

UK Data Service Webinar: Data in the spotlight: Census and population studies

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What is a census?

- Main function to count the population
 - At one or more location
- Obtain some characteristics about the population
- Outputs at small geographies
- Informs public spending
- Used as a basis for other statistical systems



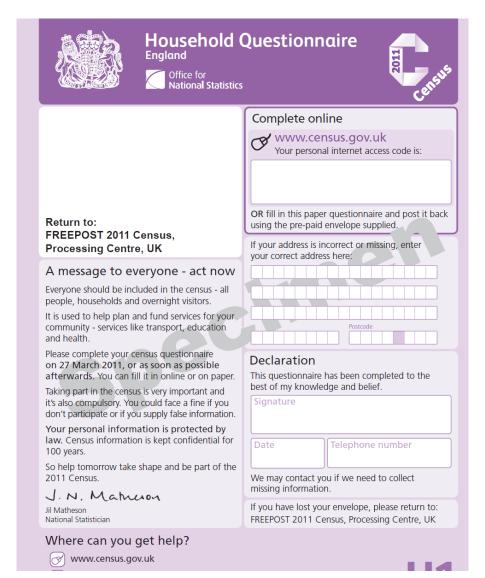




Help tomorrow take shape



How were the data collected?



Self-completion

Post-out post back

Online completion

Census offices could focus resources on follow-up and hard to count areas



What questions were asked?

Demographics

Age

Sex

Country of Birth

Short-term residence

Ethnicity

Religion

Passports

Language

National identity

Household relationships

Marital status

Second residence

Migration

Household

Tenure

Accommodation type

Cars

Central heating

No. of bedrooms

Socio-economic

Health

Unpaid care

Qualifications

Economic activity

Occupation

Industry

Supervision

Travel to work

Full Time / Part Time



Getting a complete count

- Establishing a high quality address register
- Focusing resources on hard to count areas
- Target response rate of 94% achieved no local authority below 80%
- Lower response rates for young men, those born overseas, those who live alone
- Coverage survey used to estimate undercounts, to enable imputation



The promise of confidentiality

The information you provided to us in the 2011 Census is confidential and protected by law.

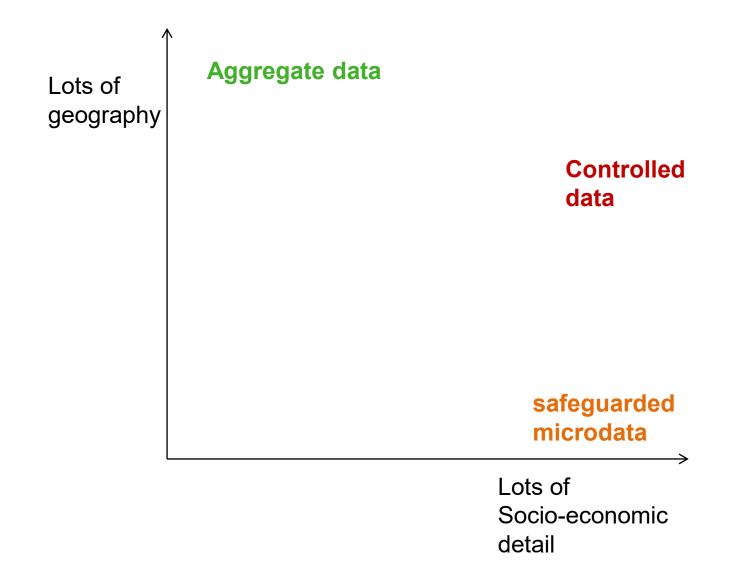
The confidentiality of personal information is a top priority for the census. Your personal census information is not shared with any other government department, local councils or marketing companies.

Information collected in the 2011 Census will be used solely to produce statistics and for statistical research. These statistics will not reveal any personal information.

The paper questionnaires are scanned, then shredded, pulped and recycled. Census records are kept confidential for 100 years before being made available to the public. Census records remain closed while they are in the custody of the census offices. Records from the 2011 Census for England and Wales are not scheduled for public release before January 2112



Reflecting confidentiality in output planning





Census output types

Supported by the UK Data Service

- Microdata
 - Samples of census records
 - Detail limited to protect confidentiality
- Aggregate data
 - · Counts of combinations of characteristics for areas
- Flow data
 - Counts of migrants from origin to destination
 - Or, between first and second address
 - Or home and place of work
- Boundary data
 - GIS files to enable these to be mapped

Supported by CALLS http://calls.ac.uk/

Longitudinal microdata for each country



Microdata (Individual level detail)

- Individual records contain person and household characteristics
- Sample data only

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Why use this type of data?

- Very flexible
 - Can create your own tables
 - Can combine characteristics to create new ones
 - Can define sub populations
 - Can undertake multivariate analysis
- But
 - Sample data, means that results are estimates
 - Geographical detail is limited



Types of 2011 census microdata

- Teaching files (Open) available from census offices for some time
 - 1% taster file
 - Regional geography
 - England and Wales file available in Nesstar
- Safeguarded files available from UK Data Service
 - Each file contains a 5% sample
 - Regional file for each territory (slightly more individual detail than the:)
 - Grouped local authorities for each territory (minimum LAD population threshold = 120,000)
- Controlled files contact relevant census office
 - 10% sample
 - Very detailed with true LAD geography

More info:

Census microdata web page



Dataset summary for England and Wales

Characteristic	Teaching	Safeguarded Regional	Safeguarded grouped LA	Secure individual	Secure Household	
Number of variables	18	121	121	258	245	
Smallest geography	Region	Region	LAD > 120,000	LAD	LAD	
Licence	OGL	End User Licence	End User Licence	Approved Researcher	Approved Researcher	
Sample size	n=569,741 1%	n=2,858,155 5%	n=2,795,020 5%	n>5 million 10%	n>5 million 10%	
Age detail	8 age groups	Individual yrs to 70, then 5 groups	Individual yrs to 70, then 5 groups	Individual yrs to 94, then 95-96, 97+	Individual yrs to 94, then 95-96, 97+	
Occupation detail	9 classes	25 classes	25 classes	Full: 369 classes of SOC plus ISCO	Full: 369 classes of SOC plus ISCO	
Ethnic group	5 classes	18 classes	13 classes	Full: 151 categories	Full: 151 categories	



e.g. Safeguarded Regional for England and

Wales:







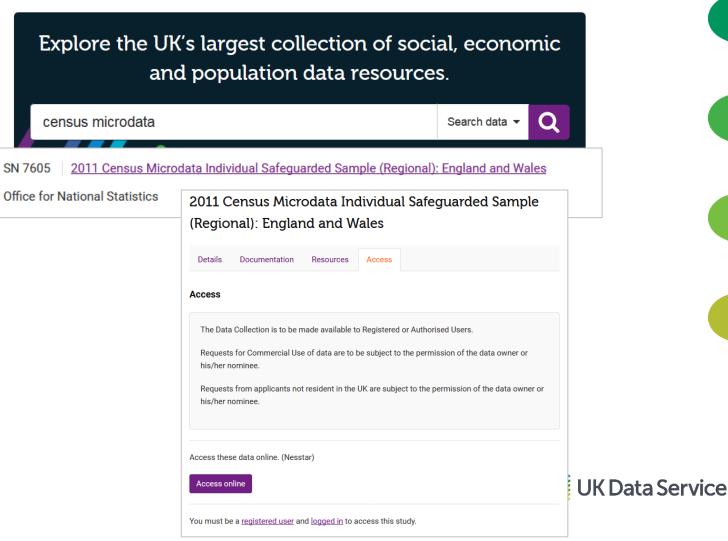


1. Quick to find using discover...

2 Click the relevant search result

3. Click "Access" tab, then "Access online"

4. You will need to be registered to interrogate the data



Population Base – Short term migrants (STR in England and Wales and NI files only)

"A STR was defined in the 2011 Census as anyone living in England and Wales who was born outside the UK and who intended to stay in the UK for a period of between three and 12 months, for any reason." ONS 2013

Full-time students/schoolchildren by population base and age

Census Microdata Teaching File for England and Wales 2011

Population Base			Age group						
Population Da	456		Less than 16	16-24	25-34	35+			
Usual	Student	Yes	81737	31166	3608	2204			
resident	Student	No	23993	35122	71608	311602			
	Total		105730	66288	75216	313806			
Student living away from	Student	Yes	944	5572	185	29			
home during term-time	Total		944	5572	185	29			
Chart tarm	Student	Yes	115	711	233	33			
Short-term resident	Student	No	43	214	314	308			
resident	Total		158	925	547	341			
Total	Total		106832	72785	75948	314176			



Data about areas

- known as aggregate data
- counts of people, households, etc. with particular combinations characteristics for an area



- areas vary from large to very small
- example: number of females aged 30-34 who are married and live in private rented accommodation in the county of Devon





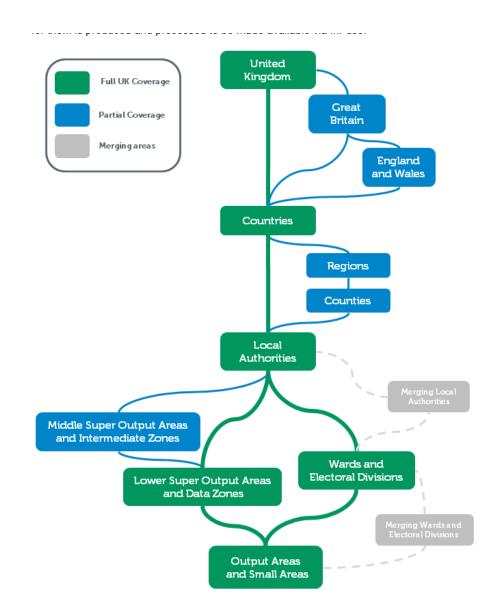
Example data

Age: 16 to 24 years old - Religion (England and Wales): Muslim - Unit: People

CDU_	ID	GEOGRAPHY	GEOGRAPHY LABEL	GEOGRAPHY T	F79175	F79176	F79177	F79178	F	79	F79180	F79181	F79182	F79183
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	10251	16UB	16UB : Allerdale	Districts	6803	0	6	5	0	10	0	15	1038	504
	10252	16UC	16UC : Barrow in-Fu	Districts	4972	3	0		3	23	0	10	1131	500
	10253	16UD	16UD: Carlisle	Districts	7395	14	3		3	48	6	15	1857	827
	10254	16UE	16UE : Copeland	Districts	5514	6	9		3	12	0	3	684	424
	10255	16UF	16UF : Eden	Districts	3142	5	3		0	6	0	3	729	274
	10256	16UG	16UG: South Lakelar	Districts	6073	17	6	i	3	3	3	13	1810	648



2011 geographical levels





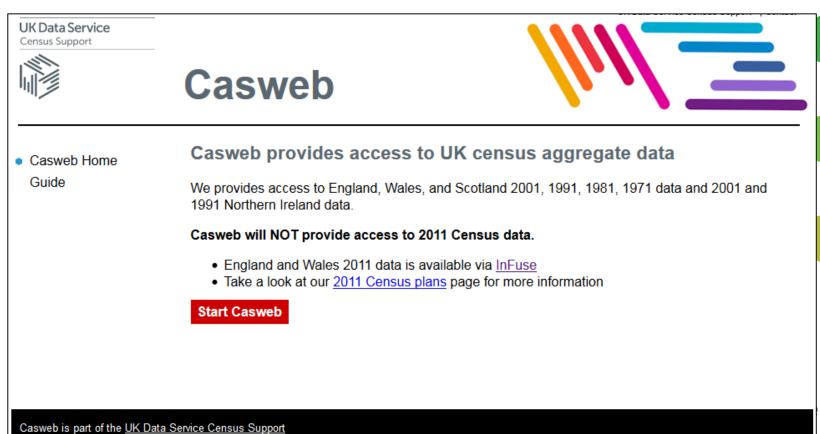
Area data coverage

Census	Coverage	Tool
2011	UK	InFuse
2001	UK	InFuse (E&W) Casweb
1991	UK	Casweb
1981	GB	Casweb
1971	GB	Casweb



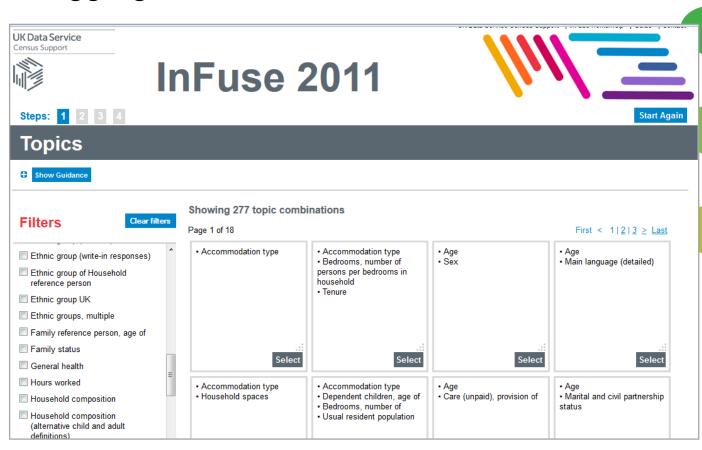
Casweb

- casweb.ukdataservice.ac.uk
- 1971-2001 aggregate data
- select by table
- open to everyone



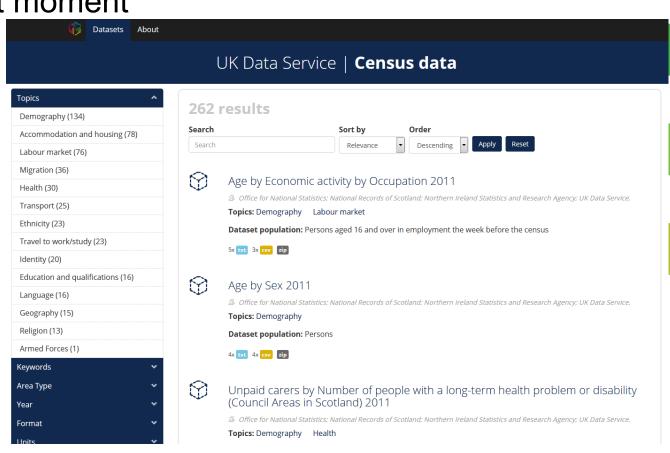
InFuse

- infuse.ukdataservice.ac.uk
- 2011 UK aggregate data
- 2001 England and Wales aggregate data
- integrated metadata
- select by topic or geography
- makes it easy
- open to everyone

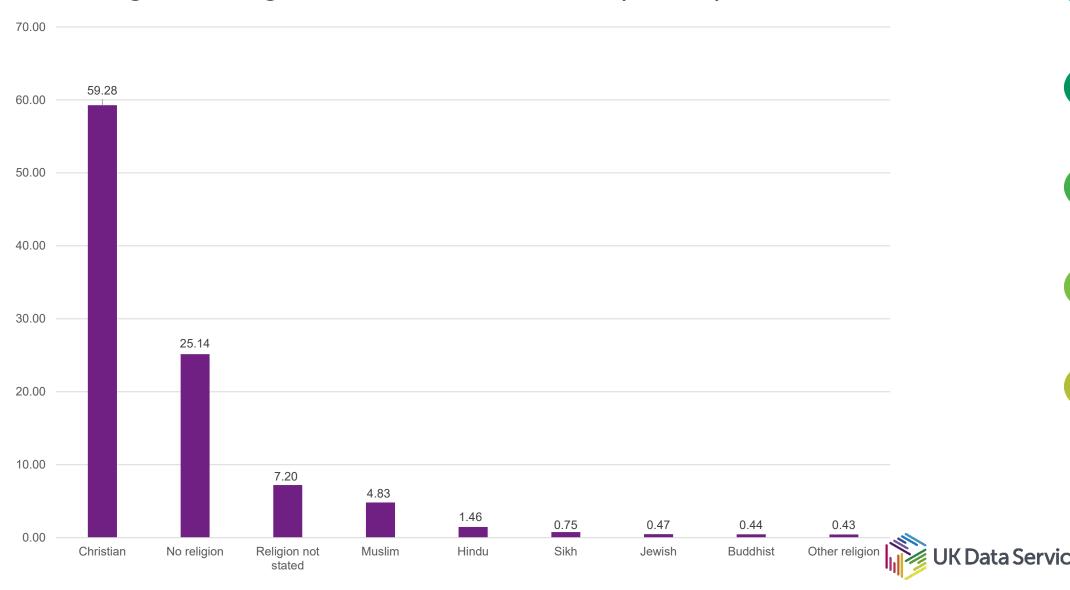


Census bulk download – New interface

- statistics.digitalresources.jisc.ac.uk
- 2011 Census data (aggregate, flow, boundaries)
- BUT Only selected datasets at moment
- UK wide
- Bulk download
- Search
- Open to everyone



Religion England and Wales % (2011)

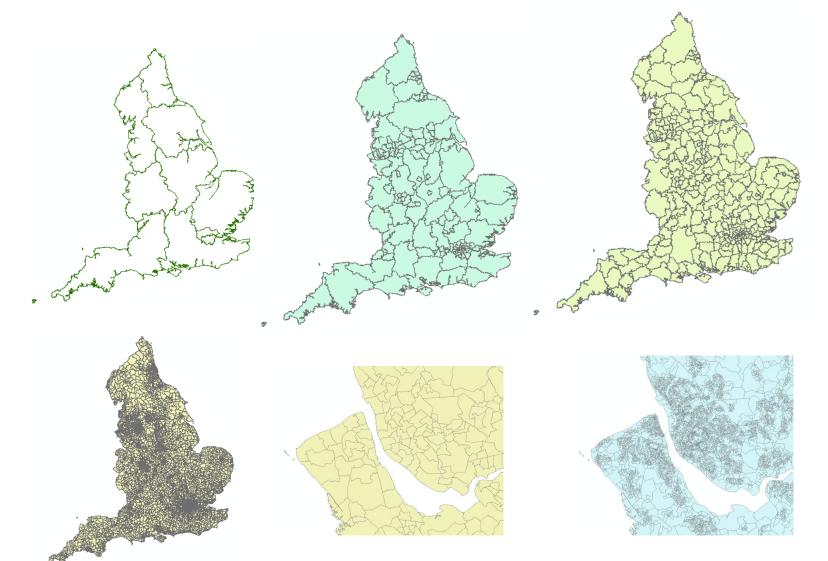


Boundary data

- 1971-2011 (also some historical boundaries)
- most data open to all (some restricted to UK FE/HE)
- GIS formats
- delivered through:
 - Easy Download
 - Boundary Data Selector
- Thematic Mapper

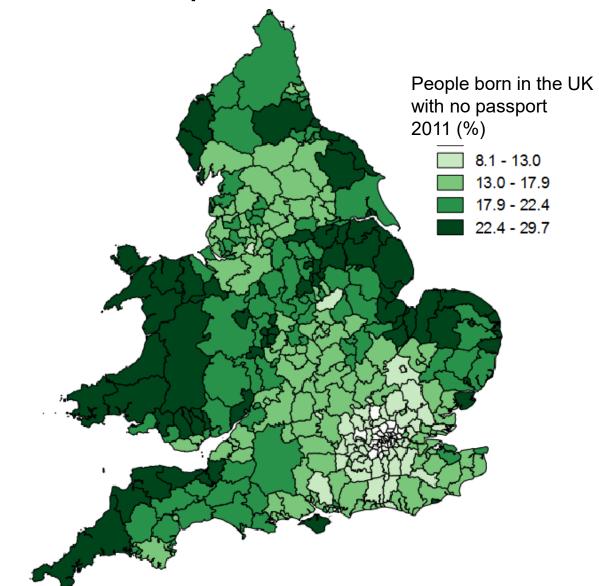


Census boundary data





Putting data in maps





Census flow data

- special type of aggregate data, where there is an origin and destination
- two main types
 - commuting
 - migration
- 1981-2011, and non census data
- access levels
- wicid.ukdataservice.ac.uk





Flow data – Travel by train Local Authorities (2011 Census)

2011 SWS Merged LA/LA [Location of usual residence and place of work by method of travel to work] - WU03UK - Open

Origin geography: UK Local Authorities (merged) 2011 Destination geography: UK Local Authorities (merged) 2011

Layer: Table WU03UK cell 4 - Method of travel to work Train;

Origina	Destinations								
Origins	Hartlepool	Middlesbrough	Redcar and Cleveland	Stockton-on-Tees	Darlington				
Hartlepool	26	32	0	49	11				
Middlesbrough	6	75	23	53	40				
Redcar and Cleveland	3	295	124	125	26				
Stockton-on-Tees	25	132	33	93	71				
Darlington	2	77	9	61	79				















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ongitudinal Data Aggregate Data Survey Data



Data Skills Modules

Learn more about longitudinal, survey and aggregate data in our new Data Skills Modules



Find out how data from the Service collection are used research, influence policy develop skills.

Our impact

Latest data

Active Lives Survey, 2016-2017

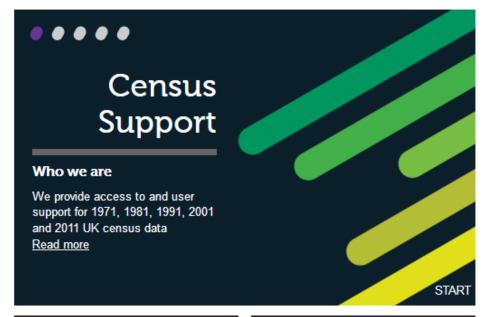
British Household Panel Survey: Waves 1-18, 1991-2009: Special Licence Access

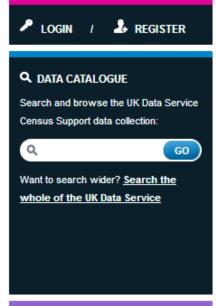
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 - ukdataservice.ac.uk/help/



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If you do need to contact us, please get in touch.

