
2011 Census – aggregate data

Richard Wiseman

Justin Hayes

Webinar

January 2015

UK Data Service
Census Support



2011 Census – aggregate data

The webinar will begin at 2pm

- You now have a menu in the top right corner of your screen.
- The red button with a white arrow allows you to expand and contract the webinar menu, in which you can write questions/comments.
- We won't have time to answer questions while we are presenting, but will answer them at the end
- You will be on mute throughout – we can't hear you.



Welcome

Some introductions...



Richard Wiseman

UK Data Service
Mimas, Jisc



Justin Hayes

UK Data Service
Mimas, Jisc



Can you hear us?



If you can't hear us

- Check your speakers/headset
- Check your volume
- Use the phone number in your invitation to call in
- The webinar is being recorded - we'll send a link



Webinar structure

- 30 minute presentation
- 20 minutes for questions and answers
- Finish by 2.50pm
- Please use chat facility to ask questions or let us know of any problems
- Some questions for the audience during presentation



Presentation content

- The UK Data Service
 - UK Data Service Census Support
- Census background
 - Aggregate data
 - Geographies
- InFuse
 - Demo
 - Data / geography model
 - Next release
 - Future plans



The UK Data Service

- Funded by the ESRC, integrating several previous resources
- A single, comprehensive and integrated point of access to a wide range of social science data
- Support, training and guidance
- ukdataservice.ac.uk



UK Data Service Census Support

- A specialist unit of the UK Data Service
- Access to, and support for use of data from the last five UK censuses (1971 – 2011)
- Bespoke interfaces to make data easy to find, understand and use
- census.ukdataservice.ac.uk





Welcome to the UK Data Service

Your resource for quality social research data

A unified point of access to data from ESDS, Census Programme, Secure Data Service and others



STOP

LOGIN / REGISTER

DISCOVER UK DATA SERVICE

Search and browse our data collection, support guides, case studies and related publications.

GO

Data Website

LATEST TWEETS



UKDataService @PHE_obesity Soon -- within the next 30 days. Subscribe to our email list to get weekly updates on new data releases! http://t.co/0MrojGvxxdN

LATEST NEWS



HASSET available as Linked Data

Call for papers: Opinions and Lifestyle Survey user meeting

OUR DATA COMMUNITY



The UK Data Service is at the core of a network of trust that includes data owners, producers, funders and users.

QUICK ACCESS TO

- Key data
- Census Support
- Information for new users
- Frequently asked questions



Census Support

Who we are

We provide access to and user support for 1971, 1981, 1991, 2001 and 2011 UK census data

[Read more](#)

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Search and browse the UK Data Service

Census Support data collection:

GO

Census Data Website

Want to search wider? [Search the whole of the UK Data Service](#)

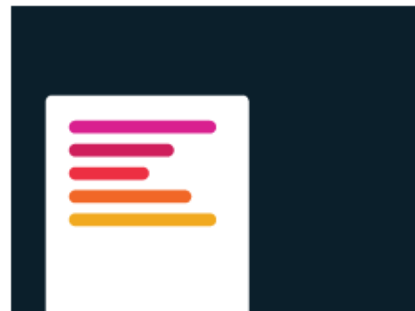
LATEST TWEETS

UKDataService Are you going to the GESIS Summer School in Survey Methodology? Cologne, 8-30 August <http://t.co/IV9rDin1R>

UKDataService @CLOSER_UK If you don't know, LSYPE is Long. Study of Young People in England. Data and documentation available here <http://t.co/vMUGMj42A>

UKDataService RT @CLOSER_UK: @usociety has alcohol data from age 10

LATEST NEWS



Book now for an introduction to using UK census data geographically

Webinar week at UK Data Service: Five free online sessions

Updated 2011 Census Output Area

UK DATA SERVICE CENSUS SUPPORT



We are the UK Data Service Census Support. This site replaces the old ESRC Census Portal and provides access to a range of census-related resources.

We do not hold the census longitudinal data. However, these can be found at

QUICK ACCESS TO

- UK Data Service
- Aggregate data
- Flow data
- Microdata
- Boundary data

Are you a census user?



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UK Censuses

- Decennial questionnaire surveys
 - Entire UK population every ten years* since 1801
 - Questions mainly about people and households
 - 2011 Census cost ~ £500m
- Primary evidence for government policy and spending
 - Wide range of high quality demographic and socio-economic characteristics
 - Detailed combinations of characteristics - *What?*
 - Small areas - *Where?*
 - Long history – *When?*
- Rich secondary source of information
 - Open Government License!



Aggregate data

- Counts of people and households with particular combinations of characteristics for particular geographical areas
 - Characteristics derived from questionnaire responses
 - Very large to very small areas (UK to postcodes)
 - Females aged 16-74 in employment in associate professional and technical occupations and usually resident in wards in the County of Devon?









Axminster
Town

Axminster
Rural

Broadclyst

Beer and Branscombe





43 ♀

65 ♀

152 ♀

38 ♀

Aggregate data

CDU_ID	GEO_CODE	GEO_LABEL	F403	F412			
			Age : Age 16 to	Age : Age 16 to			
1243845	E05003459	Axminster Rural	548	43			
1243846	E05003460	Axminster Town	985	65			
1243847	E05003461	Beer and Branscombe	403	38			
1243848	E05003462	Broadclyst	1223	152			

Age : Age 16 to 74 - Economic activity : in employment the week before the census - Occupation : 3. Associate professional and technical occupations - Sex : Female - Unit : Persons

1243855	E05003469	Exmouth Halsdon	1547	153			
1243856	E05003470	Exmouth Littleham	1262	138			
1243857	E05003471	Exmouth Town	1822	180			

Age : Age 16 to 74 - Economic activity : in employment the week before the census - Occupation : All categories\ Occupation - Sex : Female - Unit : Persons

1243863	E05003480	Ottery St Mary Town	1115	122			
1243864	E05003481	Raleigh	475	37			
1243865	E05003482	Seaton	1290	93			
1243866	E05003483	Sidmouth Rural	396	39			
1243867	E05003484	Sidmouth Sidford	1272	100			
1243868	E05003485	Sidmouth Town	918	72			
1243869	E05003486	Tale Vale	603	59			
1243870	E05003487	Trinity	516	63			
1243871	E05003489	Woodbury and Lymptone	1011	108			
1243872	E05003490	Yarty	504	51			
1243873	E05003491	Alobington	2220	223			

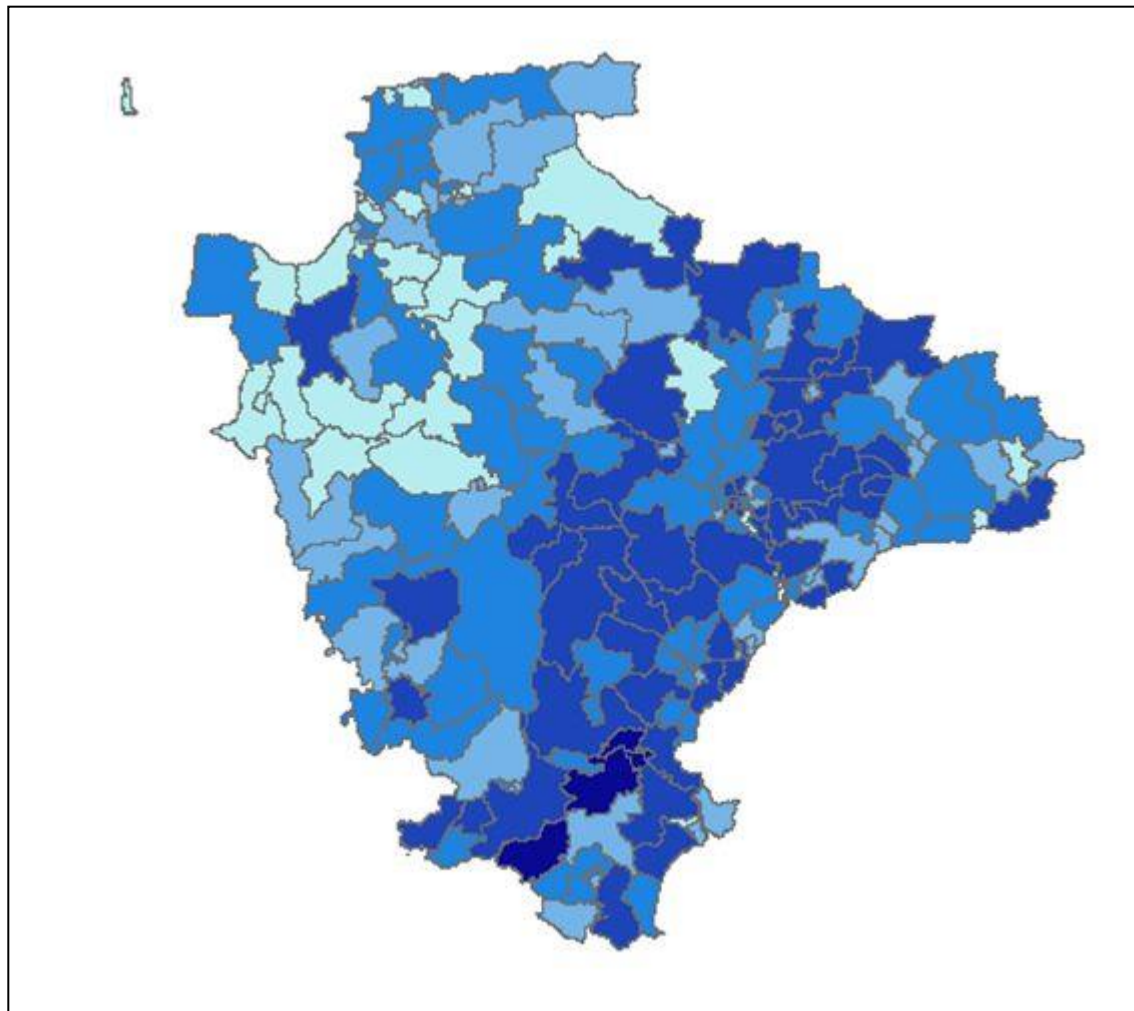


Aggregate data

CDU_ID	GEO_CODE	GEO_LABEL	F403	F412		
			Age : Age 16 to	Age : Age 16 to	Percentage	
1243845	E05003459	Axminster Rural	548	43	7.8	
1243846	E05003460	Axminster Town	985	65	6.6	
1243847	E05003461	Beer and Branscombe	403	38	9.4	
1243848	E05003462	Broadclyst	1223	152	12.4	
1243849	E05003463	Budleigh	1017	107	10.5	
1243850	E05003464	Clyst Valley	519	59	11.4	
1243851	E05003465	Coly Valley	913	86	9.4	
1243852	E05003466	Dunkeswell	412	33	8.0	
1243853	E05003467	Exe Valley	461	42	9.1	
1243854	E05003468	Exmouth Brixington	1491	121	8.1	
1243855	E05003469	Exmouth Halsdon	1547	153	9.9	
1243856	E05003470	Exmouth Littleham	1262	138	10.9	
1243857	E05003471	Exmouth Town	1823	189	10.4	
1243858	E05003472	Exmouth Withycombe Raleigh	1730	129	7.5	
1243859	E05003475	Honiton St Paul's	1030	82	8.0	
1243860	E05003476	Newbridges	470	35	7.4	
1243861	E05003477	Newton Popleford and Harpford	462	47	10.2	
1243862	E05003478	Otterhead	524	52	9.9	
1243863	E05003480	Ottery St Mary Town	1115	122	10.9	
1243864	E05003481	Raleigh	475	37	7.8	
1243865	E05003482	Seaton	1290	93	7.2	
1243866	E05003483	Sidmouth Rural	396	39	9.8	
1243867	E05003484	Sidmouth Sidford	1272	100	7.9	
1243868	E05003485	Sidmouth Town	918	72	7.8	
1243869	E05003486	Tale Vale	603	59	9.8	
1243870	E05003487	Trinity	516	63	12.2	
1243871	E05003489	Woodbury and Lypstone	1011	108	10.7	
1243872	E05003490	Yarty	504	51	10.1	
1243873	E05003491	Alabington	2220	222	10.0	



Aggregate data



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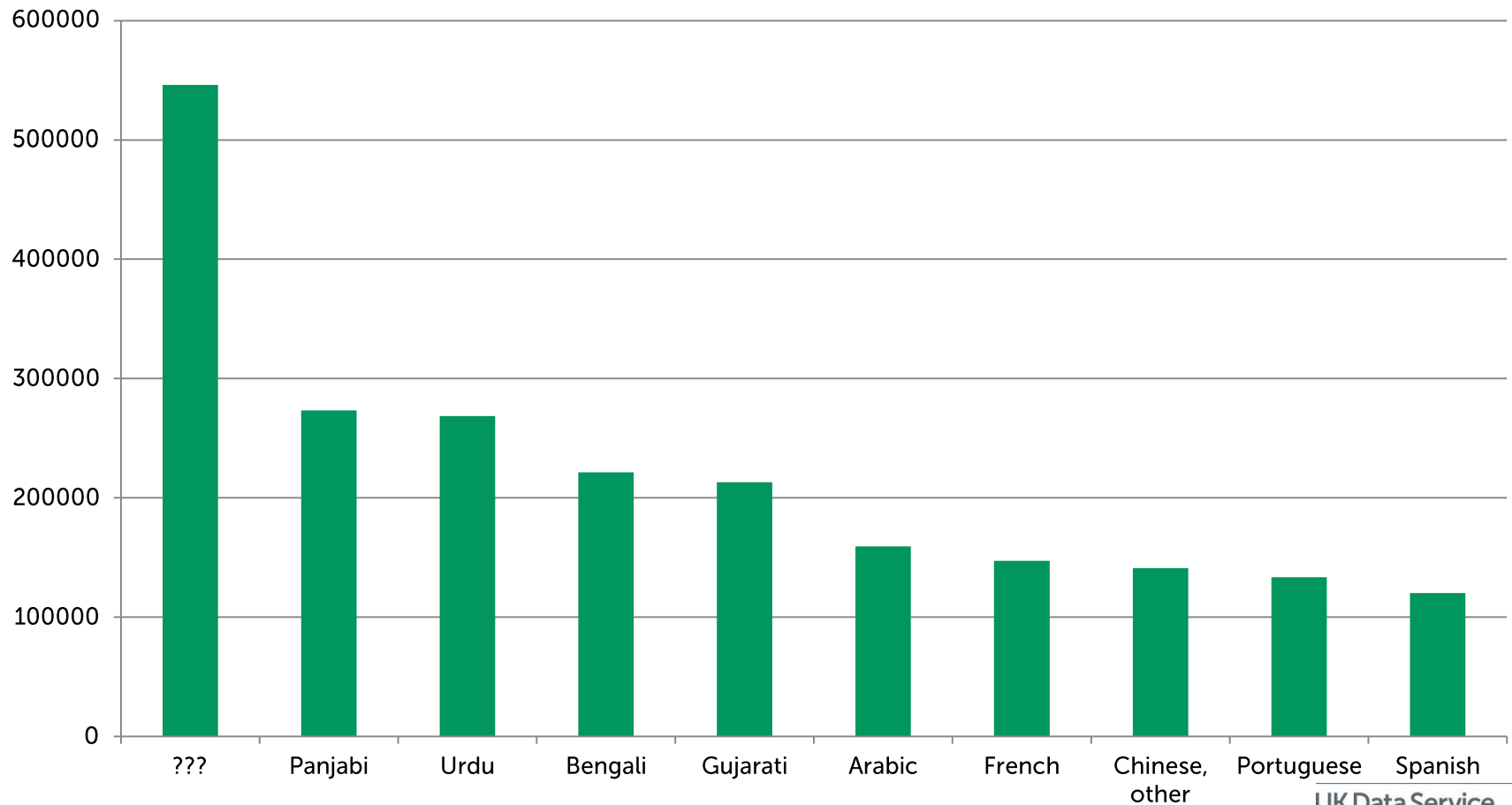


UK 2011 Census

- 27 March 2011
- Three UK census agencies (ONS, NRS, NISRA)
- New questions and variables
- Online and postal completion
- Targeted enumeration
- Sophisticated quality assurance



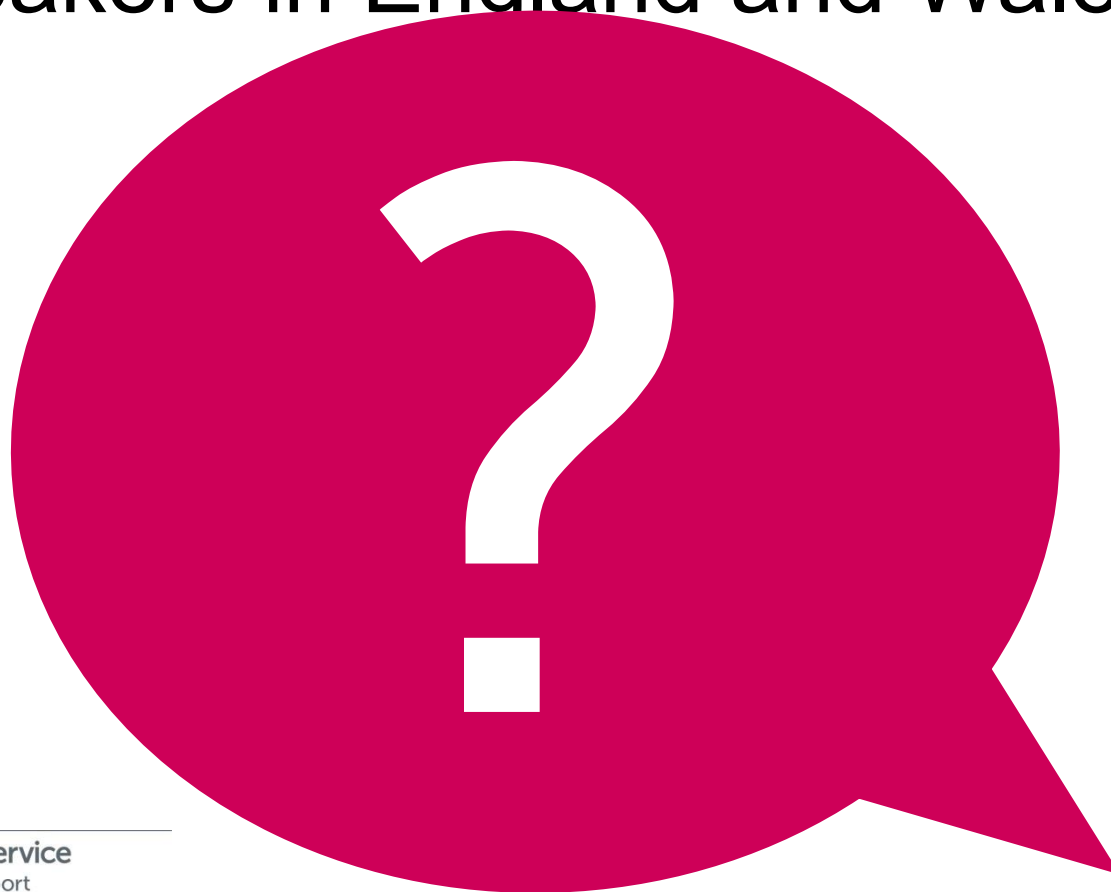
Main language other than English by number of speakers in England and Wales



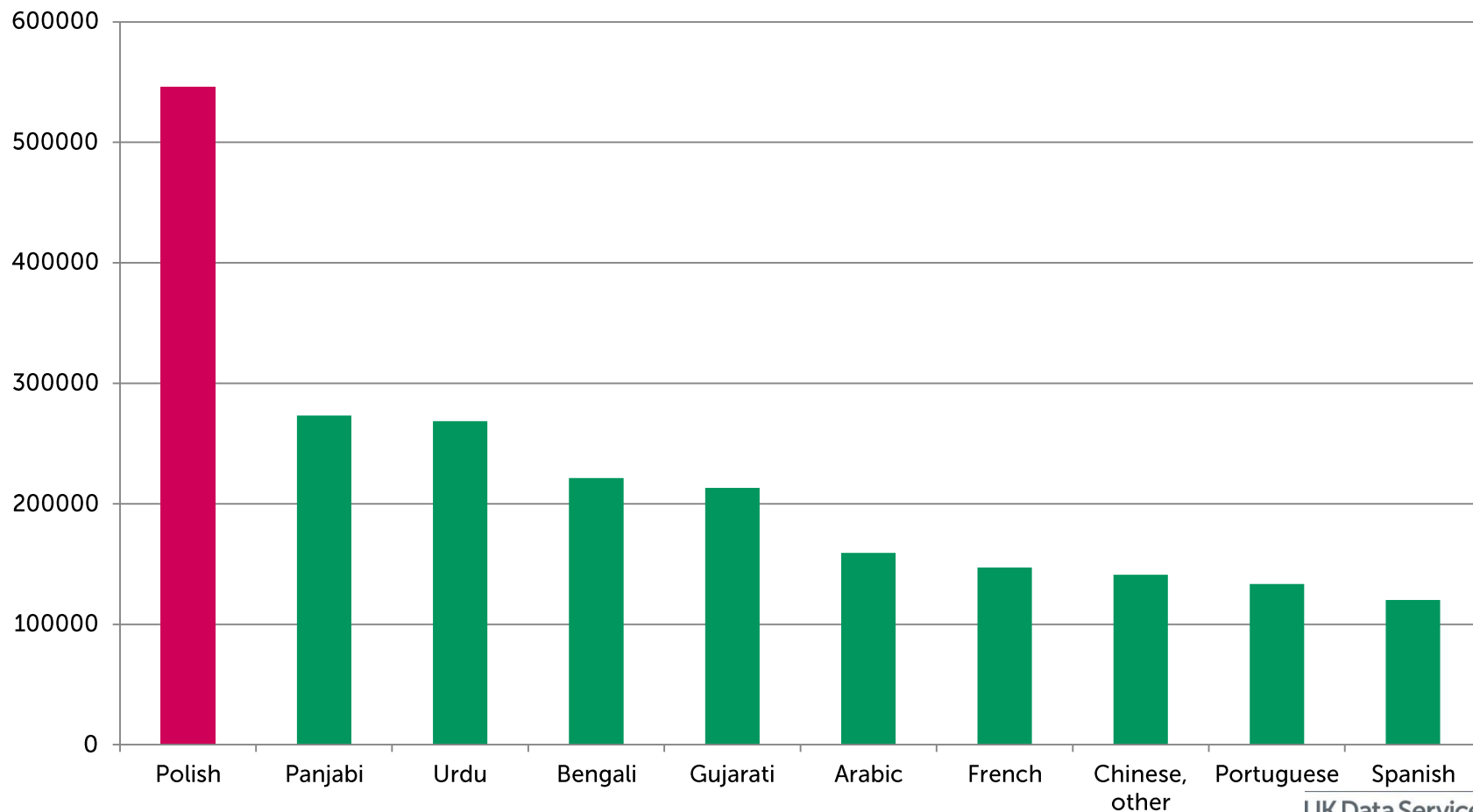
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What is the largest non-English main language by number of speakers in England and Wales



Main language other than English by number of speakers in England and Wales



InFuse 2011 demonstration

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



Which interfaces have you used?



InFuse 2011 Release 2: Raw data

- England and Wales Local and Detailed Characteristics to output area level
- UK harmonised data to local authority level
- 422 table variants, mainly multivariate
- 31 geography types
- 11,311 files
- 15Gb volume
- Contextual metadata separate



InFuse data model

- Single multidimensional dataset
- Deconstruction, rationalisation and re-integration of variables and categories
 - All UK table specifications processed
 - Integration of table universes as variables
 - Enforce consistency across dataset
- Re-insertion of counts into model
 - Retain original cell identifiers
- Attachment of metadata



InFuse 2011 Release 2: Processed data

- 97 variables
- 2,501 categories
- 281 variable combinations
- 140 thousand category combinations
- 4.6 billion values
 - A 460Km high stack of sticky notes!
 - Anticipating approximately 10 billion values in all

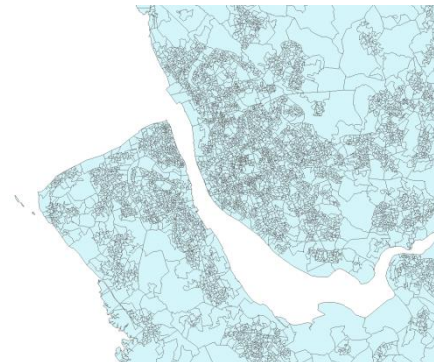
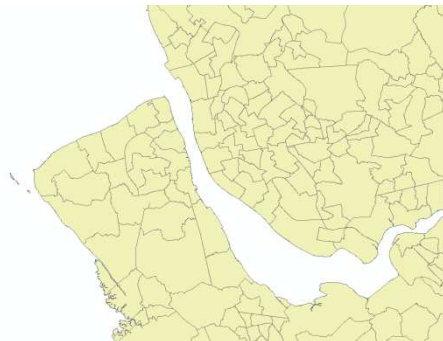
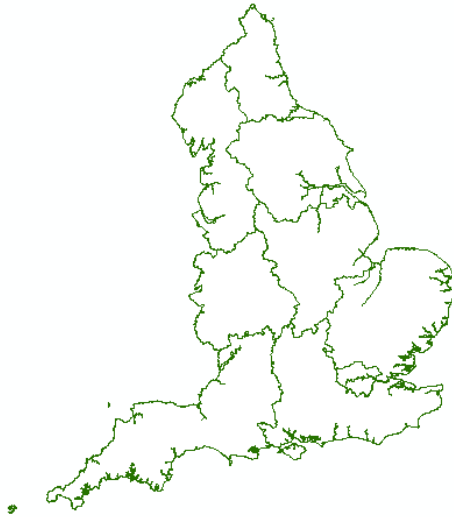


2011 Census geographies – Where?

- Subdivisions of the UK into smaller *areas*
- Sets of similar areas called *geographies*
 - Functional and statistical geographies
 - Local government districts
 - Wards and electoral divisions
 - Expecting around 100 different geographies
- Hierarchies of geographies with nesting areas
 - Administrative
 - Statistical
 - Health, Electoral, Postcode, etc



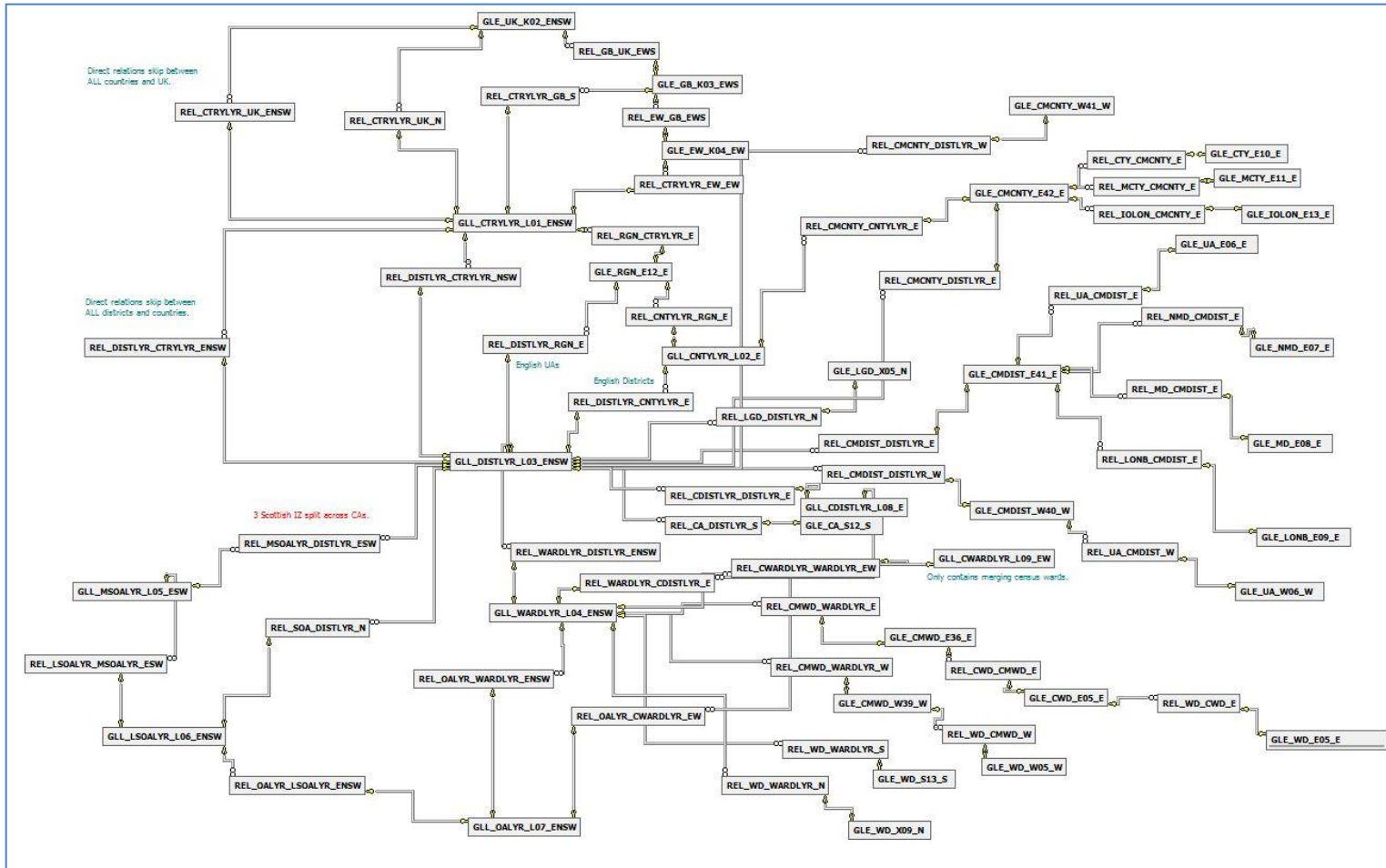
2011 census administrative hierarchy



a Service
support



Raw geography relationships

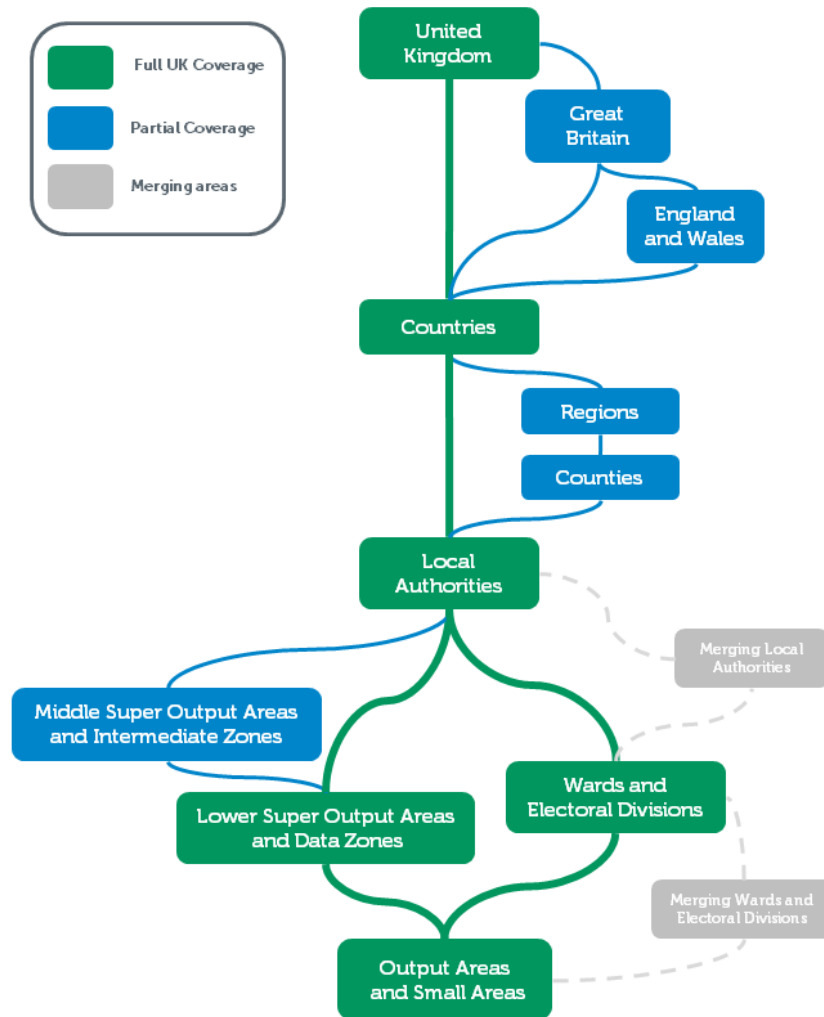


InFuse Geography Model

- Assembly and integration of raw geographies
 - 31 geography types with direct and indirect hierarchies
 - 241,334 areas (anticipating ~ 2 million including postcodes)
 - Model enables easy calculation of 'missing' data to fill gaps
- Simplified presentational model
 - 11 composite geography layers
 - Condensed standard and merged geographies
 - Selection of multiple geographies across the UK in one operation
 - *Geography jumps* in interface



Admin and statistical geography layers



What? Where?

- Not all data is available for all areas
- Confidentiality of personal information is fundamental
 - Low counts avoided
 - Trade-off between detail in characteristics (What?) and geographical detail (Where?)
- *Lower threshold data* (less detailed characteristics)
 - Produced for all areas
 - Key Statistics, Quick Statistics, Local Characteristics
- *Higher threshold data* (more detailed characteristics)
 - Produced for areas down to wards* and MSOAs
 - Detailed Characteristics



InFuse benefits

- Fast and easy global search
 - Variable and category combinations
 - No tables
 - 'No data' fast
- Guide users to find data
 - Variable combinations
 - Available geographies
- More data for more geographies
 - *All LT and HT data available for all areas in condensed geographies*
- Improved contextual information
- Open access
 - All data is open via Open Government Licence



InFuse currently contains

- England/Wales:
 - Key Statistics, Quick Statistics, Local Characteristics/Detailed characteristics down to Output Area Level
- UK wide
 - Harmonised UK wide data produced by the ONS down to Local Authorities for Key Statistics and Quick Statistics



Next release – big release!

- Due mid-February
- 837 tables and 5311 files
- England/Wales
 - Up to date with ONS data (DC/LC)
 - UK harmonised data down to output area
 - Workplace zones
 - Armed forces data
- Scotland
 - Data produced up to October 2014 (Release I)
- Northern Ireland
 - All Local and Detailed Characteristics



Future plans for InFuse

- More data
 - Remaining UK 2011 Census data
 - Data from previous UK censuses
 - Flow and boundary data
 - Non-census data
- Interface enhancement
 - Usability
 - Functionality
 - Work with users to identify requirements



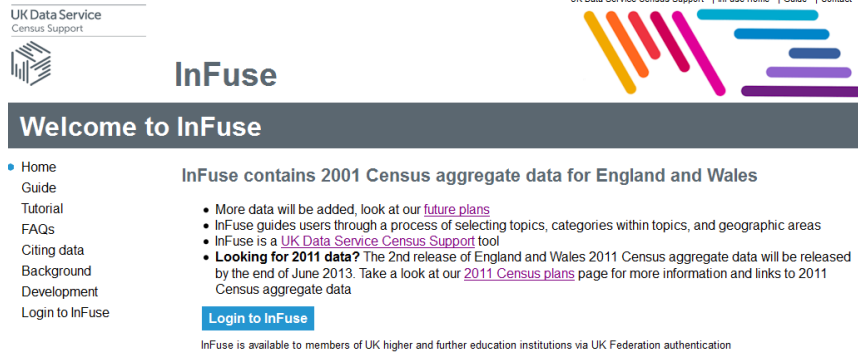
Find out more!

- Census aggregate data workshop – 17 February 2015
- ukdataservice.ac.uk/news-and-events/events




InFuse Support

infuse.mimas.ac.uk



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InFuse

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Welcome to InFuse

- Home
- Guide
- Tutorial
- FAQs
- Citing data
- Background
- Development
- Login to InFuse

InFuse contains 2001 Census aggregate data for England and Wales

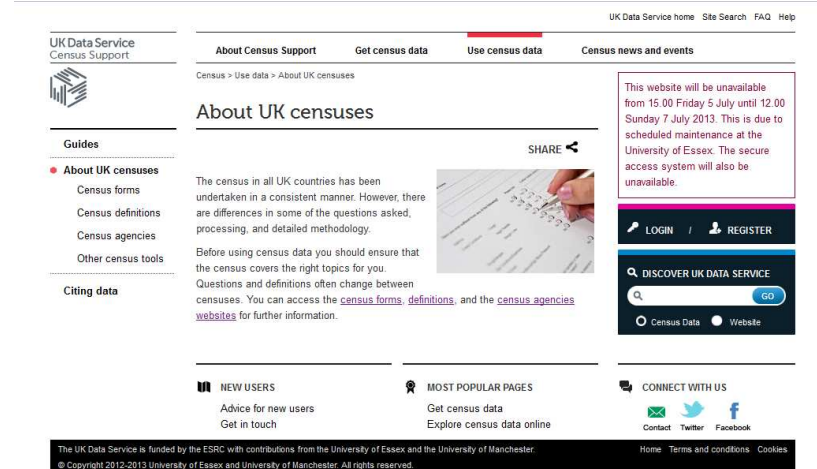
- More data will be added, look at our [future plans](#)
- InFuse guides users through a process of selecting topics, categories within topics, and geographic areas
- InFuse is a [UK Data Service Census Support tool](#)
- Looking for 2011 data?** The 2nd release of England and Wales 2011 Census aggregate data will be released by the end of June 2013. Take a look at our [2011 Census plans](#) page for more information and links to 2011 Census aggregate data

[Login to InFuse](#)

InFuse is available to members of UK higher and further education institutions via UK Federation authentication

InFuse is part of the [UK Data Service Census Support](#)

census.ukdataservice.ac.uk



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- Use census data
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About UK censuses

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Guides

- About UK censuses**
- Census forms
- Census definitions
- Census agencies
- Other census tools

Citing data

The census in all UK countries has been undertaken in a consistent manner. However, there are differences in some of the questions asked, processing, and detailed methodology.

Before using census data you should ensure that the census covers the right topics for you. Questions and definitions often change between censuses. You can access the [census forms](#), [definitions](#), and the [census agencies websites](#) for further information.

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This website will be unavailable from 15:00 Friday 5 July until 12:00 Sunday 7 July 2013. This is due to scheduled maintenance at the University of Essex. The secure access system will also be unavailable.

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Census Data Website

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