
An Introduction to UK Data Service Secure Lab

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UK Data Service

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UK Data Service



Overview

- What is the UK Data Service
- What is Secure Access data
- What kinds of Secure Access data does the UK Data Service hold?
- How you can access Secure data



What is the UK Data Service?

- a comprehensive resource funded by the ESRC
- a single point of access to a wide range of secondary social science data
- support, training and guidance



But.....

- Anonymisation by necessity removes some detail
- You may need more detail such as
 - Full date of birth
 - Lower level geographical identifiers
 - Sensitive information such as experience of sexual offences
- End User Licence datasets
 - often just year of birth or age
 - Government Office Region
- Special Licence datasets
 - often just month & year of birth
 - Smaller areas such Local Authority areas



UK Resources for Sensitive Microdata

- Secure facilities:
 - Virtual Microdata Laboratory at ONS
 - Secure Lab at UKDS
 - HMRC Datalab
- Administrative Data
 - Administrative Data Research Network
 - <http://www.adrn.ac.uk>



What is the Secure Lab?

- Provides secure access to data that are too detailed, sensitive or confidential to be made available under the standard End User Licence or Special Licence
- These data cannot be downloaded to your own desktop
- A virtual lab – don't have to visit a physical location
- Data are analysed remotely from your institutional desktop
- We provide access to statistical and office software to make remote analysis and collaboration secure and convenient.
- We apply statistical control techniques to ensure the delivery of safe statistical results
- Our security philosophy is based upon training and trust, leading-edge technology, licensing and legal frameworks, and strict security policies and penalties.



Types of Secure Access Data

Survey Microdata:

- UK Surveys: cross-sectional
- Longitudinal/cohort

Business Microdata:

- Company level data
- Employee level data

Sources of data

- Official agencies – mainly central government
 - Office for National Statistics
 - Department for Business, Innovation & Skills
- Research institutions
 - Institute for Social & Economic Research
 - Centre for Longitudinal Studies



Key data: Secure Access UK surveys

- Labour Force Survey
- Annual Population Survey
- Living Costs and Food Survey
- Crime Survey for England and Wales
- Citizenship Survey
- English Housing Survey
- National Travel Survey



Crime Survey for England and Wales (formerly the British Crime Survey)

- **Topic:**
 - experiences of crime
 - estimate levels of crime
 - how and why crime happens
- **Survey design**
 - since 1981
 - annual survey since 2001/02



Additional Information in the Secure Access data

- The adult and child data also held in the standard End User Licence (EUL) & Special License versions
- Adult self-completion modules on drinking behaviour and drug use
- Children's self-completion module
- Low-level geography variables
- Hate crime variables HATEMT3A-HATEMT3I and HATEPS3A-HATEPS3I from the victim form
- Interpersonal violence (IPV) data (modules on domestic violence, sexual victimisation and stalking)



Lower level Geographical Areas

- Local Authority District
- Crime and Disorder Reduction Partnership Family
- Rural and Urban Area Classification
- Police Force Area
- ONS Ward Classification : Supergroup
- ONS Ward Classification: Group
- ONS Ward Classification: Subgroup
- ONS District Level Classification : Supergroup
- ONS District Level Classification: Group
- ONS District Level Classification: Subgroup
- Output Area Classification - Supergroup (7 categories)
- Output Area Classification - Group (21 categories)
- Output Area Classification - Subgroup (52 categories)



Citizenship Survey

- **Topics:**
 - community cohesion
 - civic engagement
 - race and faith
 - volunteering
 - discrimination and prejudice
- **Survey design**
 - 2001 to 2010/11
 - Repeated cross-sectional



Additional Information in the Secure Access data

- The data held in the standard End User Licence (EUL) version
- More detailed household & demographic information
- Violent extremism
- Low-level geography variables:
 - Electoral wards
 - Police Force areas
 - Local Authority districts
 - Lower & Middle Super Output areas



Longitudinal data

Similar to 'UK Surveys'

- individual level data
- large samples, nationally-representative
- surveys are repeated, often annually



BUT

- they follow the same individuals over time
- new respondents are added regularly to keep numbers up

Key data: Secure Access Longitudinal Studies

- British Household Panel Survey (BHPS)
- Understanding Society (UKHLS)
- Growing Up in Scotland (GUS)
- Longitudinal Study of Young People in England (Next Steps)



Understanding Society

- 40,000 households and 100,000 individuals including the original BHPS sample
- Topics include:
 - current employment and earnings
 - employment status
 - parenting and childcare arrangements
 - family networks
 - benefit payments
 - political party identification
 - household finance
 - environmental behaviours
 - consents to administrative data linkage (health and education)
- Also incorporates an innovation panel



Additional Information in the Secure Access data

- Full data of birth
- Linked National Pupil Database 2009-2011
 - Pupil Level Annual School Census (PLASC) data on pupil background
 - pupil attainment data for the Early Years Foundation Stage Profile (EYFSP) (age 5) and Key Stages (KS) 1 (age 7), KS2 (age 11), KS3 (age 14), KS4 (age 16) and KS5 (ages 17-18)
 - absences and exclusions (ages 4-16)
- Low-level geography variables:
 - British National Grid
 - Irish National Grid



Longitudinal Study of Young People in England

- First cohort followed 2004-2010
- Second cohort began 2013
- Topics include:
 - the young person's family background & parental socio-economic status
 - personal characteristics
 - attitudes, experiences and behaviours
 - attainment in education, higher education
 - local deprivation
 - school(s) attended
 - post-16 plans
 - jobs and training, Not in Education Employment or Training (NEET)
 - risk behaviours
 - relationships and sexuality
 - own children, childcare and caring responsibilities



Additional Information in the Secure Access data

- Income Deprivation Affecting Children Indices
- Indices of Multiple Deprivation
- Low-level geography variables:
 - Local Authority Districts
 - Super Output Areas (Lower Layer), Local Learning and Skills Council areas
 - urban/rural indicators



Linked National Pupil Database

- Data about the young person's KS1 attainment, 2006
 - Type of establishment
 - National curriculum levels for speaking and listening, reading and writing, maths, science and each contributing topic
- School census data about the school the young person attended: 2006, 2010, 2013
 - School type
 - Admissions policy (W1 only)
 - Pupil numbers
 - Percentage with FSM , SEN & English being or not being their first language
 - Percentages of pupils in particular ethnic groups
 - Levels of deprivation based on school postcode (W1 only)
 - Ofsted rating
- Data about the KS1 and KS4 levels of attainment in the school the young person attended, 2006 and 2013 (W1 school) respectively
 - Percentages achieving various academic thresholds
 - Institution type
 - Number of pupils in the institution (KS4 only)
 - Percentages with English as an additional language, FSM & SEN (KS4 only)
 - Percentages of the cohort by age (KS4 only)
 - Average point scores (KS4 only)
 - Percentages achieving expected progress (KS4 only)



Key Data: Secure Access Cohort studies

- **Topics:**
 - Health/medical focus
 - Social and economic circumstances
- **Survey design:**
 - Tracking individuals over time who were born in a particular period
- National Child Development Study (NCDS) 1958
- Millennium Cohort Study (MCS) 2000/01
- **different decades:** examine generational change

Additional Information in the MCS Secure Access data

- The *Linked Education Administrative Dataset (KS1)* include:
 - school type
 - Key Stage 1 educational achievement at:
 - speaking and listening
 - reading and writing
 - maths
 - science
 - gender
 - eligibility for free school meals
 - Special Education Needs
 - Income Deprivation Affecting Children Index (IDACI) score
 - mode of transport to school
- Low-level geography variables:
 - MCS5 2001 Census Boundaries
 - 2011 Census Boundaries

Business Microdata

- Provided by the Office for National Statistics
- Collected using the sampling frame of the Inter-Departmental Business Register
- Possible to combine data for the same company from two or more surveys
- These data are more detailed & are relatively identifiable
- Can only be accessed in a secure setting to ensure confidentiality.



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, 2000-2012
- IIA: Investment in Intangible Assets Survey, 2009-2010
- BERD: Business Expenditure on Research and Development, 1994-2013
- UKIS: UK Innovation Survey, 1994-2012



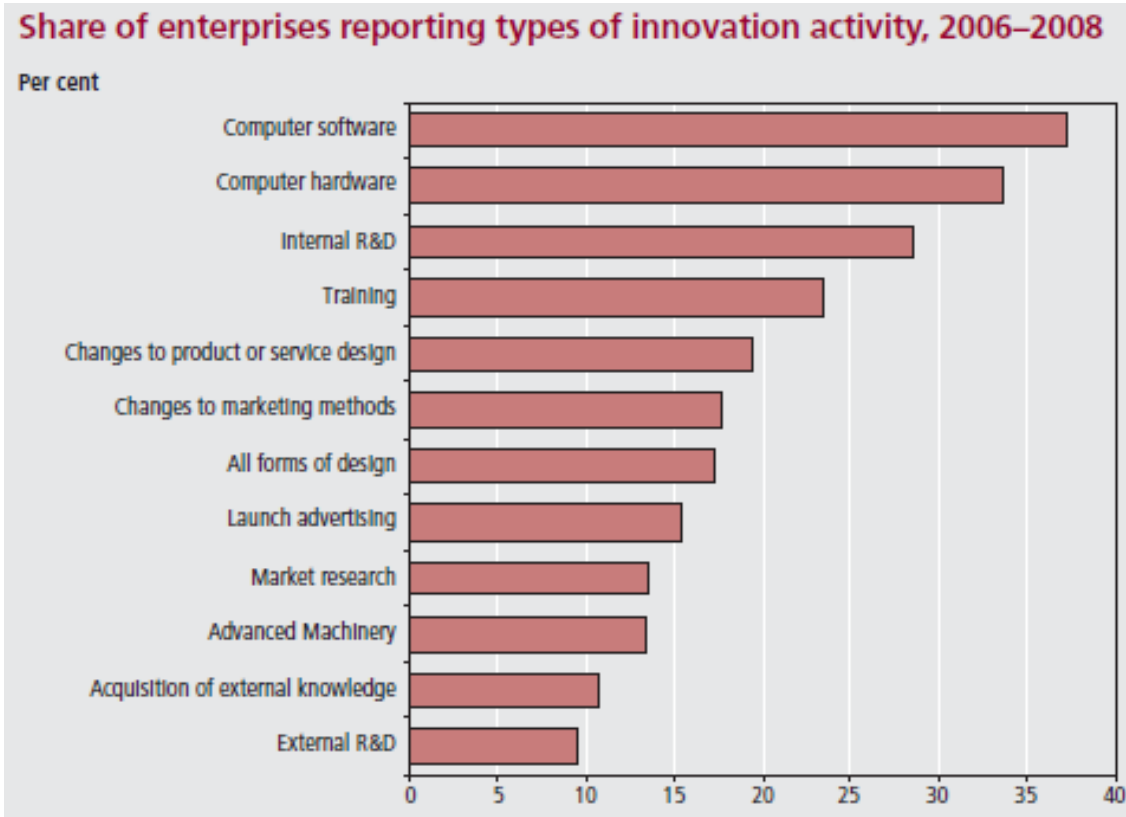
UKIS: UK Innovation Survey, 1994-2012

- Europe-wide Community Innovation Survey
- Main source of information on business innovation in the UK looking at:

‘Major changes aimed at enhancing a firm’s competitive position, performance, know-how, or capabilities’ e.g. new or significantly improved goods, services or processes for making or providing them

- Significant panel of over 4,000 businesses
- Based on firms with more than 10 employees
- Approx. 16,000 enterprises

UK Innovation Survey: types of activity



Source: Robson & Kenchatt, Economic and Labour Market Review, Vol 4, No 3, March 2010

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 (1975-2002)
- Occupational Pension Scheme Survey 2006-2013
- Monthly Wages and Salaries Survey 2000-2013
- National Employer Skills Survey 2007-2009
- Scottish Employer Skills Survey 2008
- Annual Survey of Hours and Earnings 1997-2013



Annual Survey of Hours and Earnings 1997-2013 (ASHE)

- 1% sample of individuals (approx. 140,000 – 185,000) from NI records
- Can construct panel dataset
- Replaced New Earnings Survey which goes back to 1975
- Employer completes so more accurate than some surveys (e.g. Labour Force Survey)



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

How to weather a recession: UK firms, labour hoarding and the national minimum wage

Author: Wenchao Jin, Institute for Fiscal Studies, in collaboration with Claire Crawford, Institute for Fiscal Studies and Helen Simpson, Bristol University

Date: 6 June 2013

Type of case study: Research

About the research

In 2008–2009, the UK experienced its deepest recession since World War II. One notable feature of this recession was the resilience of employment, which fell by just 2.1 per cent at a time when national output (GDP) fell by 6.3 per cent. This suggests that firms may have been trying to weather the recession by holding on to their workers and reducing their hours and/or pay, rather than making them redundant. Such behaviour is sometimes thought to indicate 'labour hoarding'.



Productivity and Industrial Relations

- Annual Respondents Database 1973-2008 (ARD) and Annual Business Survey 2008-2013 (ABS)
- Business Structure Database 1997-2014 (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 2008-2012

- 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



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

Investigating external and private benefits from investment in skills and training: UK innovators study

Author: Emanuele Giovannetti, Anglia Ruskin University, Claudio Piga, Keele Management School, Keele University

Date: 4 April 2016

Type of case study: Research

About the research

Investment in intangible assets is growing: "The current transition towards a knowledge-based economy goes hand in hand with the shift of strategic investment from tangible to intangible assets. These intangibles define the knowledge base of firms and industries. They emerge as major factors in the shaping of competitive advantages and innovativeness." [Best Practices as to How to Support Investment in Intangible Assets, WWWforEurope, Working Paper no. 101.](#)



Business Structure Database 1997-2014 (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



Industrial 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 1996-2011 (AFDI)
- International Trade in Services 1996-2012 (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 950 – 3,000 enterprises for outward FDI, and 2,000 – 14,000 for inward FDI



Environment

- Low Emissions R&D Survey, 2008 (DECC R&D)
- Quarterly Fuels Inquiry, 1993-2008

Low Emissions R&D Survey, 2008 (DECC R&D)

- Main focus is on businesses R&D aimed at reducing greenhouse gas emissions
- Expenditure on low emissions R&D, trialling and deploying the material, product, or process in a working environment on a pre-commercial basis
- Support from government incentives
- Lower energy consumption and renewable energy



Data Linkage

- The IDBR sampling frame enables linking of 2 or more business datasets
- Some of the most common linkages
 - ASHE to WERS
 - BSD to UKIS
 - ARD 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 UKDS
3. Complete an Approved Researcher application form
4. Attend a training seminar



Step 1: Find Your Data

UK Data Service

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Discover

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Case study Data collection Series record ESRC output Support guide

Results per page: 10 Sorted by: Relevance

Displaying 1-10 of 189 results 1 2 3 4 5 ▶▶▶

-  SN 6699 UK Innovation Survey, 1994-2012: Secure Access
Office for National Statistics
+ Full record...
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-  SN 850468 Innovation in Peripheral Areas
Sara Sian Davies,
+ Full record...
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-  SN 7083 Understanding Society: Innovation Panel, Waves 1-6, 2008-2013: Special Licence Access
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-  SN 6849 Understanding Society: Innovation Panel, Waves 1-6, 2008-2013
University of Essex. Institute for Social and Economic Research
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-  SN 6123 Relational Spaces of Innovation in Architecture Firms, 2007
Faulconbridge, J. Lancaster University Department of Geography

Type

- Data collections (189)
- Case studies (2)
- Series (5)
- ESRC outputs (5)
- Support / how to guides (0)

Refine

Subject +

Date -

Data coverage / publication date

From: 500

To: 2015

New editions in the last: []

New releases in the last: []

Refine

Data type -

- UK Survey data



Step 2: Apply

UK Data Service



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UK Data Service data catalogue record for:

UK Innovation Survey, 1994-2012: Secure Access

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TITLE DETAILS

SN: 6699
Title: UK Innovation Survey, 1994-2012: Secure Access
Alternative title: Community Innovation Survey; UKIS; CIS
Persistent identifier: [10.5255/UKDA-SN-6699-4](http://dx.doi.org/10.5255/UKDA-SN-6699-4)
Depositor: Office for National Statistics
Principal investigator(s): Department for Business, Innovation and Skills
Office for National Statistics
Northern Ireland. Department of Enterprise, Trade and Investment
Data collector(s): Office for National Statistics
Northern Ireland. Department of Enterprise, Trade and Investment
Sponsor(s): Department for Business, Innovation and Skills

CITATION

The citation for this study is:

Department for Business, Innovation and Skills, Office for National Statistics and Northern Ireland. Department of Enterprise, Trade and Investment, *UK Innovation Survey, 1994-2012: Secure Access* [computer file]. 4th Edition. Colchester, Essex: UK Data Archive [distributor], January 2015. SN: 6699, <http://dx.doi.org/10.5255/UKDA-SN-6699-4>

[Select the text above](#) to add data citation in your outputs.

SUBJECT CATEGORIES

Science and technology
Trade, industry and markets - Industry and management

UK Data Service



Step 3: Become an Approved Researcher

- Complete the Approved Researcher form
- UKDS sends your form to the data owner for approval
- Project colleagues should do this too
- REMEMBER: Include as much detail as possible...
 - Professional background (papers, conference presentations)
 - Experience of using micro-data
 - Project description
 - Why you need these data



Step 4: Training

- After approval, we'll offer you a range of dates to attend a training seminar
- Upon successful completion, we'll issue you with Secure Lab account credentials
- Three modules:

Using the
Secure Lab

Your role in
data
protection

Statistical
Disclosure
Control

- Not a 'box ticking' exercise – understanding is crucial



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The UK Data Service is an integrated service delivered and supported by a distributed team across the UK.

Our home office is at the University of Essex.

UK Data Service

University of Essex
Wivenhoe Park
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Essex
CO4 3SQ



+44 (0)1206 872143

Contact details for our leaders, advisory committee and staff are at [Our People](#).

Helpdesk

Use this link for all questions relating to the UK Data Service, its data and resources.

Our web forms are designed to get your question directly to the experts most able to provide the answers you need.

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Available software

- SPSS Statistics
- StataSE 14
- R
- ArcGis
- Explorer
- Microsoft Office Access
- Microsoft Office Excel
- Microsoft Office Powerpoint
- Microsoft Office Word
- MLwiN 2.29
- Mplus Editor
- OpenGeoDa
- Acrobat Reader
- Notepad++
- Calculator
- TeXnicCenter
- TeXworks
- Toolkit

