

# An Introduction to the UK Data Service: Resources for Social Research



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2 May 2019



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# Overview

- Who are we?
- What is data and what types of data do we hold?
- Online resources
- Further help
- Questions?



# What is the UK Data Service?

- A comprehensive resource funded by the ESRC
- The UK Data Service provides a single point of access to a wide range of secondary social science data
- The UK Data Archive is the lead organisation
- Support, training and guidance



# UK Data Service

Site search Accessibility **FAQ** Help Contact New users Sitemap

UK Data Service

About us Get data Use data Manage data Deposit data **News and events**



Register / Login

Explore the UK's largest collection of social, economic and population data resources

Search data

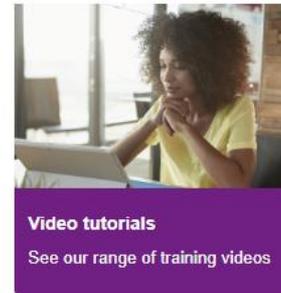
## About the UK Data Service



## Guides and resources

- Dataset guides
- Topic guides
- Methods and software guides
- Guides to exploring online

See more



See data from all over the world

Browse our data map

# Who is it for?

- Academic researchers and students
- Government analysts
- Charities and foundations
- Business consultants & data analysts
- Independent research centres & think tanks



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# What is data?

- Facts and statistics collected together for reference or analysis
- Distinct pieces of information
- Numeric information
  - Crime rates
  - Unemployment rates
  - Literacy rates
  - Risk of developing a health condition
- Collected through surveys, administrative records, business records, censuses

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# How do you get data?

- Primary data collection?
  - You can design the data collection yourself but...
  - Expensive – time and money, expertise, experience
    - Can you perform a survey of 40,000 households?
- The advantages of secondary data analysis
  - Does not (usually) cost you anything
  - Large range of available data sources
  - The data will be representative
  - Robust
  - Transparent

# Sources of data

- National statistical authorities
- UK government departments
- Intergovernmental organisations
- Research institutes
- Individual researchers

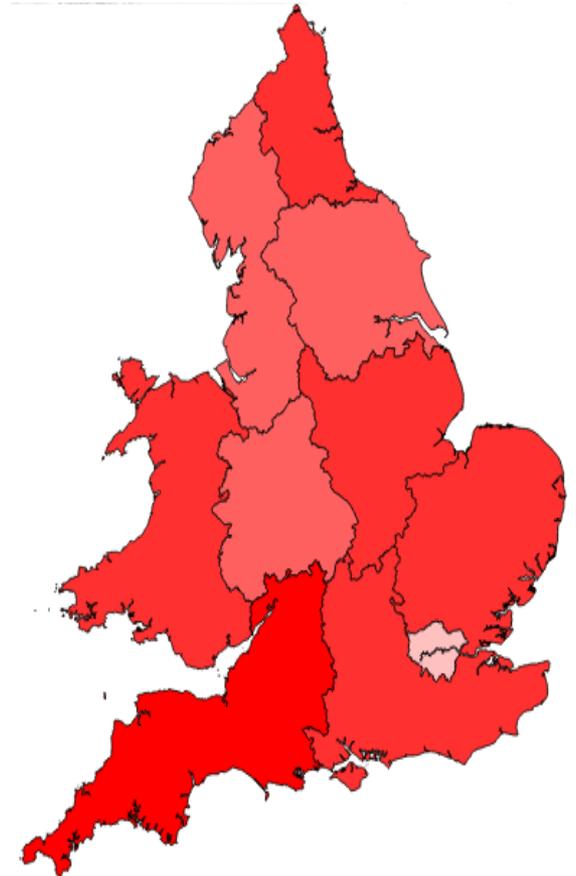


# Types of data

Survey Microdata	International Macrodata	Census
Major UK surveys Cross-national Longitudinal	Multi-nation aggregate databanks and survey data	Aggregate data for 1971-2011 Microdata for 1991-2011

# Micro data vs Macro data

- Micro data – data at the individual level
  - Collected from individuals through surveys
  - E.g. What factors influence health
- Macro data – aggregate data
  - Data at a region or country level
  - Aggregated counts
  - Useful for examining how trends (e.g. fertility rates) change over time
  - Can be created from micro data sources



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# Survey Microdata

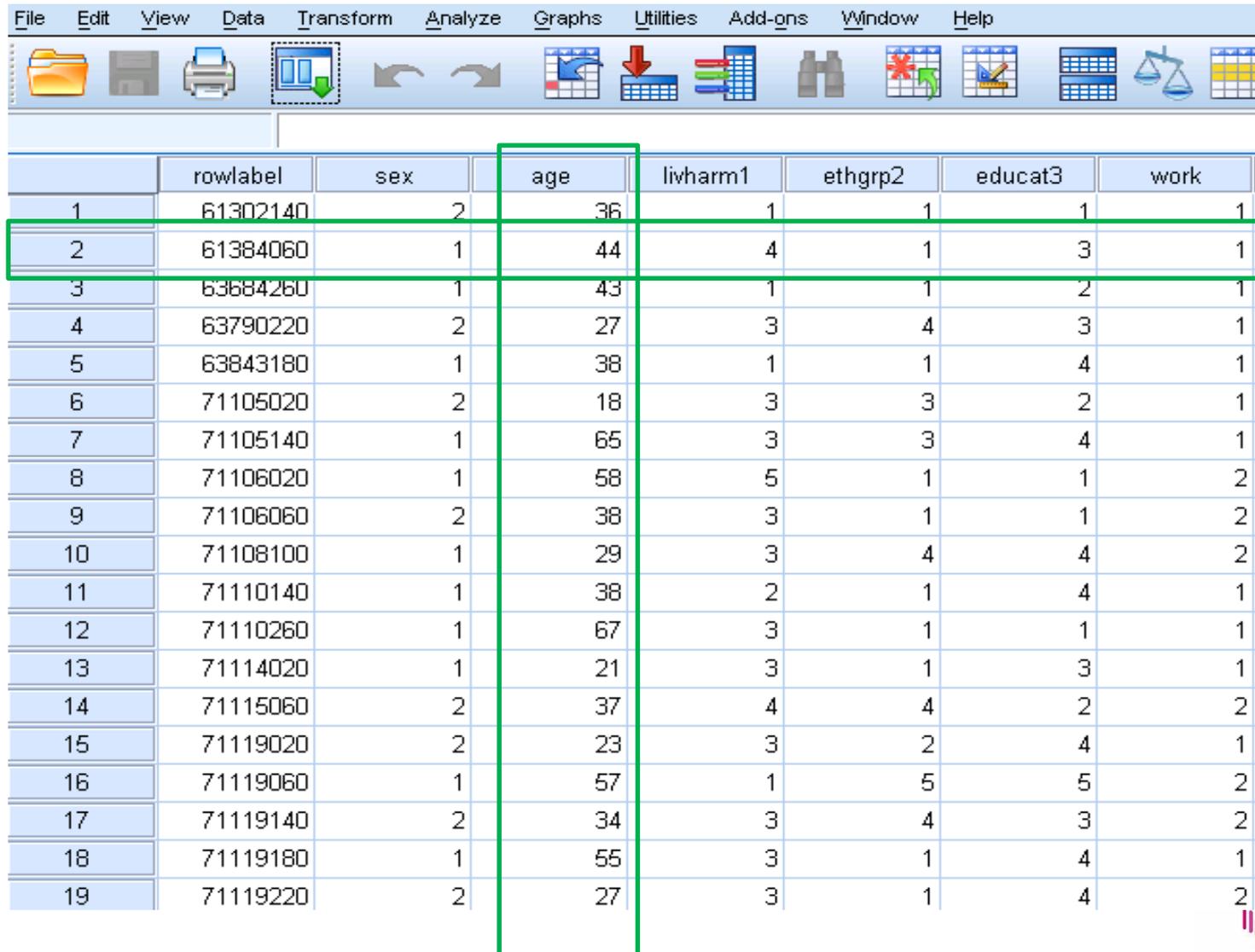


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# Survey microdata

- Individual or household level data which have been anonymised to prevent disclosure
- Large sample sizes
- Nationally-representative
- Needs to be analysed using an analysis package like SPSS or Stata
- Very flexible as you can produce your own tables, populations and attributes

# Survey microdata

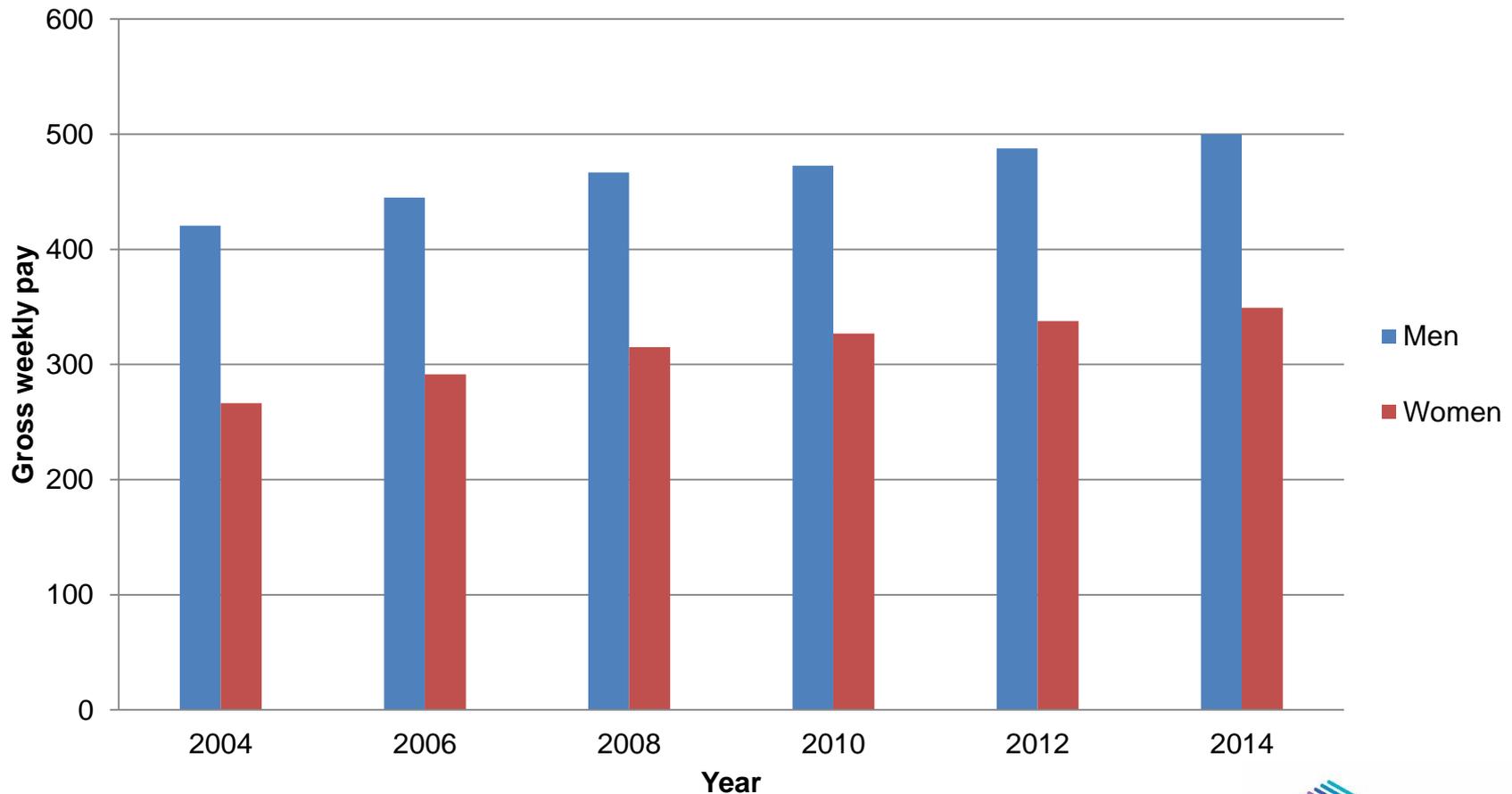


The image shows a screenshot of a data analysis software interface. The menu bar includes File, Edit, View, Data, Transform, Analyze, Graphs, Utilities, Add-ons, Window, and Help. The toolbar contains various icons for file operations, data manipulation, and visualization. Below the toolbar is a table with 19 rows and 8 columns. The columns are labeled: rowlabel, sex, age, livharm1, ethgrp2, educat3, and work. The 'age' column is highlighted with a green box. The data in the table is as follows:

	rowlabel	sex	age	livharm1	ethgrp2	educat3	work
1	61302140	2	36	1	1	1	1
2	61384060	1	44	4	1	3	1
3	63684260	1	43	1	1	2	1
4	63790220	2	27	3	4	3	1
5	63843180	1	38	1	1	4	1
6	71105020	2	18	3	3	2	1
7	71105140	1	65	3	3	4	1
8	71106020	1	58	5	1	1	2
9	71106060	2	38	3	1	1	2
10	71108100	1	29	3	4	4	2
11	71110140	1	38	2	1	4	1
12	71110260	1	67	3	1	1	1
13	71114020	1	21	3	1	3	1
14	71115060	2	37	4	4	2	2
15	71119020	2	23	3	2	4	1
16	71119060	1	57	1	5	5	2
17	71119140	2	34	3	4	3	2
18	71119180	1	55	3	1	4	1
19	71119220	2	27	3	1	4	2

# Survey microdata outputs

**Gross Weekly Pay (£) in Main Job by Sex, 2004-2014**  
Annual Population Survey





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# Key data: cross-sectional surveys

- Labour Force Survey (1975 onwards)
- Annual Population Survey (2004 onwards)
- Family Expenditure Survey (1961-2001)
- Households Below Average Income (1994/95 – 2015/16)
- Health Surveys (England/Wales/Scotland) (1991 onwards)
- Crime Survey for England and Wales (1982 onwards)
- Family Resources Survey (1993 onwards)
- Citizenship Survey (2001-2011)
- British Social Attitudes Survey (1983 onwards)

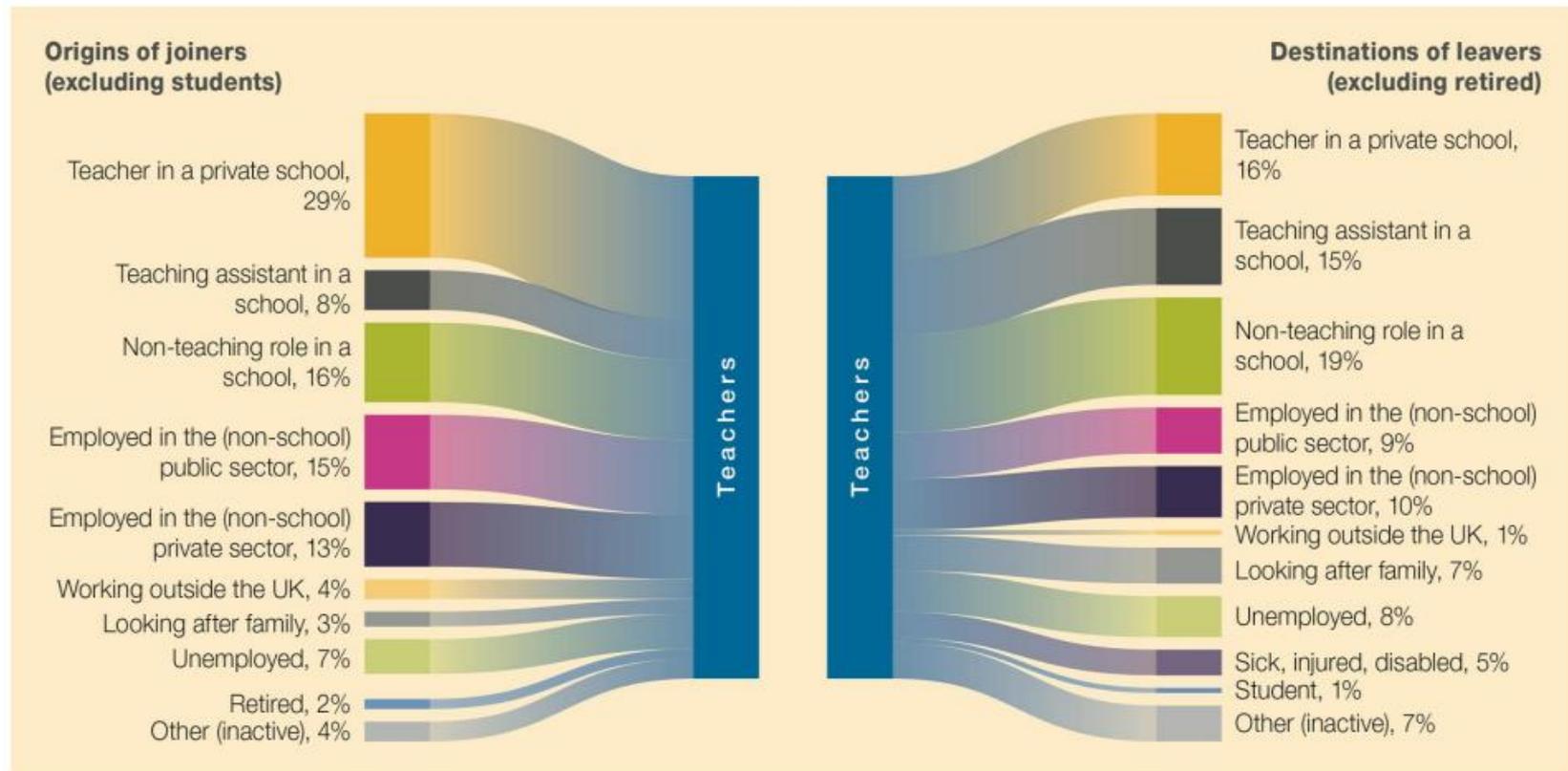
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# Labour Force Survey

- Started as an annual survey in 1975
- Quarterly from 1991
- Uses international definitions of employment, unemployment & economic inactivity
- Used to inform social, economic & employment policies
- Topics include:
  - Occupation
  - Training
  - Hours of work
  - Personal characteristics of household members aged 16 & over

# Should I Stay or Should I Go? NFER Analysis of Teachers Joining and Leaving the Profession

**Figure F More than half of non-student joiners come from jobs in the school sector; more than half of non-retiring leavers go to jobs in the school sector**



# Longitudinal data – Panel & Cohort data

Similar to cross-sectional surveys

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



## One key difference!

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

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# Panel vs. Cohort: Panel Studies

- Collect information regularly from the same individuals
- Builds up a picture of how people's lives change over time
- Measurement points/surveys are called **waves**
- Random sample of individuals across the population
- Can run for many years
- Example – household panel studies run in many countries, include interviews with all household members
- Core content of questionnaire remains the same to allow changes in key measures to be studied

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# Understanding Society

- Sample of 40,000 households
- Data collected from all household members - 100,000 individuals
- Includes an Ethnic Minority Boost sample
- coverage includes:
  - current employment and earnings; benefit payments; political party identification; household finances; environmental behaviours; parenting and childcare arrangements; family networks; religion, ethnicity, health
- Includes a number of biomarkers
- Consents to administrative data linkage (health and education)

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# Cohort studies

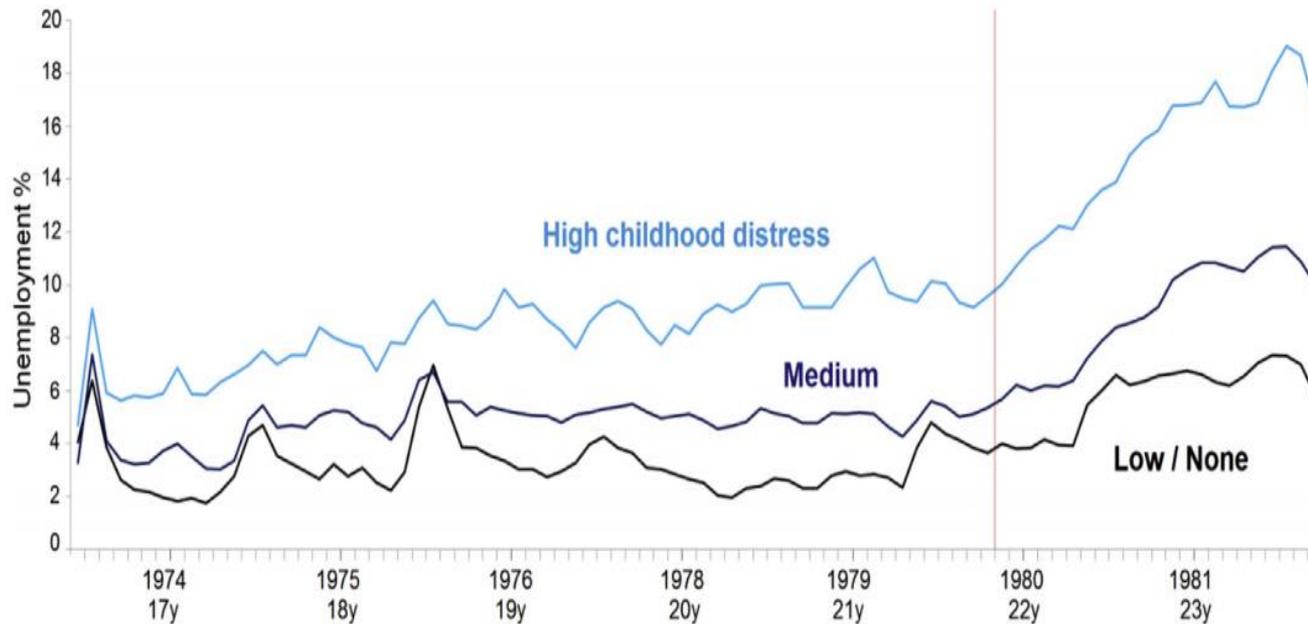
- Follow individuals who have a particular event in common
- Most common event is being born in the same week/year
- Interviewed at key time points, generally less frequently
- Measurement points are called **sweeps**
- Some will follow the cohort over their life time
- Can be used together to examine generational change
- Content of questionnaires is age-specific so will change over time

# Birth Cohort Studies - data collection sweeps

1958 National Child Development Study	1970 British Cohort Study	Millennium Cohort Study
1958 - birth	1970 - birth	2000-02 – birth
1965 - age 7	1975 - age 5	2001-03 – 9 months
1969 - age 11	1980 - age 10	2006 – age 5
1974 - age 16	1986 - age 16	2008 - age 7
1981 - age 23	1996 - age 26	2012 - age 11
1991 - age 33	1999-2000 – age 29-30	2015 - age 14
1999-2000 – age 41-42	2004-05 - age 34-35	NEXT: 2018 – age 17
2004-05 – age 46-47	2008-09 - age 38-39	
2008-09 – age 50	2012 - age 42	
2013-14 – age 55	NEXT: 2016 – age 46	
NEXT: 2018 – age 60	FUTURE: 2020 – age 50	

# Childhood psychological distress and youth unemployment: Evidence from two British cohort studies

Mark Egan, Michael Daly, Liam Delaney



**Fig. 2.** Descriptive statistics describing unemployment in the NCDS from August 1974–November 1981 by levels of childhood distress. The year above the cohort members' age refers to March of that year, the month when the cohort members were born. The vertical line denotes the onset of the U.K. recession in January 1980. Five months at the beginning and end of the data-range are omitted due to small sample sizes.

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# Cross-national Surveys

- Individual or household level data
- Allow comparisons across different countries
- Topics covered include:
  - education
  - income
  - working conditions
  - poverty
- Examples:
  - Eurobarometer Surveys
  - European Quality of Life Survey
  - European & World Values Studies
  - International Social Survey Programme



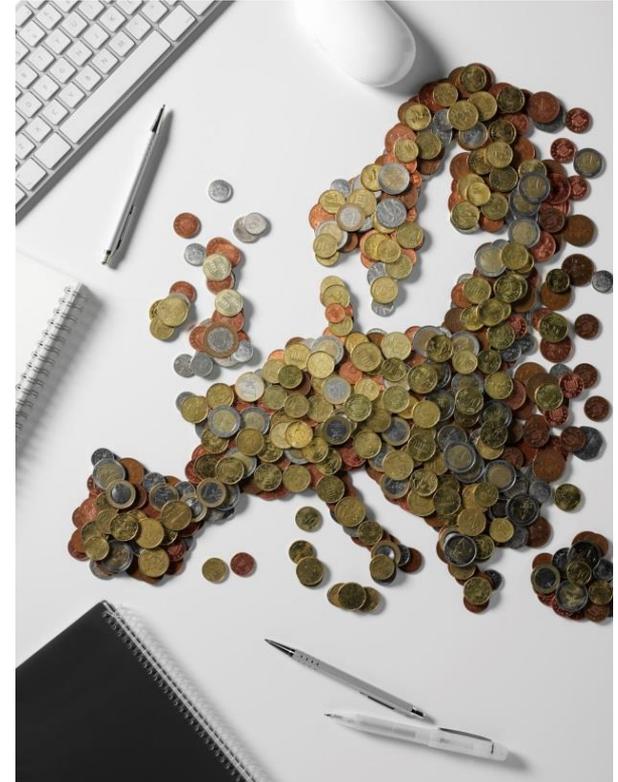
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# International Macrodata



# International Macrodatab

- Time series data aggregated to country/region
- Regularly updated
- International governmental organisations (IMF, OECD, IEA, World Bank)
- Only available to staff and students from UK institutions of higher and further education (World Bank data are open access)



# International Macrodata themes

Databanks cover:

- Economic performance and development
- Trade, industry and markets
- Employment
- Demography, migration and health
- Governance
- Human development
- Social expenditure
- Education
- Science and technology
- Land use and the environment



# International Macrodata



**UKDS.Stat**  
Disseminating international time-series data for the UK Data Service

20 October: 🎉 We celebrate World Statistics Day  
15 July: We have launched a new version of UKDS.Stat! Please take a look at some of the [new features and enhancements](#).

[Login](#) to view the full data portfolio (UK HE/FE only), or browse World Bank, OECD and IMF Open Data.

To get started, select data in the left-hand menus or select a dataset from the table below.

UKDS.Stat [user guides](#) and [video tutorials](#) provide extensive help on accessing the data. Please do [get in touch](#) if you have any questions for us.

UKDS.Stat platform	Other platforms and data formats
World Bank datasets: ADI   IDS   WDI	IMF eLibrary Text Collection <i>Currently unavailable</i>
IMF datasets: BOPS   DOTS   GFS   IFS   WEO	
OECD datasets	OECD International Trade by Commodity Statistics (2010) in CSV format
IEA datasets	United Nations Comtrade Database (premium access)
Unido industrial statistics: IDSB   INDSTAT2   INDSTAT4	Eurostat New Cronos Database

Download the series you want from the appropriate online tool: UKDS.Stat or IMF eLibrary.

[Login](#) | [Contact us](#) | [Guides](#) |  
Search   
[Getting Started](#)



**Explore our data on Sustainable Development Goals**

**No poverty:**

- Poverty headcount
- Infant mortality rate
- Percentage living on less than \$1.25 a day

**Zero hunger:**

- Prevalence of undernourishment
- Depth of food deficit

**Good health and wellbeing:**

- Maternal mortality
- Prevalence of HIV
- Measles immunisations

**Quality education:**

- Youth literacy rates

**Gender equality:**

- Adolescent fertility rate
- Parliamentary seats held by women

**Clean water and sanitation:**

- Access to improved sanitation facilities

**Industry, Innovation and Infrastructure:**

- Mobile cellular subscriptions
- R&D expenditure and technology exports

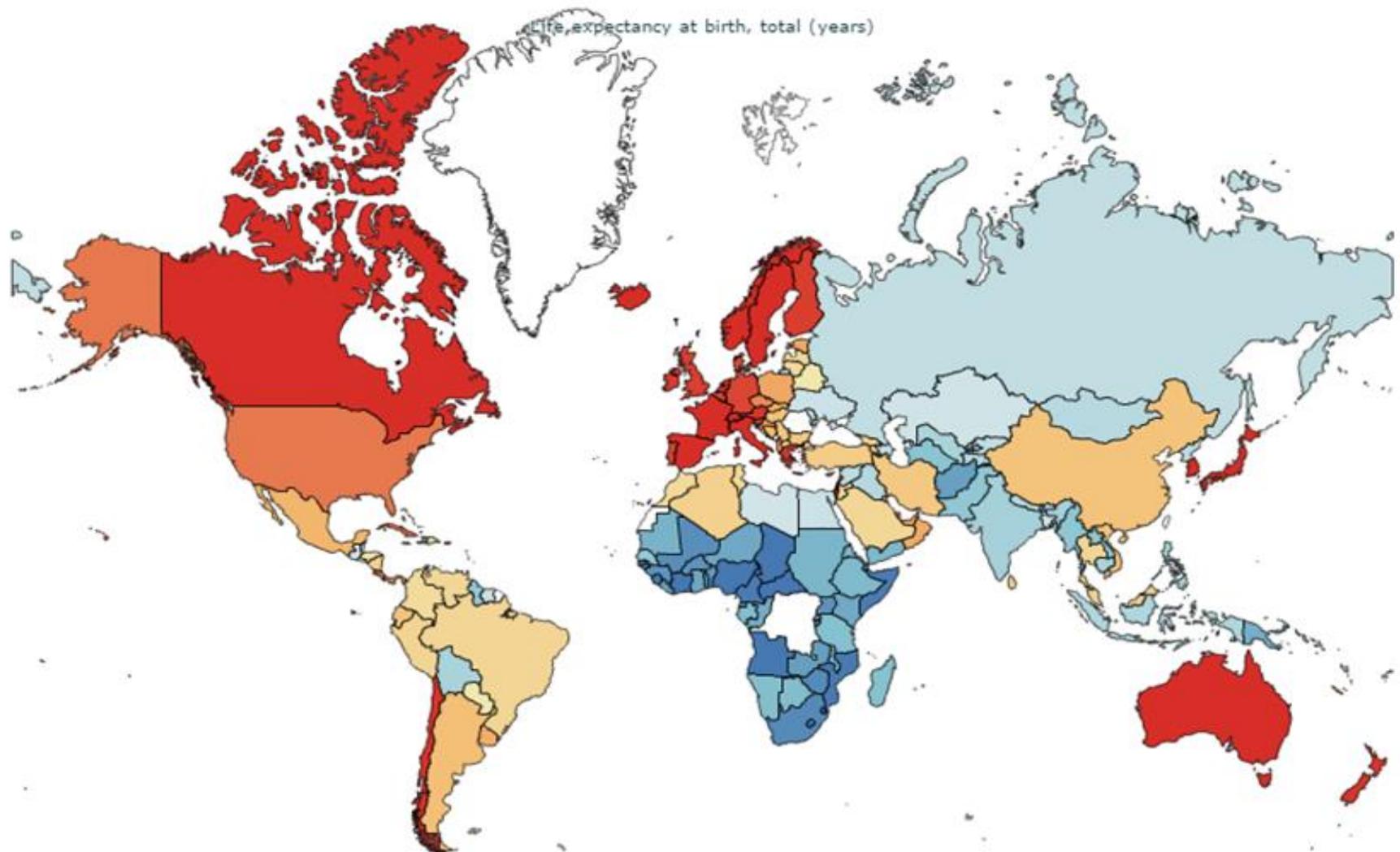
**Life on land:**

- Land use in African countries
- Protected terrestrial and marine areas
- Mammal and bird species, threatened

**Peace, justice and strong institutions:**

- Bribery incidence %
- Intentional homicide

# International Macrodata Outputs



Total Life Expectancy (years) – 2014  
World Bank (November 2016): World Development Indicators

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# Census Data

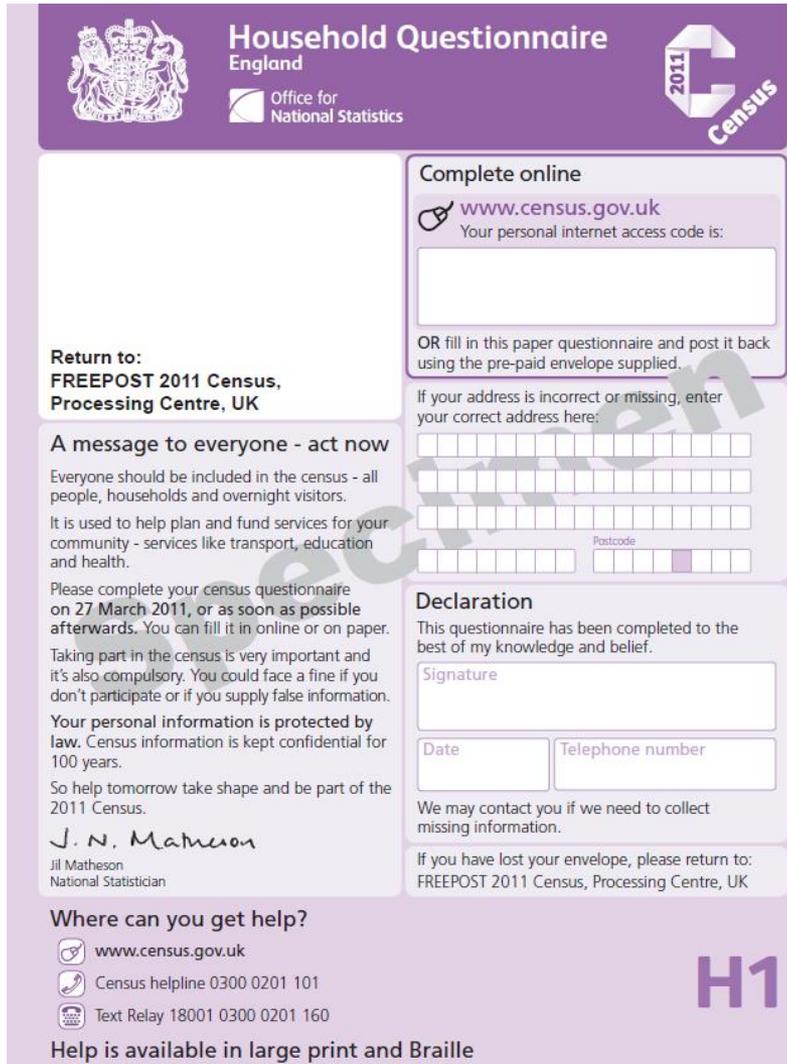


# UK census data

- 1971-2011 census data
- Gold standard
- Used as baseline for other statistics
- Detailed combinations of characteristics
- Small geographies
- Census outputs
  - Aggregate data
  - Boundary data
  - Flow data
  - Microdata



# Topics



**Household Questionnaire**  
England  
Office for National Statistics

2011 Census

**Return to:**  
**FREEPOST 2011 Census,**  
**Processing Centre, UK**

**A message to everyone - act now**  
Everyone should be included in the census - all people, households and overnight visitors.  
It is used to help plan and fund services for your community - services like transport, education and health.  
Please complete your census questionnaire on 27 March 2011, or as soon as possible afterwards. You can fill it in online or on paper.  
Taking part in the census is very important and it's also compulsory. You could face a fine if you don't participate or if you supply false information.  
Your personal information is protected by law. Census information is kept confidential for 100 years.  
So help tomorrow take shape and be part of the 2011 Census.  
*J. N. Matheson*  
Jil Matheson  
National Statistician

**Complete online**  
[www.census.gov.uk](http://www.census.gov.uk)  
Your personal internet access code is:  
  
OR fill in this paper questionnaire and post it back using the pre-paid envelope supplied.  
If your address is incorrect or missing, enter your correct address here:  
  
  
 Postcode

**Declaration**  
This questionnaire has been completed to the best of my knowledge and belief.  
Signature   
Date  Telephone number   
We may contact you if we need to collect missing information.  
If you have lost your envelope, please return to: FREEPOST 2011 Census, Processing Centre, UK

**Where can you get help?**  
[www.census.gov.uk](http://www.census.gov.uk)  
Census helpline 0300 0201 101  
Text Relay 18001 0300 0201 160

**H1**

Help is available in large print and Braille

- age
- sex
- health
- religion
- ethnicity
- caring
- travel to work
- household composition
- housing
- car ownership
- employment
- education
- national identity
- second homes
- intention to stay

# Census aggregate data

- Counts of people, households, etc. with particular combinations of characteristics for an area
- Areas vary from large to very small
- Example:  
Numbers of people who are aged over 50 and are unemployed (a combination of characteristics) within each of the wards in the district of Greater Manchester (a set of geographical zones).



# Census Tools - InFuse

UK Data Service  
Census Support



## InFuse: 2011 Census data



Steps: **1** 2 3 4

[Start Again](#)

### Topics

[+ Show Guidance](#)

#### Filters

[Clear filters](#)

Showing 90 topic combinations

Page 1 of 6

First < 1 | 2 | 3 > Last

#### Topics

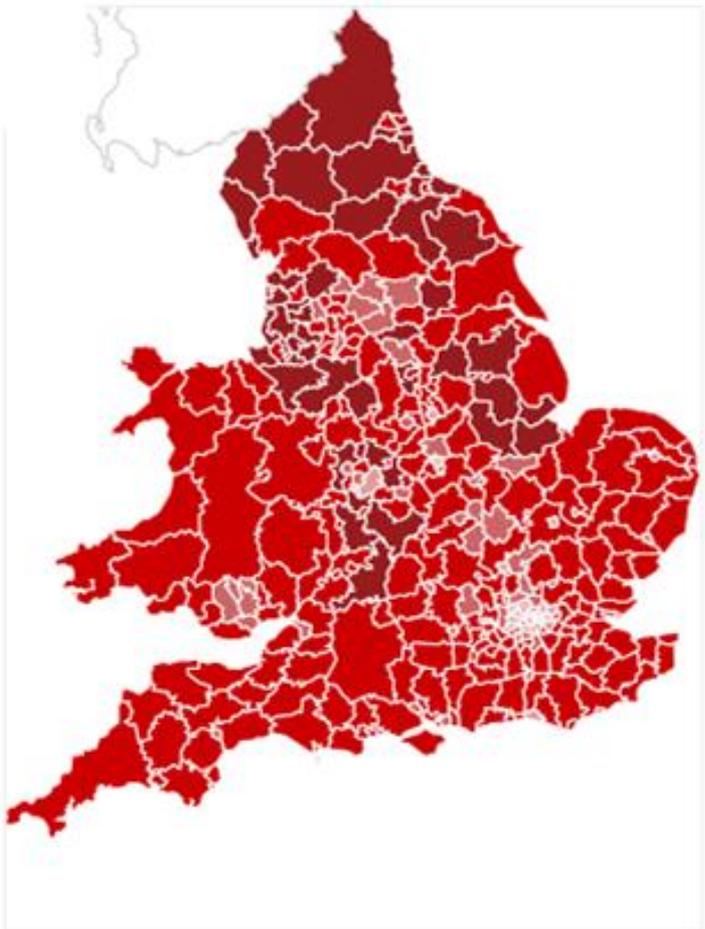
- Accommodation type
- Adult lifestage (alternative adult definition)
- Adults in household, number of
- Age
- Age of arrival in the UK
- Age of children
- Age of household reference person
- Age of schoolchildren and

<ul style="list-style-type: none"><li>Accommodation type</li></ul> <p>Select</p>	<ul style="list-style-type: none"><li>Age</li><li>Dependent children</li><li>Family status</li><li>Sex</li></ul> <p>Select</p>	<ul style="list-style-type: none"><li>Age</li><li>Economic activity</li><li>Industry</li></ul> <p>Select</p>	<ul style="list-style-type: none"><li>Age</li><li>Economic activity</li></ul> <p>Select</p>
<ul style="list-style-type: none"><li>Accommodation type</li><li>Usual resident population</li></ul>	<ul style="list-style-type: none"><li>Age</li><li>Economic activity</li><li>Hours worked</li><li>Sex</li></ul>	<ul style="list-style-type: none"><li>Age</li><li>Economic activity</li><li>Occupation</li><li>Sex</li></ul>	<ul style="list-style-type: none"><li>Age</li><li>Qualification, highest level of</li></ul>

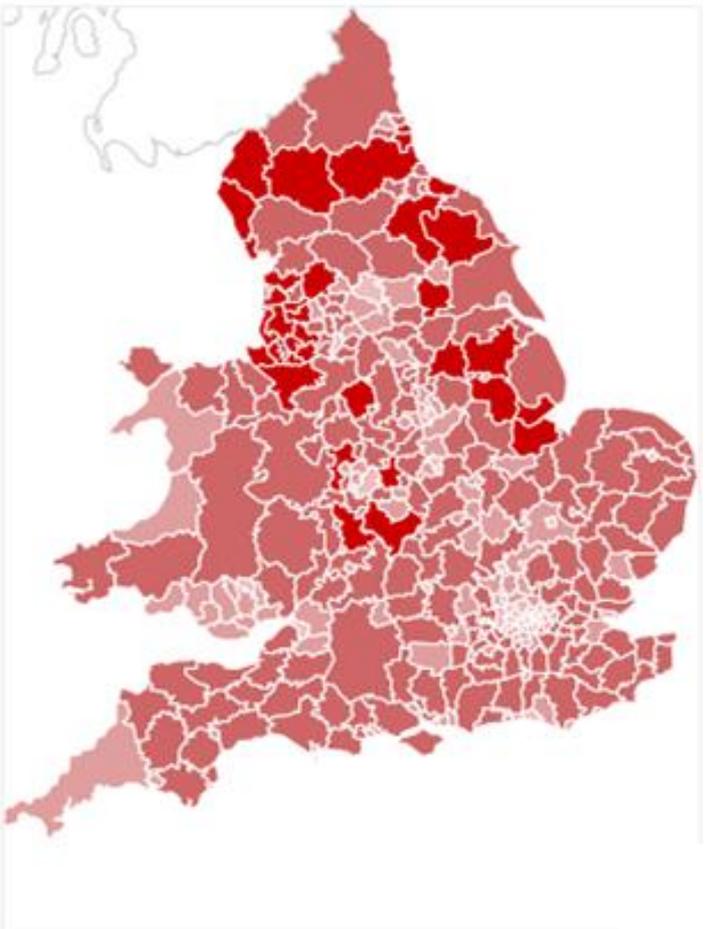
<http://infuse.mimas.ac.uk/>

# Religion

Percentage Christians, 2001



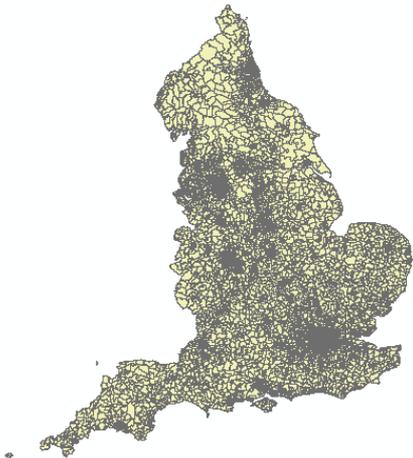
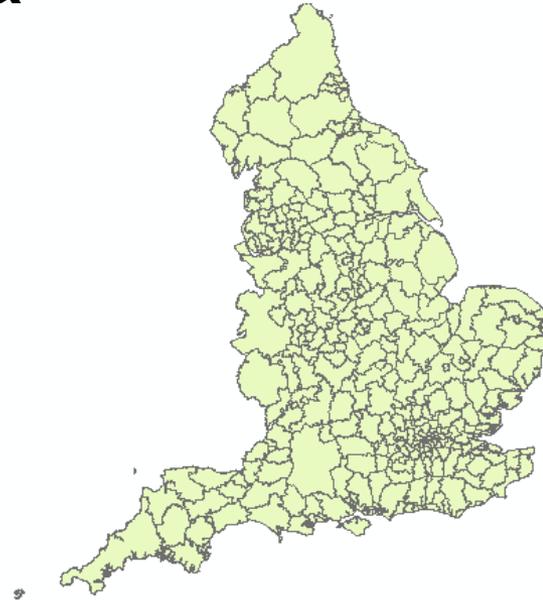
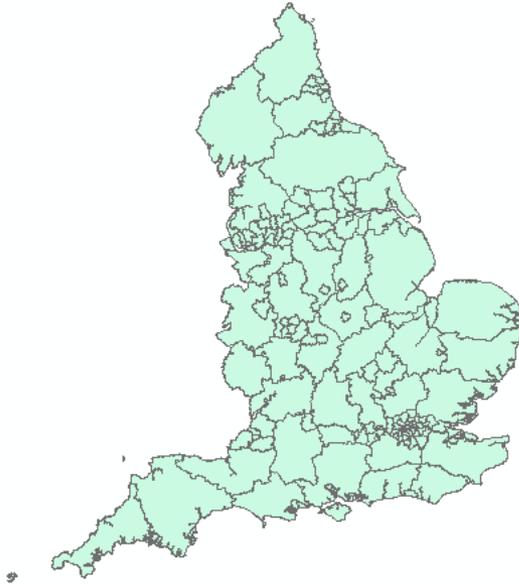
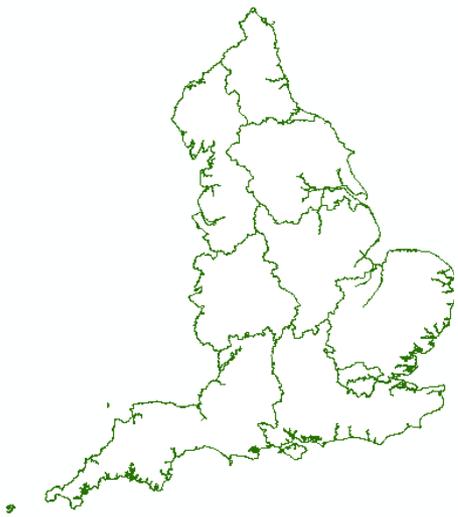
Percentage Christians, 2011



 More than 80%	 50-59%
 70-79%	 Less than 50%



# Census Boundary Data



# Census Tools – Boundary Data

## ACCESS BOUNDARY DATA

These tools are restricted to staff and students from UK further/higher education institutions.



### [EasyDownload](#)

The most regularly requested census boundaries available as ready-to-use national datasets in popular formats



### [Boundary Data Selector](#)

This facility lets you select the boundaries you want, for the area you want, in the format you want



### [Postcode Directory Download](#)

This facility allows you to download complete versions of current and historical postcode directories (sometimes referred to as look-up tables)



### [Postcode Data Selector](#)

This facility allows you to download the set of postcodes that you want from postcode directories released between 2001 and the present day



### [GeoConvert](#)

A geography matching and conversion tool. Obtain and manipulate complex geographical and postcode data in a straightforward way



### [Thematic Mapper](#)

Create Choropleth thematic maps from your own uploaded CSV file and boundary data from Census Support



### [Metadata Viewer](#)

This facility allows you to search for and view metadata records associated with the census geographic datasets



### [WICID \(Web-based Interface to Census Interaction Data\)](#)

This facility allows users to select and download migration and journey-to-work flow data collected by the Census of Population.



### [Casweb](#)

This facility contains boundary data bundled with census aggregate data for the 2001 and 1991 Censuses

<http://census.ukdataservice.ac.uk/geot-data/boundary-data.aspx>

<http://census.ukdataservice.ac.uk/usa-e-data/guides/boundary-data.aspx>

# Census Flow Data

- Special type of aggregate data, where there is an origin and destination
- Two main types
  - commuting
  - migration



<http://census.ukdataservice.ac.uk/use-data/guides/flow-data.aspx>

<http://cider.census.ac.uk/cider/wicid/query.php>

# Census Microdata

- Individual-level data which has been anonymised
- Sample of Anonymised Records (SARs)
- Looks like data you would get from doing a survey yourself
- Analysed using an analysis package like SPSS or Stata
- More flexible as you can produce your own tables, populations and attributes
- 1991, 2001 and 2011 SARs data available



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# Useful resources and Further help



# Useful tips - Advice for new users

- We have webpages for new users with information on:
  - How to find data with our search tools
  - How to register and access data
  - What kinds of data we hold
  - How you can get in touch?

## Advice for new users

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"Learn about our service and how to use our resources"



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The UK Data Service provides access to, and support for, the use of an extensive range of key economic and social data, spanning many disciplines and themes. Find out [about us](#).

Our search and browse application, [Discover](#), provides access to data and related resources, such as case studies, support guides and publications. Discover contains over 6,000 digital data collections for research and teaching purposes.

### Using our data

Anyone can register for our service but access to our resources may differ depending on your affiliation.

<b>Academic</b>	Public Sector	Voluntary Sector	Commercial	Personal
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# Interactive Events

- Webinars
  - Introduction to the UKDS
  - Introduction to key types of data
  - Specialised webinars for topic area, methods
  - E.g. An Introduction to survey data on health
  - Can be collaborative

UK Data Service

## Introductory Webinars



To help you get the most from the UK Data Service we run a series of webinars to introduce different aspects of the Service and explain our key datasets. They run from 15.00–16.00 and they are free to attend.

You can find other webinars on more specialised topics on our [events pages](#)

To book your place click on the dates below or go to [ukdataservice.ac.uk/news-and-events](http://ukdataservice.ac.uk/news-and-events)

### Introduction to the UK Data Service

The UK Data Service holds the UK's largest collection of research data. This introductory webinar is for anyone with an interest in social research who wants to hear about the vast array of resources we offer. Participants will learn about the different types of quantitative and qualitative data we hold, how to find those data collections using our online resource discovery tools, and how to register to access datasets in a number of different formats. We will also demonstrate how some of our data collections can be viewed and analysed online, as well as providing an overview of our support and training resources for students, researchers and teachers.

### Finding and accessing data in the UK Data Service

This introductory webinar is intended for anyone who wants to hear about finding data from the UK Data Service. Participants will be given a practical overview of the tools that the service provides, particularly our Discover tool to help you to make the most of your data searches. We will discuss best approaches to searching data and how to use the search tool to narrow down search results. We will also explore other service resources provided to help you get the data you want and related information.

### Key issues in reusing data

Participants will hear about the key issues in secondary analysis as a method. The introductory session will briefly cover the pros and cons of reusing data and the importance of learning about the origins of your data. Quantitative and qualitative secondary analysis will be discussed with examples and issues of context, sampling and ethics will be raised.

# Resources for using data

UK Data Service



Advice and training

Guides

Video tutorials

Data in use

Citing data

Secure Lab

Teaching with data

Student resources

Data Skills Modules

Secondary analysis

About us

Get data

Use data

Manage data

Deposit data

Home > Use data

## Use data

"Information,  
training and support  
for our users"



SHARE

Behind everything we do is the desire to see data used to its maximum potential. To help you to make best use of our collection we offer resources and support for users.

This section contains information on:

- [advice and support](#), including information about our helpdesk and training
- a number of [guides](#), [video tutorials](#) and pointers to other useful information
- examples of [how the data have been used](#) by others
- information and resources designed for [teachers and learners](#)

# Surveys

## Unit 1: What are survey data?

This unit will explore survey data.

You will look at what the data are, some key concepts relating to survey data and how to find datasets that you can use.

You can work through this unit in order using the next button, or use the menu to view the list of sections and jump to the part you are most interested in.



### Demo: Opening a data set

This video illustrates how to open a data set in PSPP.



Open video in a new window

SPSSID	StateID	Popstand	SCORE	WFactor	CHURN	SCORE2	ABSVN	County	Sex	Age	HouseHd	FDes	FPage	F2015	F2012	F2011	F2010	F2009
101	101	2	12	1.52	1.05	11	2	2	2	38	4	1	39	1	1	1	1	1
101	101	2	12	52	55	11	1	2	1	81	1	0	-1	0	0	0	0	0
101	101	2	12	40	55	11	2	2	2	Female	1	0	-1	0	0	0	0	0
101	101	2	12	40	55	11	3	2	2	57	1	0	-1	0	0	0	0	0
101	101	2	12	84	110	11	1	2	1	82	2	2	83	1	1	1	1	0
101	101	2	12	89	110	11	2	2	2	10	2	1	46	2	2	2	2	0
101	101	2	12	86	110	11	1	2	2	42	2	1	45	1	1	1	1	0
101	101	2	12	113	105	11	2	2	1	76	3	2	72	1	1	1	1	1
101	101	2	12	137	105	11	3	2	2	52	5	2	22	2	2	2	2	1
101	101	2	12	55	55	11	1	2	2	36	1	0	-1	0	0	0	0	0
101	101	2	12	161	220	11	2	2	2	52	4	1	51	1	1	1	1	1
101	101	2	12	126	110	11	3	2	1	46	2	2	29	1	1	1	1	0
101	101	2	12	46	55	11	1	1	1	42	2	1	8	2	2	2	2	0
101	101	2	12	61	55	11	1	1	1	45	1	0	-1	0	0	0	0	0
101	101	2	12	72	110	11	2	2	2	56	2	2	21	2	2	2	2	0
101	101	2	12	109	110	11	3	2	1	36	4	2	35	1	1	1	1	1
101	101	2	12	47	55	11	1	2	1	51	1	0	-1	0	0	0	0	0
102	101	2	12	115	110	11	1	2	1	38	4	2	34	1	1	1	1	1
102	101	2	12	40	55	11	2	2	1	74	1	0	-1	0	0	0	0	0
102	101	2	12	76	110	11	1	2	2	58	2	1	58	1	1	1	1	0
102	101	2	12	87	110	11	3	2	2	40	5	1	40	1	1	1	1	1
102	101	2	12	80	110	11	2	2	1	72	2	2	69	1	1	1	1	0
102	101	2	12	40	55	11	2	2	1	72	1	0	-1	0	0	0	0	0
102	101	2	12	40	55	11	3	2	1	74	1	0	-1	0	0	0	0	0
102	101	2	12	90	110	11	3	2	1	66	2	2	67	1	1	1	1	0
103	102	3	12	102	55	11	1	2	1	28	1	0	-1	0	0	0	0	0
103	102	3	12	66	55	11	1	2	2	71	1	0	-1	0	0	0	0	0

# User Support Helpdesk

- Data-related queries
  - Finding suitable data
  - Identifying specific variables
  - Understanding the data - coding frames, etc.
  - Data problems/anomalies

Help

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"How can we help?"



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# Questions

[ukdataservice.ac.uk/help/](http://ukdataservice.ac.uk/help/)

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