An Introduction to the UK Data Service

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UK Data Service

Overview of the day

- Overview of the UK Data Service

- Census and international data

  - Demo & exercise: finding data and using InFuse and UKDS.Stat

- Surveys

  - Demo & exercise: Nesstar

  - Demo and exercise: Analysing survey data using SPSS

- Questions

UK Data Service

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

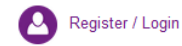- Support, training and guidance

UK Data Service

Who is it for?

- Academic researchers and students

- Government analysts

- Charities and foundations

- Business consultants

- Independent research centres

- Think tanks

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Sources of data

- Official agencies – mainly central government
- International governmental organisations
- Research institutions
- Individual academics - research grants
- Market research agencies
- Public records/historical sources

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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

Video tutorials

See our growing range of training videos

See data from all over the world

Browse our data map

Data types

Census data

International macrodata

Longitudinal studies

Qualitative/mixed methods

UK surveys

Professor Michaela Benzeval

The Director of Understanding Society discusses the impact of making data available through the UK Data Service

Featured data

Encouraging healthy lifestyles in young people

What is the link between

Latest data

Small Business Survey, 2014

Second Longitudinal Study of Young People in England: Wave 1, 2013: Safe Room Access

Second Longitudinal Study of Young People in England: Wave 1, 2013: Secure Access

ukdataservice.ac.uk

What data do we hold?

Surveys	Longitudinal	International
Large-scale government funded UK and cross-national surveys	Major UK surveys following individuals over time	Multi-nation aggregate databanks and survey data

Census	Business	Qualitative
Census data 1971 – 2011	Microdata and administrative data	Range of multimedia qualitative data sources

Repository for researcher-generated datasets

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Data access

- Web access to data and documentation

- Data are freely available to students & staff in higher education institutions

- Data supplied in a variety of formats
  - statistical package formats (e.g. SPSS, STATA)
  - databases and spreadsheets
  - word processed documents, PDF documents etc.

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Access conditions

Data Type	Access conditions
Open access *Most Census / International - Small number of survey teaching datasets*	Open access
End User Licence *Most research datasets*	Requires registration and user name and password UK academics and students login using their institutional username and password
Special Licence *Most survey microdata with lower level geography*	Restricted to 'Approved Researchers' under the Statistics and Registration Act
Secure access	Restricted to 'Approved Researchers' and access limited through a physical or virtual environment

International macrodata

- Time series data aggregated to country/region (Annual, Quarterly, Monthly)

- Regularly updated

- International governmental organisations (IMF, OECD, IEA, World Bank, UN)

- Wide range of socio-economic topics

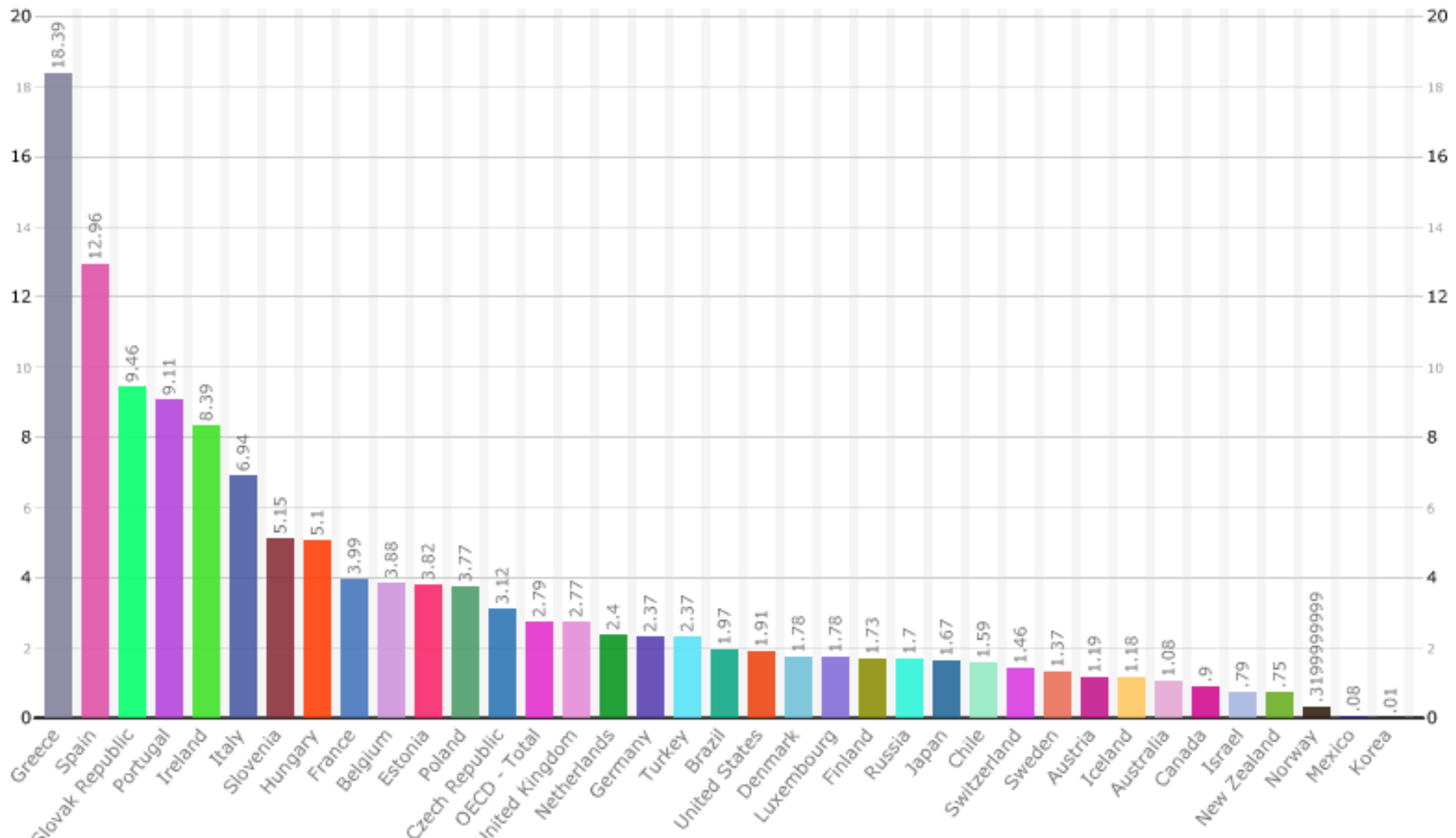UK Data Service
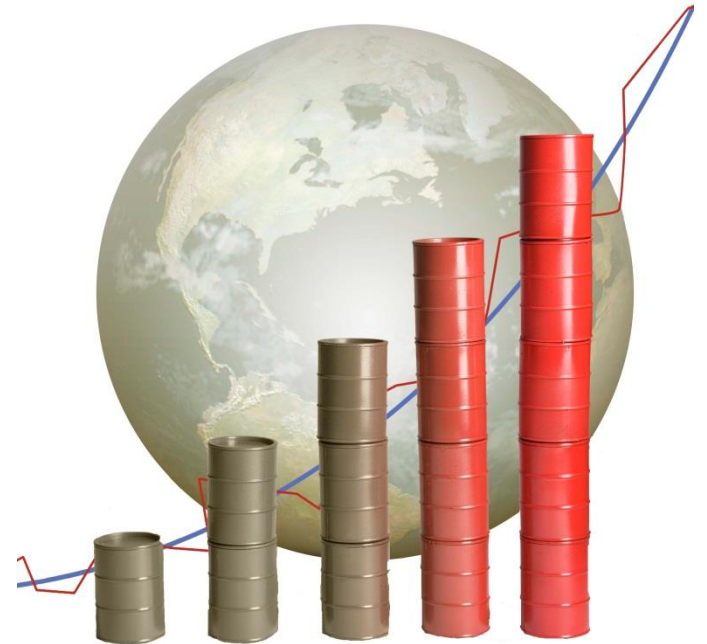
International data themes

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
- energy

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World Economic Outlook by Country ℹ

Customise ▾   Export ▾   Draw Chart ▾   My Queries ▾

→ǀ Series		NGDP_R - Gross domestic product, constant prices ▾										
→ǀ **Time**		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
		▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼	▲▼
→ǀ **Location**												
Afghanistan	ℹ	386.368	440.336	457.654	463.52	470.313	479.8	494.431	511.815	532.369	553.637	575.622
Albania	ℹ	715.048	725.182	733.251	748.075	767.819	794.177	824.169	857.974	893.524	930.536	969.017
Algeria	ℹ	6 157.82	6 360.98	6 539.09	6 787.58	7 041.22	7 278.5	7 492.39	7 689.83	7 907.08	8 151.6	8 429.56
Angola	ℹ	1 391.95	1 463.71	1 563.44	1 638.55	1 687.67	1 730.1	1 776.78	1 834.46	1 901.69	1 981.69	2 066.42
Antigua and Barbuda	ℹ	2.308	2.391	2.428	2.53	2.584	2.636	2.699	2.772	2.847	2.923	3.002
Argentina	ℹ	837.791	844.508	868.875	872.816	883.304	874.407	898.682	924.825	950.466	976.894	1 005.21
Armenia	ℹ	2 837.27	3 039.69	3 140	3 250.93	3 348.61	3 411.78	3 497.07	3 601.99	3 728.06	3 858.54	4 012.88
Australia	ℹ	1 478.8	1 531.23	1 562.39	1 603.25	1 642.99	1 683.54	1 734.08	1 786.58	1 839.14	1 890.34	1 942.79
Austria	ℹ	302.901	305.195	306.175	307.257	309.949	313.803	318.127	322.106	325.718	329.32	332.878
Azerbaijan	ℹ	21.293	21.754	23.016	23.661	23.921	23.206	23.435	23.95	24.498	25.1	25.543
Bahrain	ℹ	9.871	10.226	10.779	11.262	11.617	11.869	12.108	12.333	12.564	12.841	13.125
Bangladesh	ℹ	6 515.33	6 923.15	7 341.18	7 803.09	8 302.62	8 847.07	9 457.81	10 119.86	10 828.25	11 558.24	12 309.53
Barbados	ℹ	1.106	1.109	1.109	1.111	1.116	1.14	1.166	1.19	1.214	1.238	1.263
Belarus	ℹ	156 290.5	158 996.5	160 624.6	163 175	156 820.48	152 654.59	153 225.57	154 528.24	156 134.53	157 868.93	159 827.18
Belgium	ℹ	392.041	392.634	392.699	397.994	403.449	408.133	413.798	419.938	426.138	432.359	438.594
Belize	ℹ	2.5	2.596	2.636	2.73	2.77	2.839	2.915	2.992	3.067	3.142	3.204
Benin	ℹ	3 228.4	3 378.5	3 610.7	3 846.9	4 047.23	4 249.59	4 470.55	4 711.89	4 966.16	5 243.87	5 537.3

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Long-term unemployment rate % (2015)

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UNIDO data

United Kingdom, Output in current national currency
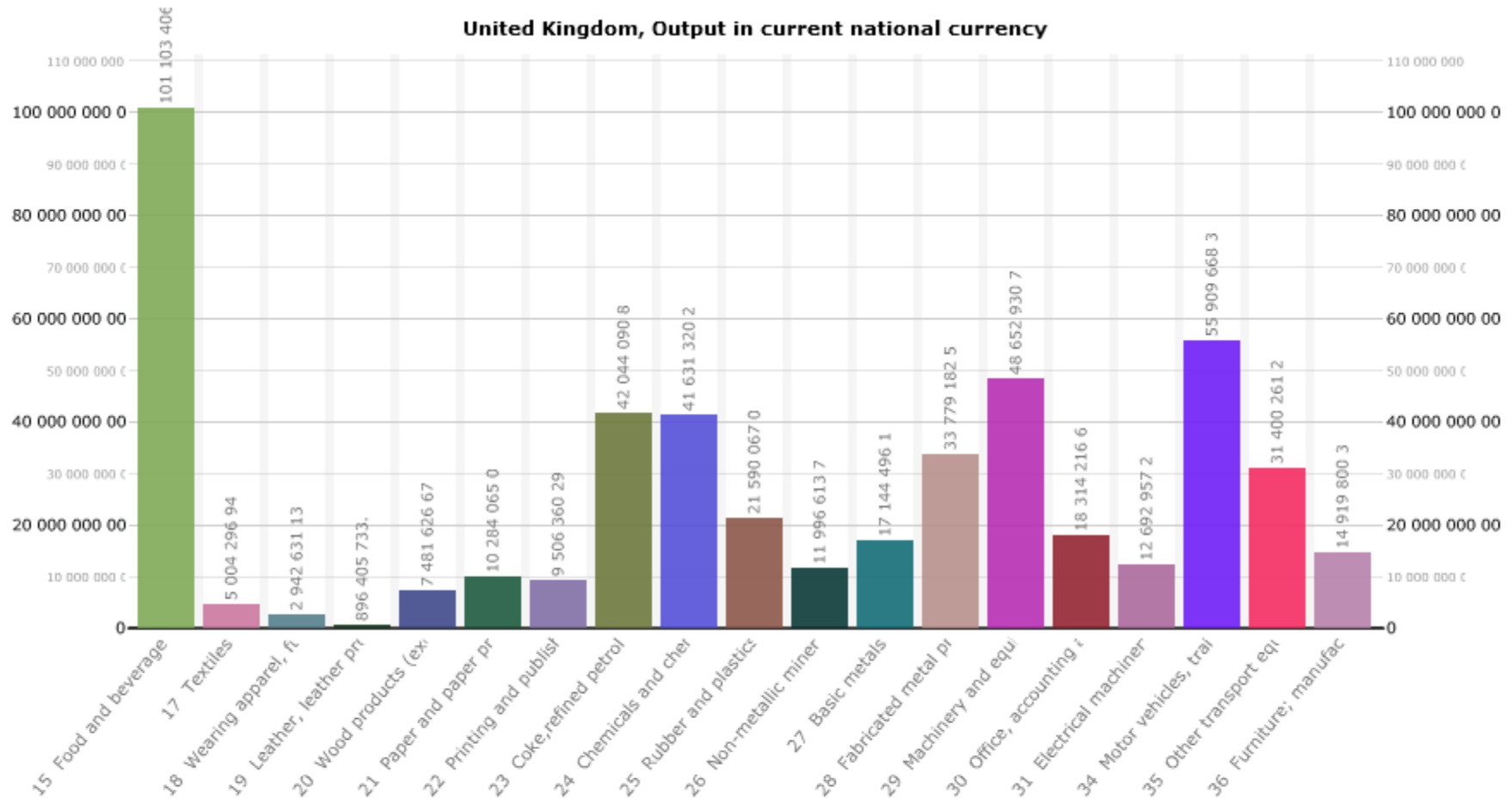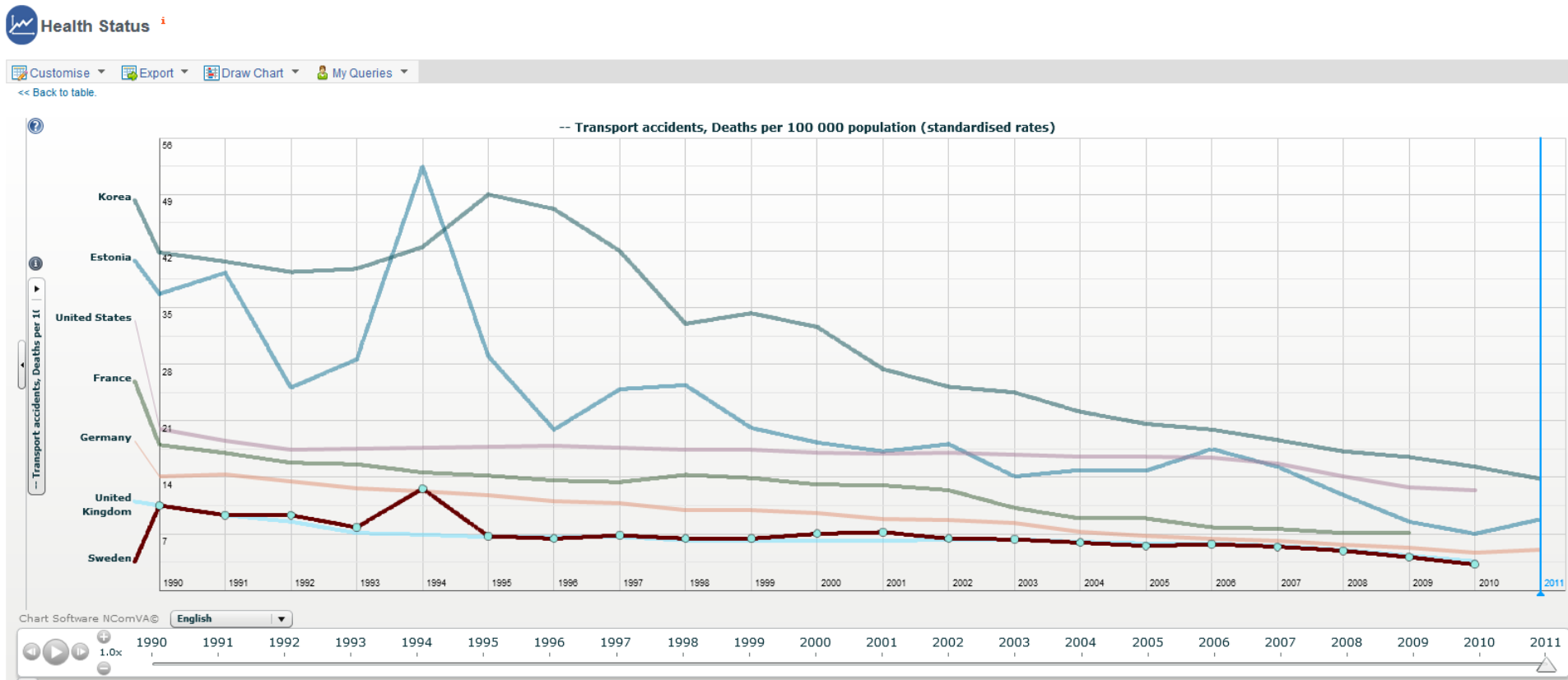
OECD Health Statistics

Political Terror Scale (Amnesty, 2012)
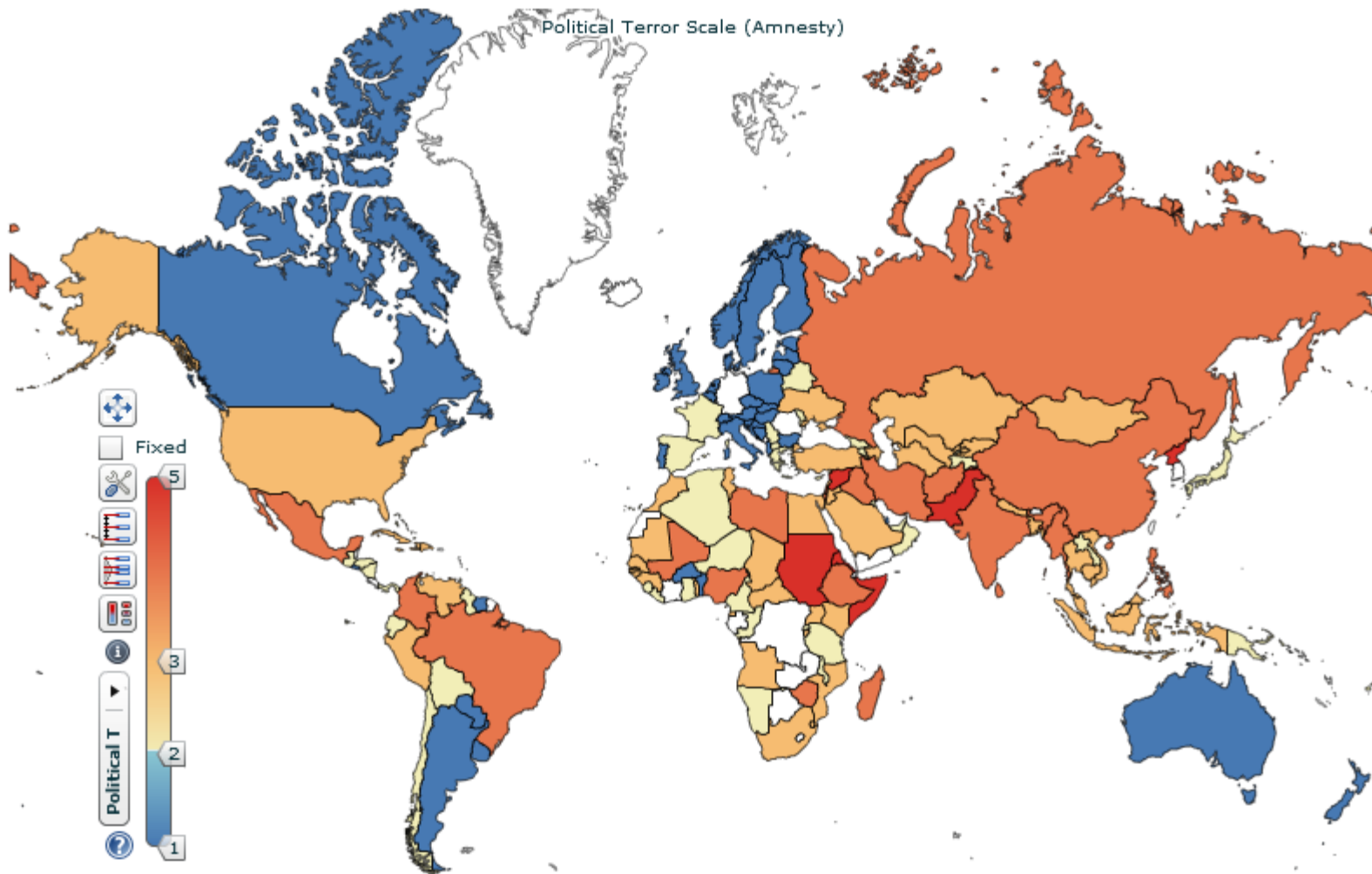
UK census data

- 1971-2011 UK census data

- used as baseline for other statistics

- detailed combinations of characteristics

- small geographies

- census outputs
  - aggregate data
  - flow data
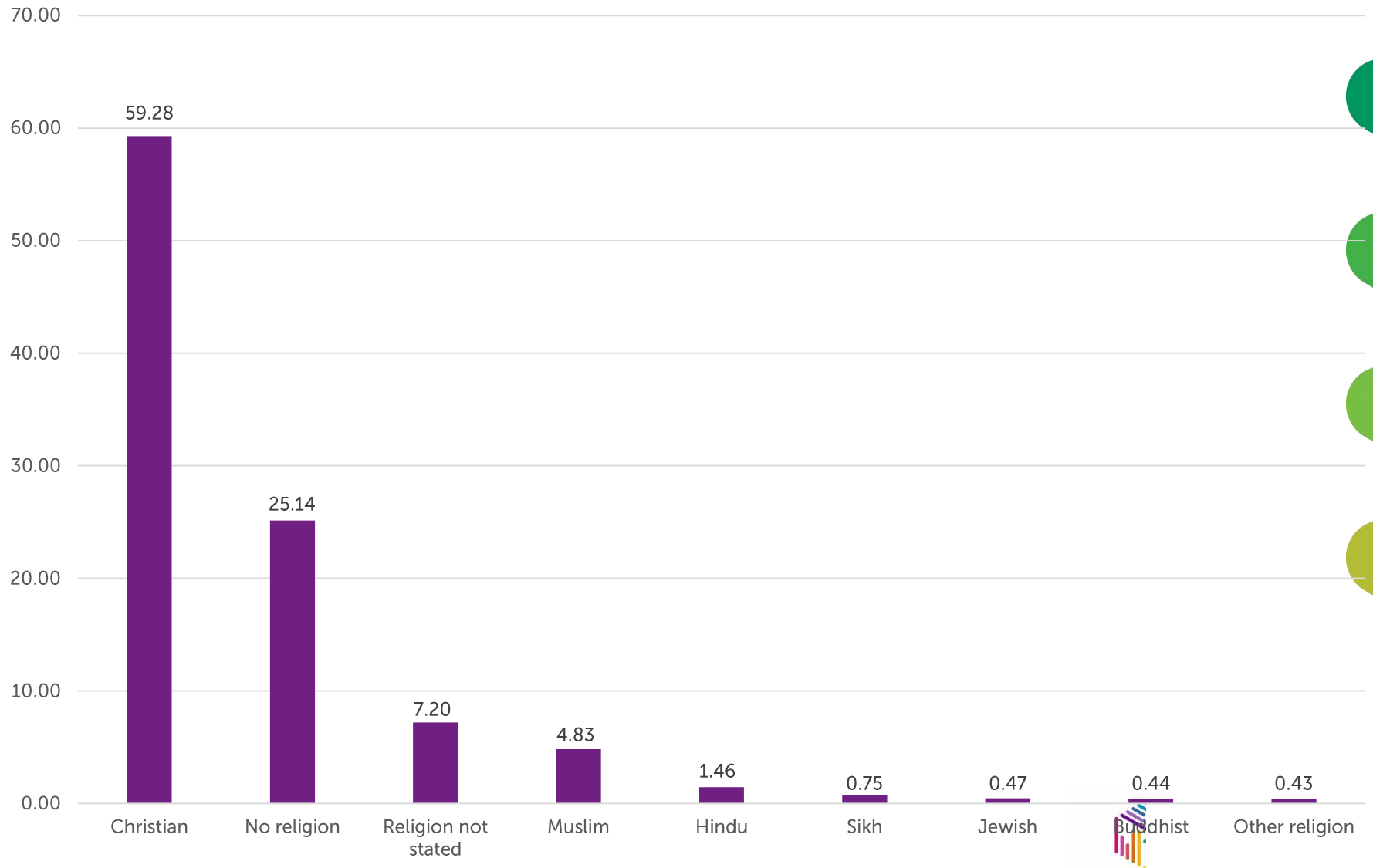 - microdata
  - boundary data

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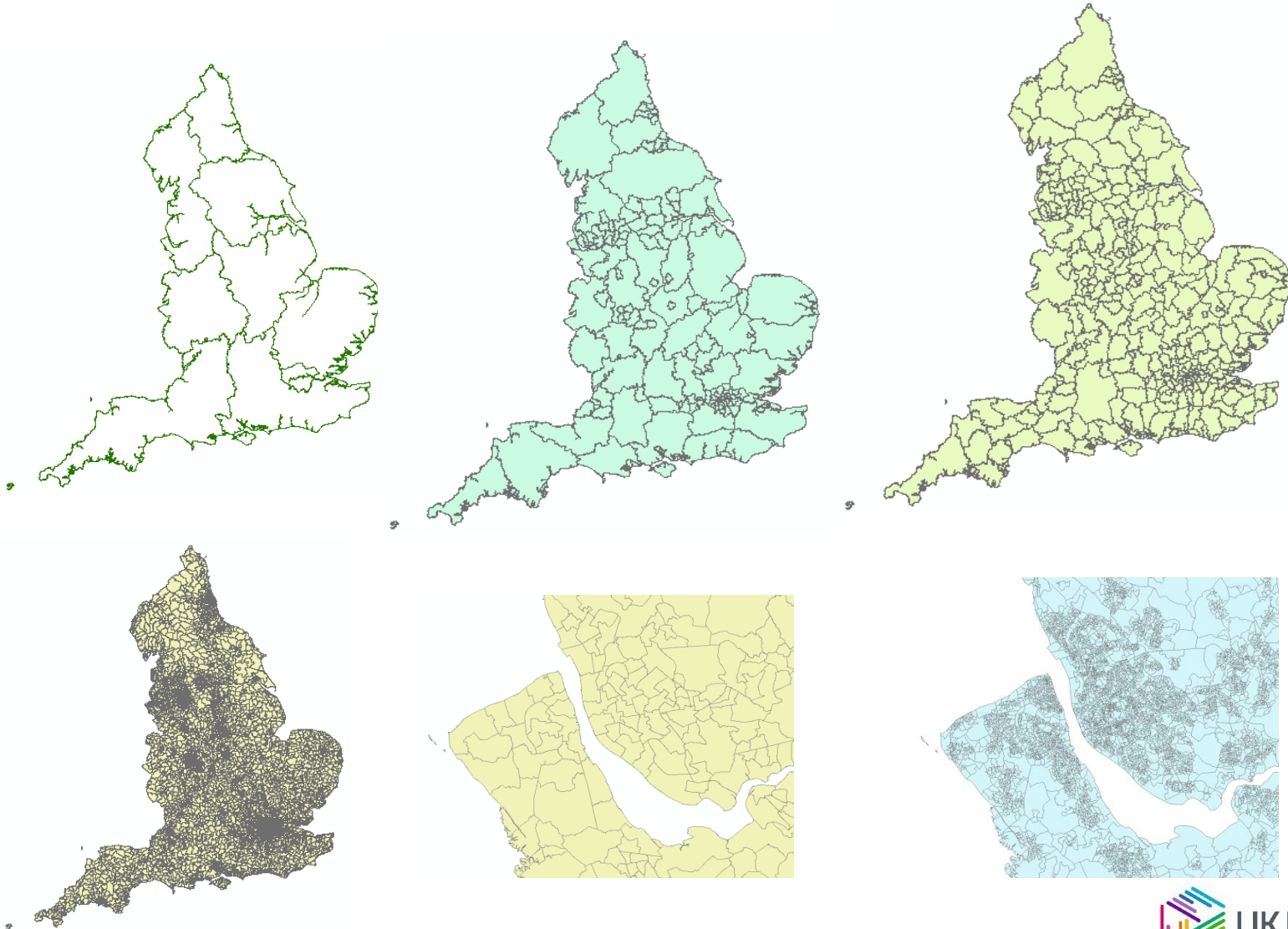
Religion - Local Authorities (2011 Census)

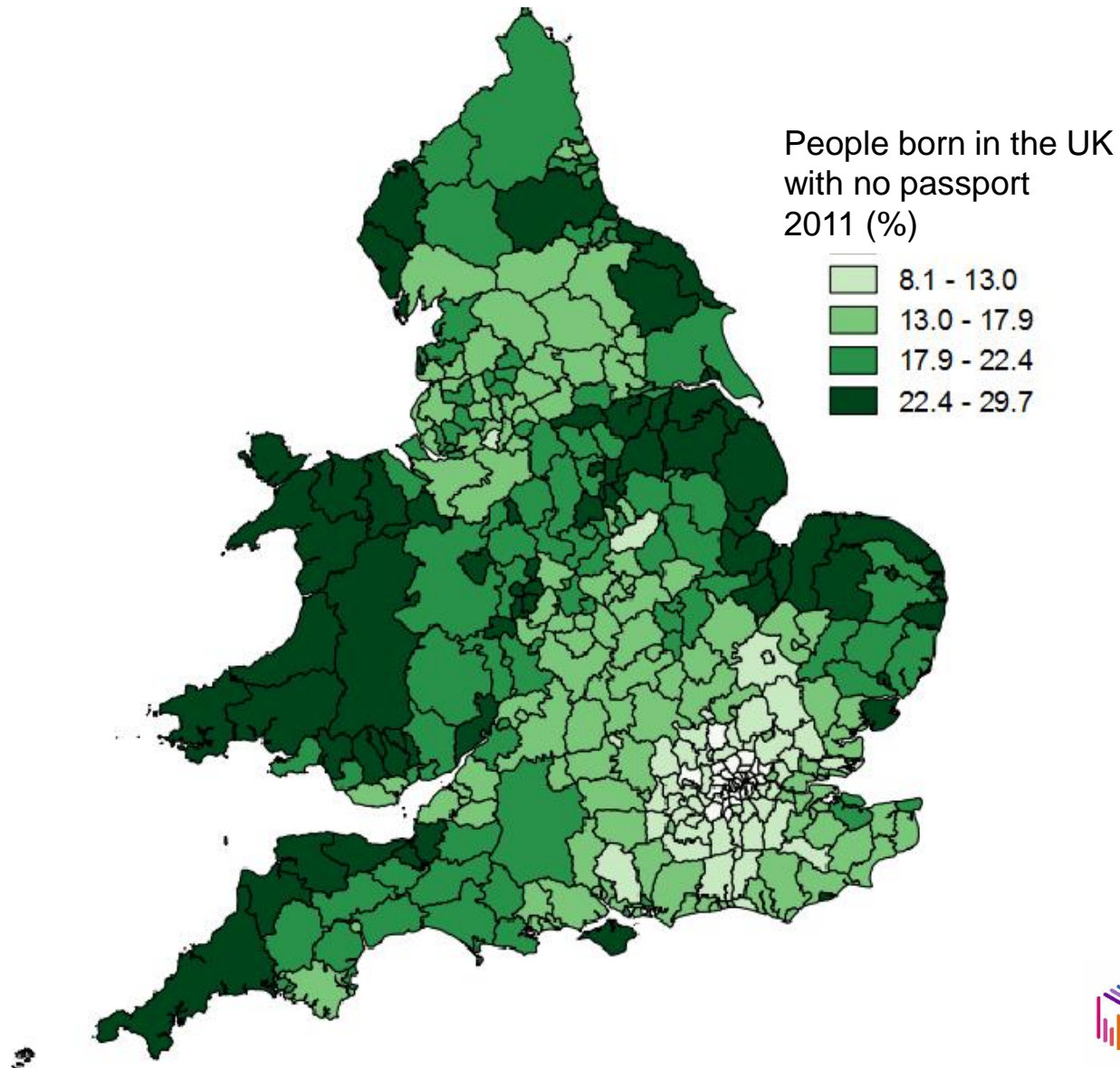| Local Authority	All people	Christian	Buddhist	Hindu	Jewish	Muslim
Hartlepool	92028	64349	152	168	9	689
Middlesbrough	138412	87511	370	591	45	9757
Redcar and Cleveland	135177	95111	187	64	33	598
Stockton-on-Tees	191610	130723	388	675	94	4143
Darlington	105564	71122	307	317	45	971
Halton	125746	94314	216	194	44	267
Warrington	202228	144405	457	1118	147	2097
Blackburn with Darwen	147489	77599	306	574	54	39817
Blackpool	142065	95426	450	337	252	1061

Religion England and Wales % (2011)

Census boundary data

Putting data in maps

People born in the UK
with no passport
2011 (%)

- 8.1 - 13.0
- 13.0 - 17.9
- 17.9 - 22.4
- 22.4 - 29.7

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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;

Origins	Destinations				
	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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Qualitative data

qualitative data is non-numeric information for example:

- interview transcripts
- visual data
- focus groups
- essays
- diaries
- observation notes
- documents
- audio data
- open-ended survey questions
- case notes
- newspaper clippings

mixed methods approaches combine qualitative data with quantitative (numeric) data.

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Demo and exercises 1

Demos

- Ways to find data on the UK Data Service website
- International data

Exercises

- Ways to find data on the UK Data Service website
- International data, or Census aggregate data exercises

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Surveys and survey data

Women with degrees earn three times as much as those without ...

Sep 23, 2015 ... The research found the male–female annual earnings gap 10 years after graduation was about 23%, whereas the official **Labour Force Survey** ...

Number of EU migrants working in UK rises to record level | World ...

May 18, 2016 ... The latest quarterly **labour force survey** data shows that there are 28.15 million Britons in work compared with 3.34 million non-UK nationals.
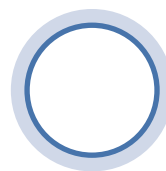
Technology has created more jobs than it has destroyed, says 140 ...

Aug 18, 2015 ... Analysis of the UK **Labour Force Survey** from the Office for National Statistics suggest the number of these workers soared from 29,743 to ...

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Key Data: UK Surveys

- Government, ONS or NatCen
- Large sample sizes
- Nationally-representative
- Well documented
- Wide range of topics
  - including health, work, crime, social attitudes, family expenditure, living costs, housing etc.

Examples

British Social Attitudes (BSA)

British Election Study (BES)

Health Survey for England (HSE)

Office for National Statistics

NatCen
Social Research that works for society

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Cross-sectional survey data

- Sample of individuals from one point in time

- Use to estimate
  - prevalence in the population
  - comparison of sub-groups

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Repeated cross-sectional survey data

- Survey repeated with a new sample of individuals

- Use to estimate population change over time
- **not** individual change over time

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Example: Crime Survey for England and Wales

- Face-to-face victimisation survey
  - experiences of a selected range of offences in the 12 months prior to the interview
  - measurement of crime to be unaffected by reporting to the police or police recording practices
  - National Statistics "badge".
- Attitudes and perceptions
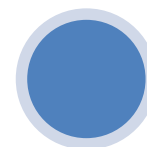
Survey design

since 1981

annual since 2001/02

methodology for the main count of crime comparable since the survey began

recent inclusion of fraud and computer misuse

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Trends in Crime Survey for England and Wales and police recorded crime, year ending December 1981 to year ending September 2016

Number of offences (thousands)

Legend:
- Police recorded crime - old counting rules
- Police recorded crime - new counting rules
- Police recorded crime - post NCRS
- Police recorded crime - post NCRS years ending September
- CSEW estimate excl fraud & computer misuse
- CSEW estimate - years ending September excl fraud & computer misuse
- CSEW estimate incl fraud and computer misuse

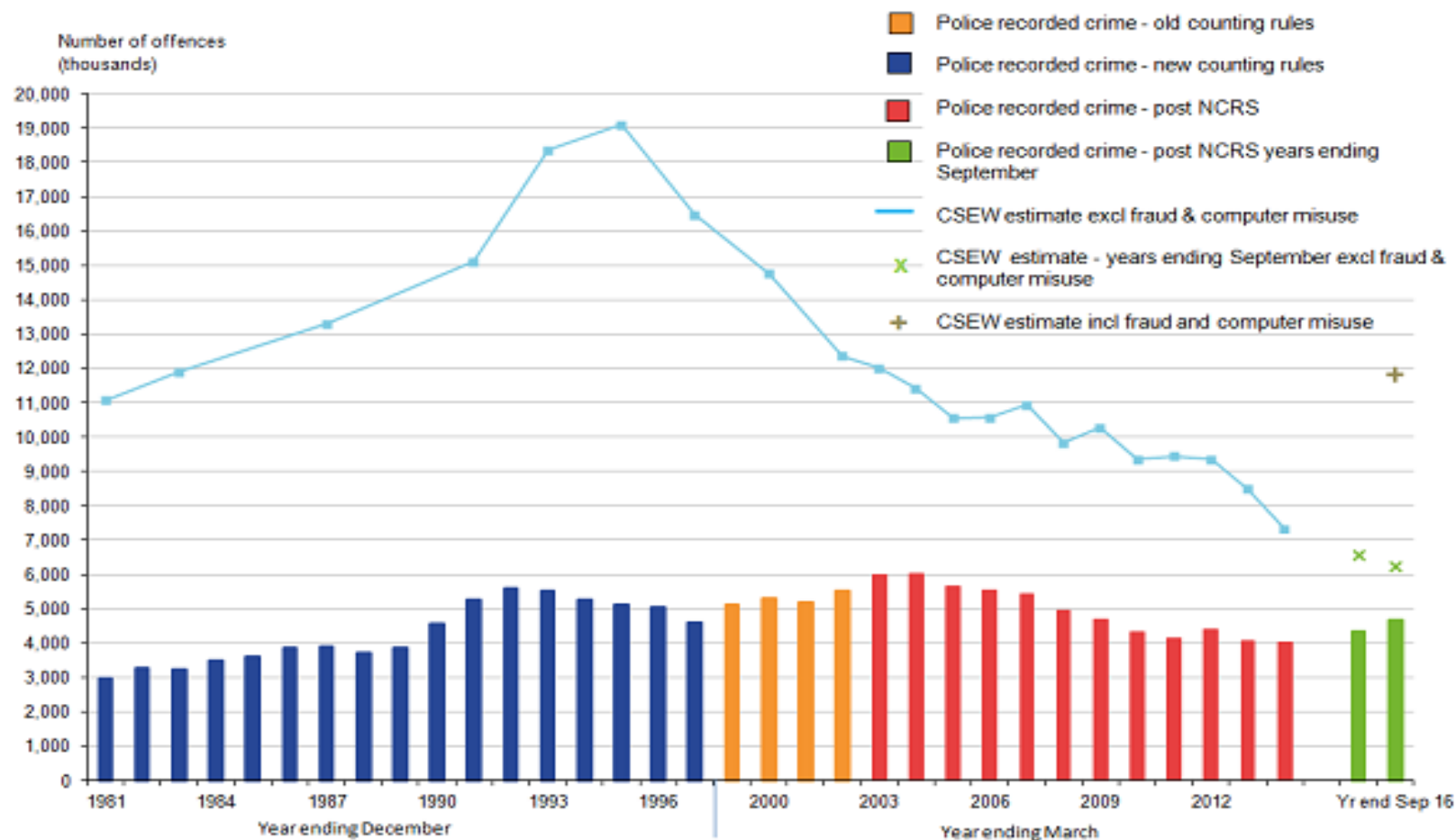Year ending December

Year ending March

Fig 1 in Statistical bullet in: Crime in England and Wales: year ending Sept 2016
Source: Crime Survey for England and Wales, Office for National Statistics / Police recorded crime, Home Office

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Longitudinal studies

- Survey repeated with the same individuals/households

Year 1   Year 2   Year 3

- Follow individual level change over time
- Analyse change at the individual level
  - e.g. who moves in and out of the labour market and why?

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Key data: cohort studies

- Follow a group from a particular period
- Three major studies
  - National Child Development Study (1958)
  - 1970 British Cohort Study
  - Millennium Cohort Study (2000/01)
- Generational change
- Health/medical focus
- Social and economic circumstances

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Key data: Understanding Society

- 40,000 households
    - and 100,000 individuals

- topics
    - economic circumstances
    - social and family life
    - attitudes and behaviours
    - health

- [British Household Panel Survey](#) (25 years)

- data linkage (linking together two or more streams of data):
    - Geographical Identifiers, Administrative Data Linkage and Organisations

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Cross-national surveys

- Studies across many nations with
  - same survey instrument
  - fieldwork protocols (where possible)
- Other archives may hold the data

Examples

Eurobarometer (EB)

European Quality of Life Survey (EQLS)

European Social Survey (ESS)
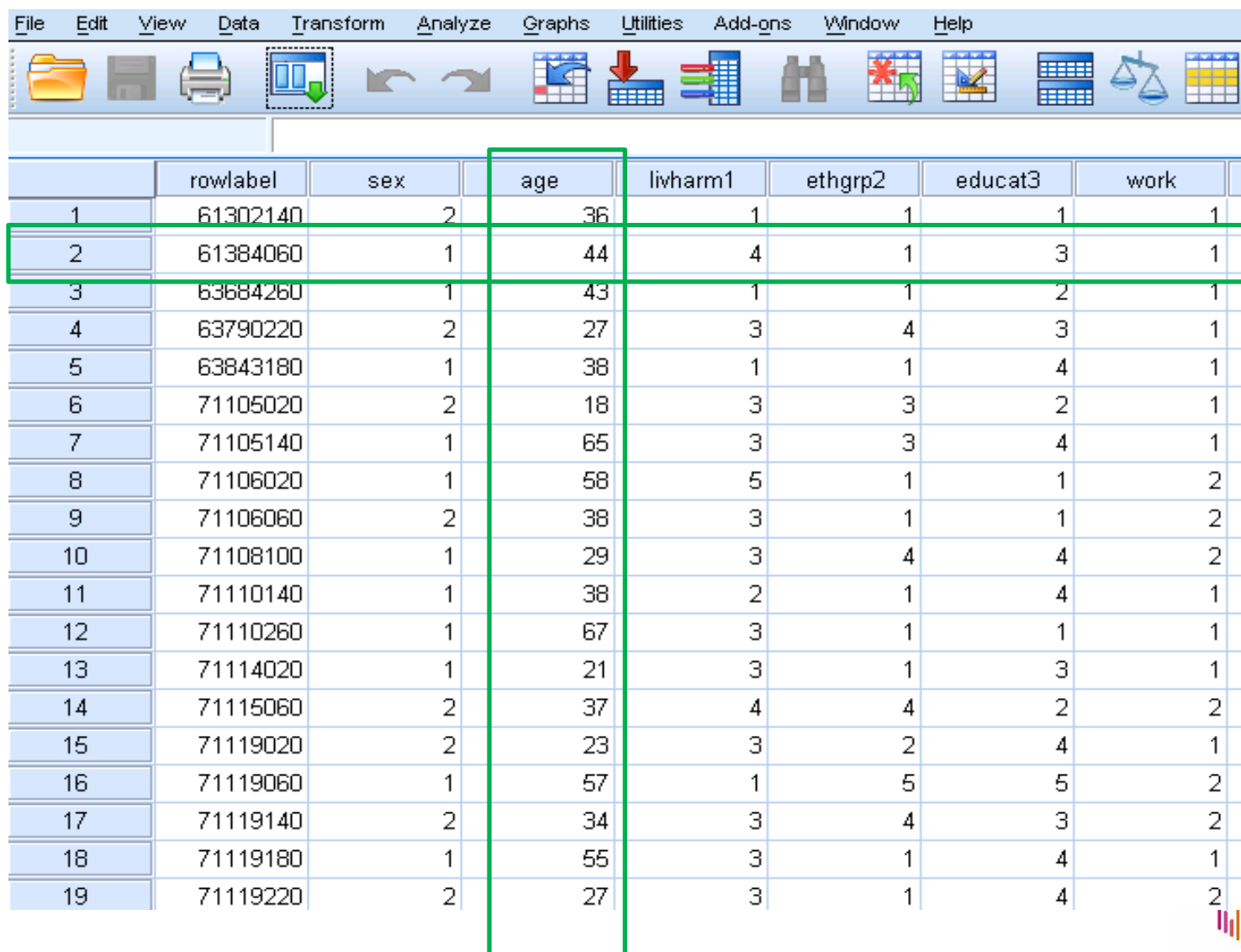
Young Lives: an International Study of Childhood Poverty

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Survey microdata

- Individual or household level data
- Anonymised to prevent disclosure
- Analyse using computer software (e.g. SPSS , Stata or R)

- produce tables, graphs
- select sub-populations
- create attributes
- statistical tests and models

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Survey microdata

	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

Making sense of your data

- You need to understand the data and evaluate suitability for your research question

- Consider:
  - what information was collected
  - from whom
  - when and where
  - what was done to the data?

- Read documentation!

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Who was asked what…

FLEX10
UK
W1/EQ
Some people have special working hours arrangements that vary daily or weekly.
In your (main) job is your agreed working arrangement any of the following…
MAIN
AW/AJ and OD
Code up to 3
RUNNING PROMPT
    1   flexitime (flexible working hours),
    2   an annualised hours contract,
    3   term-time working,
    4   job sharing,
    5   a nine-day fortnight,
    6   a four-and-a-half day week,
    7   zero hours contract,
    8   on-call working, or
    9   none of these?

ONS ✔   **GOV** ✔   **SPL** ✔   **EUL** ✔

Applies if in work during reference week
IF (Wrking=Yes) OR (JbAway=Yes) OR (OwnBus=Yes) OR (RelBus=Yes)
OR (TYPSCH12=1,2,3,5.8) On a government training scheme considered as employment
OR ((TYPSCH12=9) AND (YTETJB=Yes)) OR (YTETJB=Yes) Doing paid work in addition to this particular
government training scheme

in addition to who was in the sample…

- Computer Aided Interviewing (CAI) makes it easy to send respondents through the questionnaire by different routes
- many questions may only be applicable to some of the sample

And what was done with data afterwards?

- derived variables are created from the 'raw' data

FLEXW7 - Whether respondent works zero hours contract

START → ALL FLEX10 (1-3) = -9 —NO→ ANY FLEX10 (1-3) = 7 —NO→ FLEXW7 = 2 / DOES NOT WORK A ZERO HOURS CONTRACT

ALL FLEX10 (1-3) = -9 —YES→ FLEXW7 = -9

ANY FLEX10 (1-3) = 7 —YES→ FLEXW7 = 1 / WORKS A ZERO HOURS CONTRACT

Uses:

FLEX10

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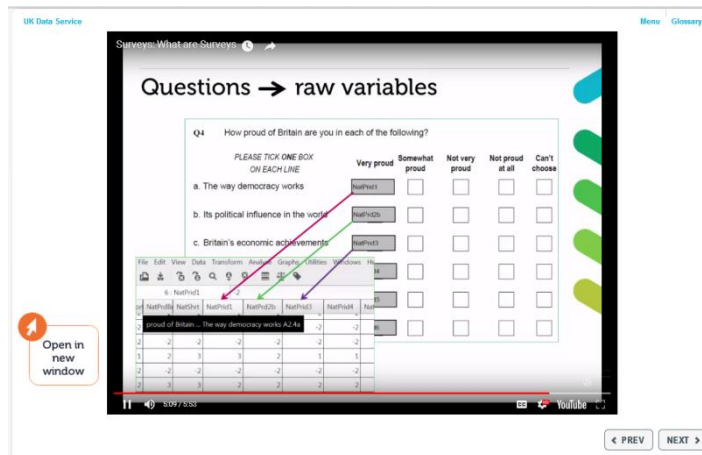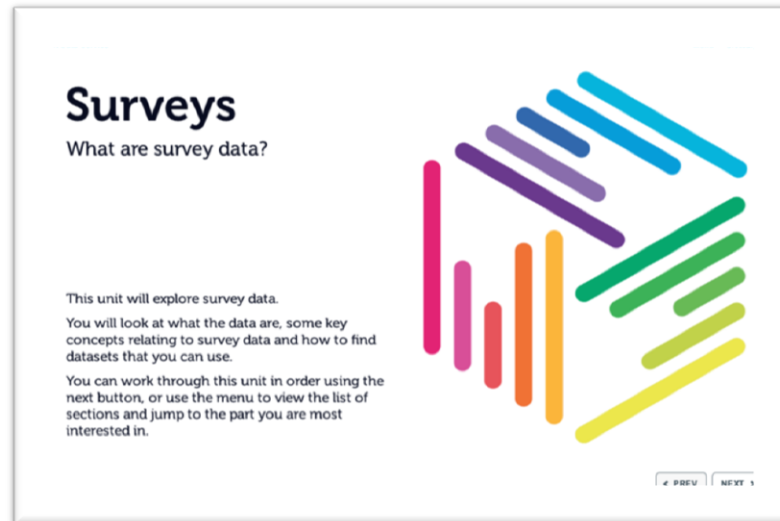# Resources

Data Skills Modules

- Interactive
  - Information to read
  - Videos
  - Quizzes

- Modules on
  - Survey Data
  - Longitudinal
  - Aggregate

Helpdesk

Nesstar

- Explore data online (without SPSS etc)
- Explore metadata (user guides etc)
- Download graphs/tables
- Download subset of data

Demo 2: BSA data in Nesstar

Should students (or their families) pay tuition fees?

What % agree?

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Exercise 2

- Exploring the dataset: the catalogue page, documentation and Nesstar

Exploring the dataset: the catalogue page, documentation and Nesstar

Catalogue page and documentation

We will use the British Social Attitudes Survey 2016 but the processes for finding out about survey data will apply to all survey datasets.

Use Get data>Key data to find the British Social Attitudes Survey from among the Key UK Surveys.

⇒ Click on the title of the survey to go to the Series page.
⇒ Click on the *Access* tab
⇒ On the list that appears, click on BSA 2016 to go to the **catalogue page** for the BSA 2016.

The catalogue page includes information about the survey in the Details tab, the documentation from the survey providers in the Documentation tab and links to download the data in the Access tab.

TASK: Explore the BSA 2016 catalogue page to find out more about the data

1. When did the BSA series start?

2. Who deposits the BSA?

Demo & Exercise 3: using SPSS

- SPSS Demo

- Exercise
  - Gender and age differences in the fear of crime
  - 'Crime Survey for England and Wales 2013-2014: Unrestricted Access Teaching Dataset'

Crime is falling. Now let's reduce fear of crime
Ally Fogg

Despite the evidence, people don't believe Britain is becoming safer. Accepting the truth isn't easy, but would benefit the nation

MY STREET

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Before we start

- Is fear of crime widespread in England and Wales?

- Are there likely to be gender differences in the fear of crime?

- How might age determine fear of crime?

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Remaining time

- Finish SPSS worksheet
- Explore website
  - key data
  - data by theme
  - student resources

Ask questions!

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Questions