Employer completes so more accurate than some surveys (e.g. Labour Force Survey)
- Data on the wages, paid hours of work, age, pensions arrangements, occupation, industrial classification and more



ASHE based research topics

- Driving up Wages: The Effects of Road Construction in Great Britain by Sanchis-Guarner, R., 2012
- Industry Knowledge Spillovers: Do Workers Gain from their Collective Experience? by Riley, R., 2010
- Incentive Pay: How Important is it and Does it Work? by Bryson, A. et al, 2012
- Productivity, Investment and Profits During the Great Recession: Evidence from UK Firms and Workers by Crawford, C. et al, 2013





Productivity and Employment Relations

- Annual Respondents Database 1973-2008 (ARD) and Annual Business Survey 2008-2017 (ABS)
- Business Structure Database 1997-2018 (BSD)
- Monthly Production Inquiry 1997-2009 (MPI)
- Workplace and Employment Relations Survey 1998-2011 (WERS)



Annual Respondents Database 1973-2008 (ARD) and Annual Business Survey 2008-2016 (ABS)

- Can see differences in productivity between firms with different organisational structures
- Employment, turnover, purchases, capital and other expenditure and income across sectors
- Over 100 key economic variables
- Data in two parts, employment record and financial information (ABS – financial only)
- Various geographies down to postcode





Annual Respondents Database X 1998-2014

- Deposited summer 2016
- Created by researchers at ONS Virtual Microdata
 Laboratory (VML) and University of the West of England
- Allows users of ARD to continue analysis even though the Annual Business Inquiry (ABI) which was used to create ARD ceased in 2008. ARDx contains harmonised variables from 1998 to 2014.
- More information on our website



ARD based research topics

- How do Firms' Outward FDI Strategies Relate to their Activity at Home? Empirical Evidence for the UK by Simpson, H., 2010
- The Impact of the National Minimum Wage on Firm Behaviour During Recession by Riley, R. and Rosazza Bondibene, C., 2013
- Regional Selective Assistance (RSA) in Scotland: Does it
 Make a Difference to Plant Survival? By Moffat, J., 2013
- Migration and Productivity: Employers' Practices, Public Attitudes and Statistical Evidence by Rolfe, H. et al, 2013



Business Structure Database 1997-2018 (BSD)

- Employment turnover, SIC, legal status, foreign ownership, birth and death codes
- Data divided into 'enterprises' and 'local units' (more on this later)
- Up to 4 million 'enterprises' and up to 5.5 million 'local units'
- Government Office Regions (GORs) and postcodes



Monthly Production Inquiry 1997-2009 (MPI)

- Turnover, export turnover, employees etc.
- Provides 75.5% of the current price turnover data used in the compilation of Index of Production (IoP)
- Provides over 90% of the data used to estimate the number of employees in the production industries





Employment relations

Workplace and Employment Relations Survey, 1998-2011 (WERS)

- Cross-Section Survey of Managers
- Cross-Section Survey of Employee Representatives
- Cross-Section Survey of Employees





WERS based research topics

- Two perspectives on multiskilling and product-market volatility, by DeVaro J, 2011
- Disability and earnings: are employer characteristics important?, by Jones M and Latreille P, 2010
- Workplace Performance, Worker Commitment and Loyalty, by Brown S, McHardy J, McNabb R and Taylor K, 2011
- Understanding the Gender Pay Gap: What's Competition Got to Do with It?, by Manning A and Saidi F, 2010





International Trade and Foreign Direct Investment

- Annual Inquiry into Foreign Direct Investment 1996-2016 (AFDI)
- International Trade in Services 1996-2017 (ITIS)





Annual Inquiry into Foreign Direct Investment (AFDI)

- Info on UK companies and their foreign affiliates
- Inward FDI relates to foreign investment into the UK
- Outward FDI relates to investment by UK-based companies overseas
- Approximately 8,000 21,000 enterprises for outward FDI, and 2,000 – 35,000 for inward FDI





Environment

- Low Emissions R&D Survey, 2008 (DECC R&D)
- Quarterly Fuels Inquiry, 1998-2015

Let's take a look at the Quarterly Fuels Inquiry...



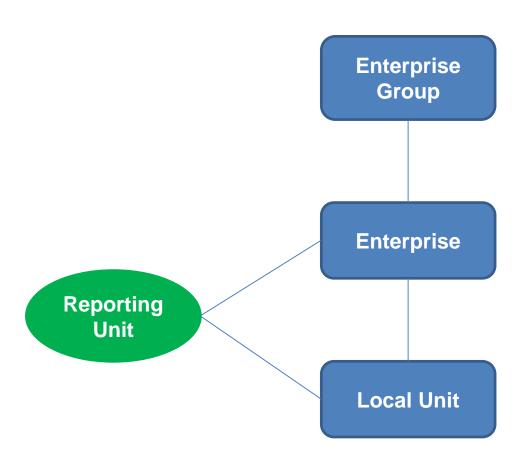
Quarterly Fuels Inquiry, 1998-2015

- A quarterly survey among a panel of manufacturing plants
- Data are widely used both within government and industry and are considered a vital source
- Data are collected on:
 - Coal
 - Coke
 - Heavy and medium fuel oil
 - Gas oil
 - Liquefied petroleum gas
 - Electricity



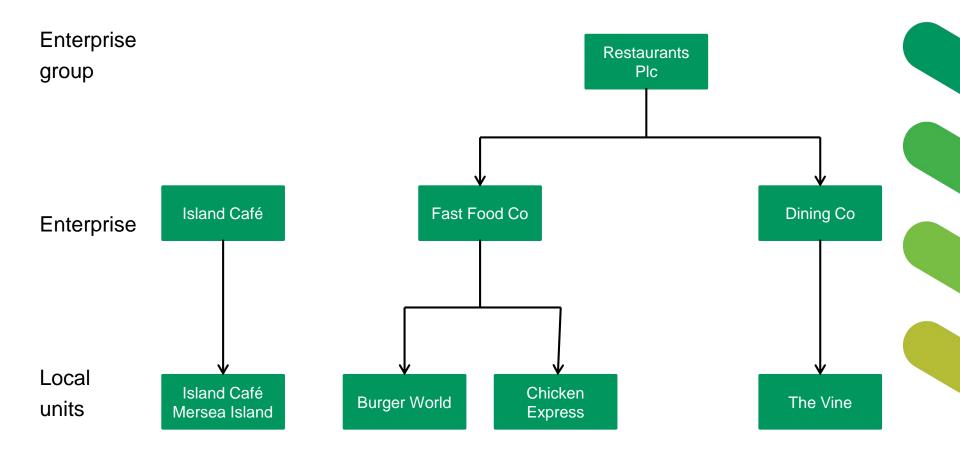


How are the datasets structured?





ONS IDBR business data identifiers



Fake company data



Examples of Data Linked

Some of the most common linkages

- Annual Survey of Hours and Earnings (ASHE) to Workplace Employment Relations Survey (WERS)
- Business Structure Database to UK Innovation Survey
- Annual Respondents Database to WERS
- ASHE to Employer Skills Survey

Permission from data owner required to link datasets

How to Apply



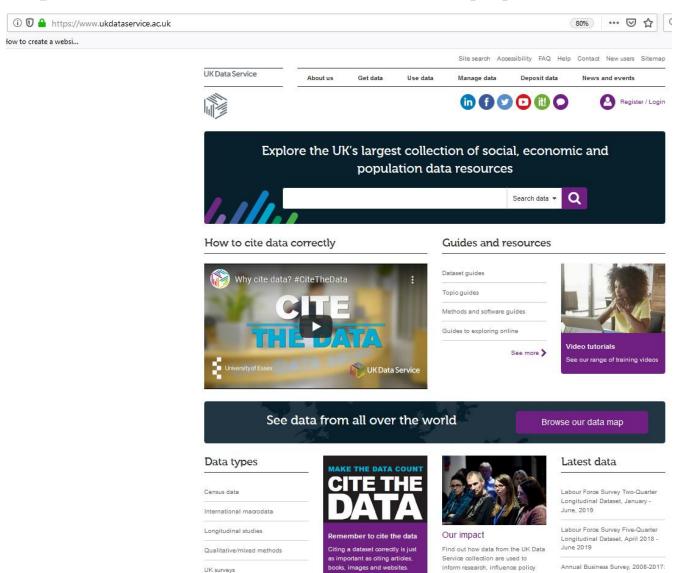
A Four Step Application Process

- 1. Find the dataset you wish to use
- 2. Apply for use through the UK Data Service
- 3. Complete an Accredited Researcher application form
- 4. Attend a training course and pass the associated test





Step 1: Find Your Data (1)



Annual Business Survey, 2008-2017: Secure Access

and develop skills.

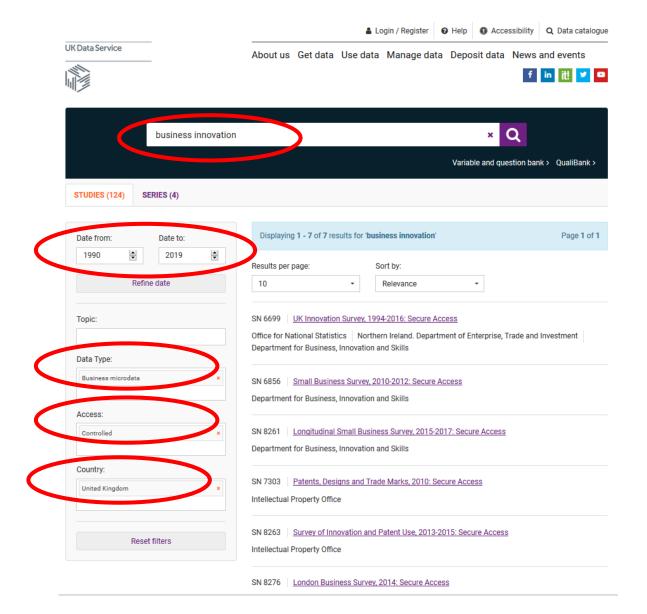


Step 1: Find Your Data (2)

	▲ Login / Register
Data Service	About us Get data Use data Manage data Deposit data News and events
business innovation	on × Q
STUDIES (124) SERIES (4)	Variable and question bank > QualiBank >
Date from: Date to:	Displaying 1 - 10 of 124 results for 'business innovation' Page 1 of 13
2019 Q Refine date	Results per page: Sort by: 10 ▼ Relevance ▼
Topic:	SN 7814 Small Business Survey, 2014 Department for Business, Innovation and Skills
Data Type: Access:	SN 6699 <u>UK Innovation Survey, 1994-2016: Secure Access</u> Office for National Statistics Northern Ireland. Department of Enterprise, Trade and Investment Department for Business, Innovation and Skills
Country:	SN 6856 Small Business Survey, 2010-2012: Secure Access Department for Business, Innovation and Skills
Reset filters	SN 7113 English Business Survey, 2011-2012: Secure Access Department for Business, Innovation and Skills TNS-BMRB
	SN 7973 Longitudinal Small Business Survey, Year One and Two, 2015-2016 Department for Business, Innovation and Skills
	SN 8261 Longitudinal Small Business Survey, 2015-2017: Secure Access



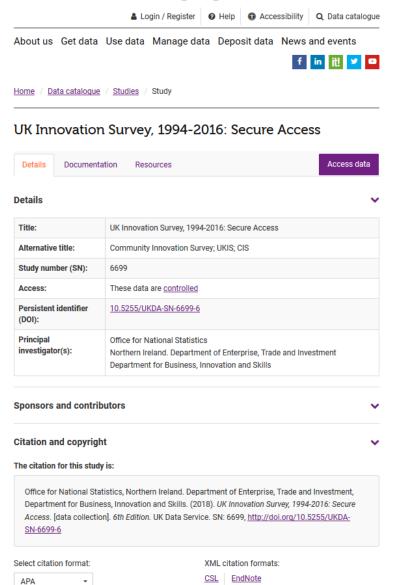
Step 1: Find Your Data (3)





Step 1: Find Your Data (4)







Step 1: Find Your Data (5)

Topics

Science and technology
Trade, industry and markets

Thesaurus search on keywords

COMMERCIAL INNOVATION EXPENDITURE INNOVATION BEHAVIOUR PROCESS DEVELOPMENT

PRODUCT DEVELOPMENT RESEARCH AND DEVELOPMENT TURNOVER UNITED KINGDOM

Abstract copyright UK Data Service and data collection copyright owner.

The UK Innovation Survey (UKIS) provides the main source of information on business innovation in the UK. The survey data is a major resource for research into the nature and functioning of the innovation system and for policy formation. It is used widely across government, regions and by the research community. The UKIS also represents the UK's contribution to the Europe-wide Community Innovation Survey (CIS). Like many innovation surveys across Europe, the UKIS follows general guidelines set out in the Organisation for Economic Co-operation and Development (OECD) publication known as the Oslo Manual (OECD 2005). This manual provides guidelines on the conduct of innovation surveys, including statistical procedures and a review of the range of concepts that fall together under the umbrella term "innovation".

Geographical references: postcodes

Abstract

The postcodes included in the first edition of these data (i.e. data files prior to 2008-2010) are pseudoanonymised postcodes. The real postcodes were not available due to the potential risk of identification of the observations. However, these replacement postcodes retain the inherent nested characteristics of real postcodes. In the dataset, the variable of the replacement postcode is 'new_PC'.

The first two editions only include the first half of an observation's anonymised (or real) postcode (sometimes referred to as the postcode district). Researchers who are interested in analysing data by more disaggregated geographies (e.g. ward, output area) are advised that this is not possible using the first half of the postcode. Full postcodes are available from the third edition onwards.

Linking to other business studies

These data contain Inter-Departmental Business Register (IDBR) reference numbers. These are anonymous but unique reference numbers assigned to business organisations. Their inclusion allows researchers to combine different business survey sources together. Researchers may consider applying for other business data to assist their research.

For the sixth edition (July 2018), data and documentation for UKIS10 (also known as UKIS2017, covering the period 2014 to 2016) were added to the study.

MAIN TOPICS

The survey is based on a core questionnaire developed by Eurostat and Member States, and covers a broad range of policy interests including:

- · general business information
- · innovation activity
- · goods, services and process innovation
- · context for innovation
- · general economic information

The purpose of the survey is to collect information about business innovation in the UK. An enterprise is defined as being active in innovation if it has:

- · introduced a new or significantly improved good, service or process
- · engaged in innovation projects that are not yet complete
- engaged in longer term innovation activities such as basic Research and Development or technology watch
- · had innovation related expenditure
- · formally co-operated with other enterprises or institutions on innovation



Step 1: Find Your Data (6)

Coverage and methodology

Time period:	1994 - 2016
Country:	United Kingdom
Spatial units:	Postcode (Unit) Standard Statistical Regions Postcode (Unit) [anonymised] Government Office Regions
Observation units:	Institutions/organisations
Observation unit location:	National
Population:	UK businesses with 10 or more employees in sections B-N of the Standard Industrial Classification (SIC) 2007 (prior to 2008-2010, sections C-K of SIC 2003), registered for VAT and/or PAYE in 1994-2016.
Number of units:	Up to approximately 16,000 enterprises
Method of data collection:	Postal survey An electronic questionnaire was intorduces with UKIS10. Due to the change in mode some responses may be different to previous surveys.
Time dimensions:	Repeated cross-sectional study frequency increased from every four years to every two years in 2007; panel dataset for 2004-2008
Sampling procedures:	One-stage stratified or systematic random sample
Kind of data:	Numeric
Weighting:	Weighting used. See documentation for details

Edition history

First edition release:	29 July 2011
Latest edition release:	19 July 2018 (6th Edition)



Step 1: Find Your Data (7)

UK Innovation Survey, 1994-2016: Secure Access



Documentation

Title -	File name	Size (MB) 🗘
Study information and citation	UKDA_Study_6699_Information.htm	
UK Data Archive Data Dictionaries	6699allfiles_ukda_data_dictionary.pdf	
UK Data Archive Information for Study 6699	read6699.htm	
UKIS Questionnaires, 1994-2008	6699questionnaires_1994_2008.pdf	
UKIS Related Articles, 2002-2006	6699research_articles.pdf	1.78
UKIS User Guide, 1st edition	6699userquide_1st_edition.pdf	
UKIS User Guide, 2011	6699userquide_2011.pdf	0.6
UKIS Variable Catalogue Waves 1 to 10	6699_cis_waves_1-10_variable_catalogue.xls	
UKIS10 Headline Findings, 2014 to 2016	6699_ukis_2017_headlines_final.pdf	
UKIS7 Questionnaire, 2008-2010	6699questionnaire_2008_2010.pdf	
UKIS8 Annex: Statistical Tables	6699bis-14-p106-uk-innovation-survey-2013.xlsx	
UKIS8 First Findings (revised)	6699bis-14-p107-first-findings-from-ukis-2013.pdf	
UKIS8 Questionnaire 2010-2012	6699uk-innovation-survey-2010-2012.pdf	
UKIS9 Headline Findings, 2015	6699bis-16-134-uk-innovation-survey-2015.pdf	0.37



Step 2: Apply

UK Innovation Survey, 1994-2016: Secure Access

Details Documentation Resources Access data

Details

Title:	UK Innovation Survey, 1994-2016: Secure Access	
Alternative title:	Community Innovation Survey; UKIS; CIS	
Study number (SN):	6699	
Access:	These data are controlled	
Persistent identifier (DOI):	10.5255/UKDA-SN-6699-6	
Principal investigator(s):	Office for National Statistics Northern Ireland. Department of Enterprise, Trade and Investment Department for Business, Innovation and Skills	



Step 3: Become an ONS Accredited Researcher

- Complete the Accredited Researcher form
- Project colleagues should do this too
- The lead researcher should complete the Research Proposal form
- UK Data Service sends the forms to the data owner for approval
- REMEMBER: Include as much detail as possible...
 - Professional background (papers, conference presentations)
 - Experience of using micro-data
 - Project description
 - Why you need these data
 - Data linkage
 - Research publications



Step 4: Training

 After approval, we'll offer you a range of dates to attend a training course

Areas covered:

Using the Secure Lab

Understanding Disclosure Control of outputs

Attitudes and efficiently

Working safely and efficiently

 Upon successful completion of the training and associated test, we'll issue you with Secure Lab account credentials

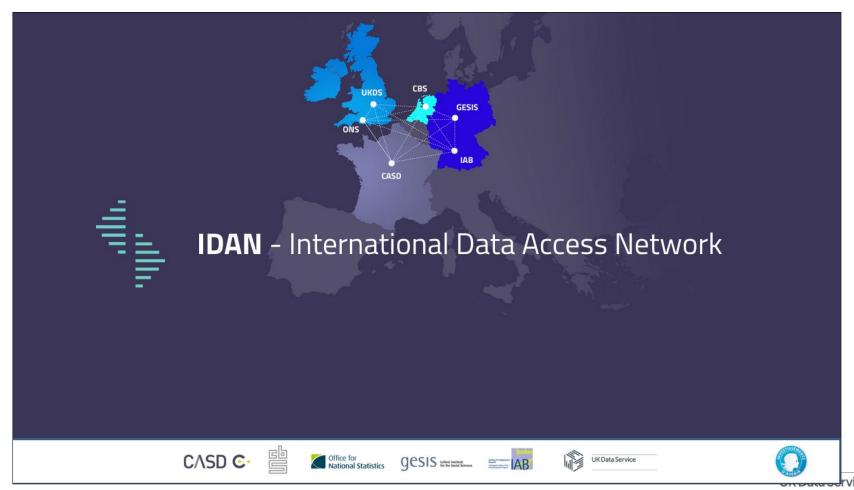


Access to international business data via the UK Data Service





'Transnational Access to Controlled Microdata'





Access to international controlled microdata - IAB

 Since 2015 Reciprocal Provision of Safe Room Remote Desktop Access

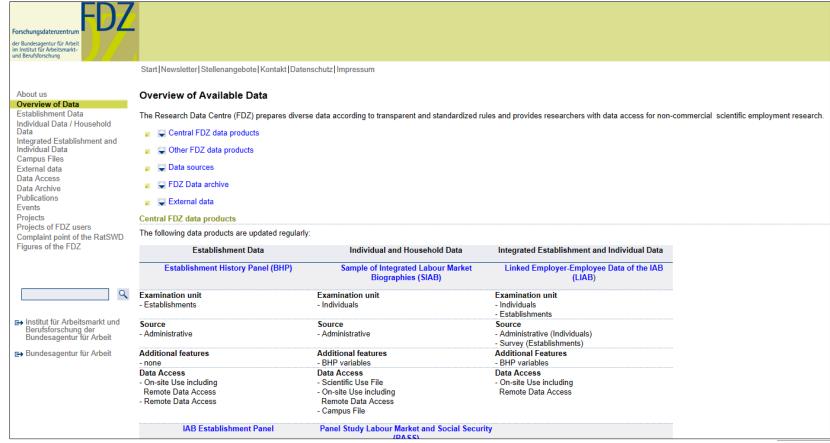
 UK Data Service – IAB (Institute for Employment Research), Germany



 Datasets available via UK Data Service Safe Room: IAB RDC on-site use files, https://fdz.iab.de/en/FDZ_Overview_of_Data.aspx



Access to international controlled microdata - IAB





IAB/FDZ data

Central FDZ data products

The following data products are updated regularly:

Establishment Data	Individual and Household Data	Integrated Establishment and Individual Data
Establishment History Panel (BHP)	Sample of Integrated Labour Market Biographies (SIAB)	Linked Employer-Employee Data of the IAB (LIAB)
IAB Establishment Panel	Panel Study Labour Market and Social Security (PASS)	
German Job Vacancy Survey of the IAB	IAB-SOEP Migration Sample (IAB-SOEP-MIG)	

Establishment Data

German Management and Organizational Practices (GMOP) Survey

Individual and Household Data

- Working and Learning in a Changing World (ALWA), ALWA Literacy und Numeracy Data (ALWA-LiNu) and ALWA survey data linked to administrative data of the IAB (ALWA-ADIAB)
- Employee survey 'Bonus payments, wages increases, and fairness' (BLoG)
- Biographical Data of Social Insurance Agencies in Germany (BASiD)
- IAB-BAMF-SOEP Survey of Refugees
- IZA/IAB Administrative Evaluation Dataset (AED) and IZA/IAB Linked Evaluation Dataset 1993-2010 (LED)
- lidA Survey Data. German cohort study on work, age and health
- National Educational Panel Study (NEPS), Starting Cohort 6 (SC6) survey data linked to administrative data of the IAB (NEPS-SC6-ADIAB)
- S-MGA The Study on Mental Health at Work

Integrated Establishment and Individual Data

- Linked Personnel Panel (LPP) and LPP survey data linked to administrative data of the IAB (LPP-ADIAB)
- Panel "WeLL" Employee Survey for the Project "Further Training as a Part of Lifelong Learning" and WeLL survey data linked to administrative data of the IAB (WeLL-ADIAB)

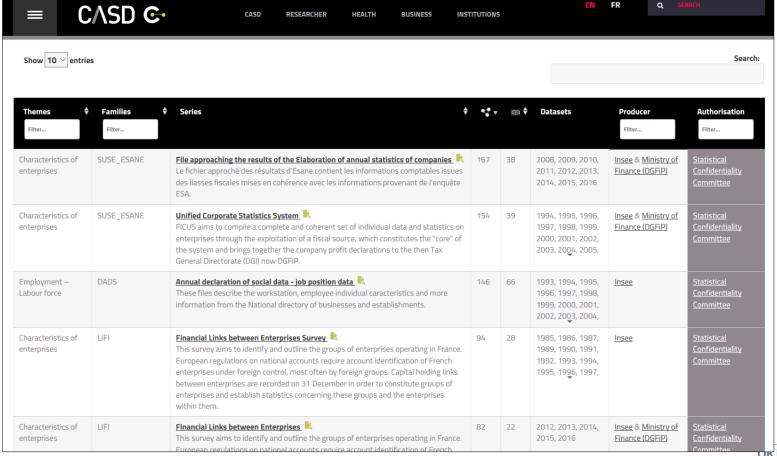


Access to international controlled microdata - CASD

- In cooperation with the French Secure Access Data
 Centre (CASD Data of the Centre d'Accès Sécurisé aux
 Données), the UK Data Service has set up a secure data
 access point within the UK Data Service Safe Room at
 the University of Essex to facilitate on-site direct remote
 access to the CASD data from UK.
- Data: https://www.casd.eu/en/available-data-on-casd/
- To apply for data access, contact: <u>service@casd.eu_kData Service</u>



Access to international controlled microdata - CASD





CASD data (269)

Themes:

- Agriculture
- Births Fertility
- Business demography
- · Characteristics of enterprises
- Construction
- Couples, Families, Households
- Deaths, Mortality, Life expectancy
- Economic outlook
- Education, training, skills
- Employment, labour force
- Environment
- Foreigners, Immigrants
- Globalisation, competitiveness and innovation
- Health, handicap, dependency
- Household consumption and ownership rates
- Housing
- Income, Living standards, purchasing power
- Population, change and structure
- Public finance
- Safety, justice
- Social protection, pensions
- Society, social life, elections
- Transportation
- Unemployment
- Wages and salaries

Producer list includes:

- Insee (NSI)
- Ministry of Labour (DARES)
- Ministry of Environment (SDES)
- Central Agency for Social Security (ACOSS)
- Institute for Research and Information in Health Economics (IRDES)
- Ministry of Finance (DGFiP)
- Ministry of Justice (SDSE)
- Public Investment Bank (BPIFrance)
- National housing information agency
- Hospital stays (PMSI)
- Directorate General for Enterprise (DGE)

