

Data in the spotlight: International Time Series Data

David Rawnsley

5th November 2020







What we will cover today

- Introduction
- International macrodata
- Documentation and tips
- Demo
- Questions
 - can be typed in, but we will wait until the end to answer them





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





What data do we hold?

Surveys

Large-scale government funded UK and cross-national surveys

Census

Census data 1971 – 2011

Longitudinal

Major UK surveys following individuals over time

Business

Microdata and administrative data

International

Multi-nation aggregate databanks and survey data

Qualitative

Range of multimedia qualitative data sources

Repository for researcher-generated datasets



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News and events













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

Search data 💌



How to cite data correctly



Guides and resources

Dataset guides

Topic guides

Methods and software guides

Guides to exploring online

See more >



See our range of training videos

See data from all over the world

Browse our data map

Data types

Census data

International macrodata

Longitudinal studies





Our impact

Latest data



ukdataservice.ac.uk

ata Service

International macrodata: data about countries

- time series data aggregated to country/region
- international governmental organisations
- wide range of socioeconomic topics
- availability





Data providers

- International Monetary Fund (IMF)
- Organisation for Economic Co-operation and Development (OECD)
- World Bank
- United Nations
- International Energy Agency (IEA)



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



International macrodata

	→ Variables	Total population of the metropolitan area (persons)					
	→ı Time	2009	2010 ▲ ▼	2011	2012	2013	2014
	71 Time						
→ Metropol	litan areas						
■ Australia		21 691 653	22 031 750	22 340 024	22 728 254	23 125 868	23 490 7
Australia	Adelaide	1 237 354	1 253 097	1 264 091	1 278 600	1 291 377	1 304 6
	Brisbane	2 068 479	2 108 348	2 147 436	2 193 316	2 236 044	2 274
	Gold Coast-Tweed Heads	509 133	519 630	528 766	540 527	551 123	560
	Melbourne	4 031 787	4 105 857	4 169 366	4 252 458	4 344 673	4 440
	Perth	1 739 342	1 781 132	1 833 567	1 904 858	1 972 849	2 021
	Sydney	4 492 380	4 555 516	4 608 949	4 676 118	4 756 398	4 840
■ Austria		8 335 003	8 351 643	8 375 164	8 408 121	8 451 860	8 506
Austria	Graz	602 465	608 420	614 454	620 587	626 826	633
	Linz	604 006	606 514	609 054	611 622	614 214	616
	Vienna	2 656 523	2 683 251	2 710 331	2 737 753	2 765 519	2 793
■ Belgium		10 753 080	10 839 905	10 951 266	11 035 948	11 099 554	11 203
Belgium	Antwerp	1 046 834	1 053 725	1 060 675	1 067 688	1 074 765	1 081
	Brussels	2 460 663	2 485 480	2 510 626	2 536 106	2 561 930	2 588
	Ghent	572 560	576 408	580 281	584 187	588 127	592
	Liege	723 142	726 431	729 740	733 071	736 425	739
■ Canada		33 628 571	34 005 274	34 342 780	34 752 128	35 154 279	35 540
Canada	Calgary	1 237 622	1 271 737	1 306 924	1 342 733	1 379 633	1 417

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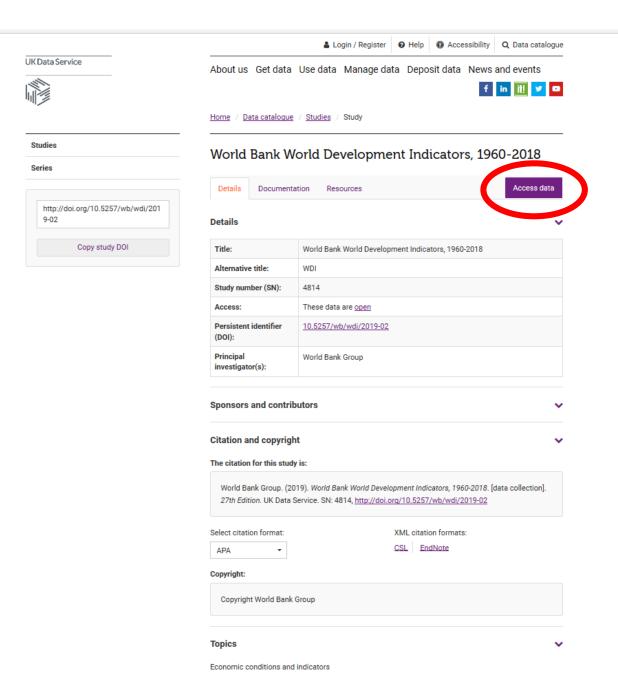


Accessing the international macrodata

- World Bank IMF, OECD, UNESCO data are open to all
- Other data restricted to UK FE and HE (UNIDO, IEA)
- Access via Federated access (Shibboleth) authentication
- Data delivered over the web via UKDS.stat
- Download formats include *.xls, *.csv



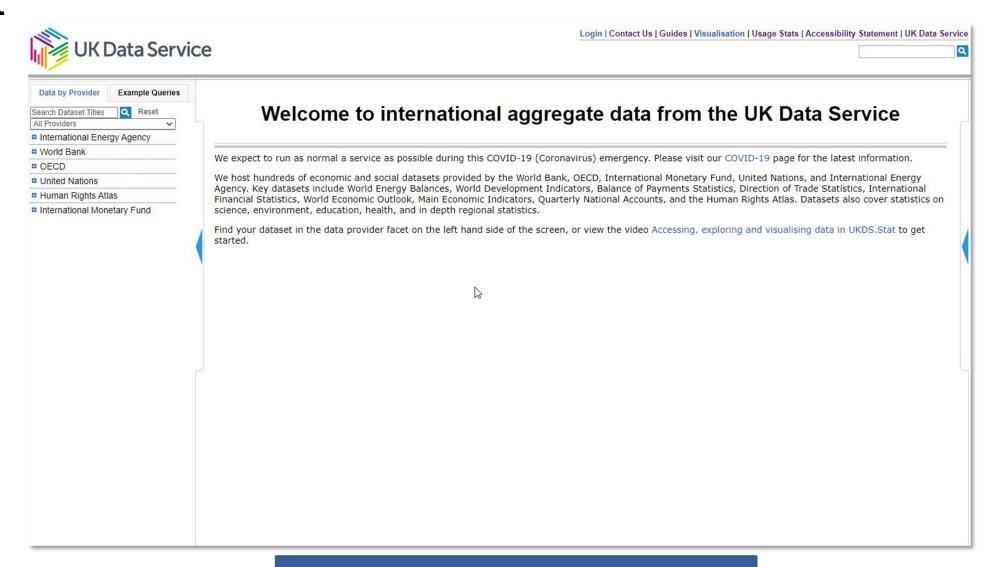
Catalogue record







DotStat

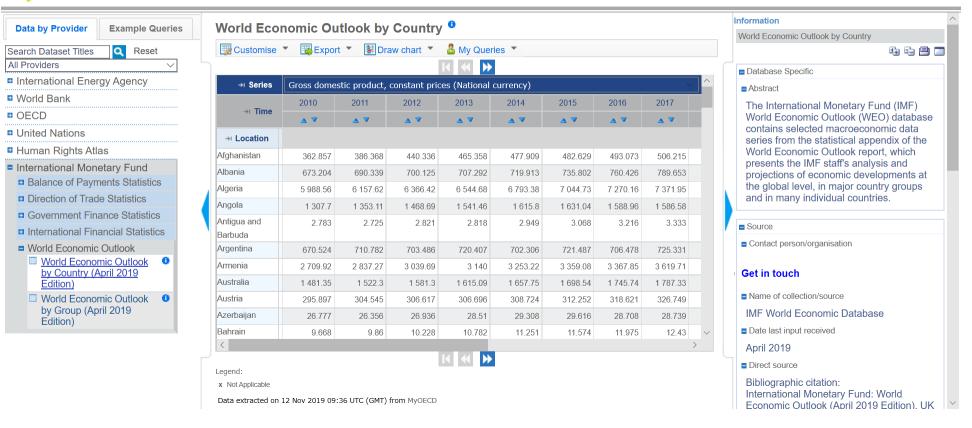




International macrodata



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World Bank Databases

- Collects data on all aspects of human development worldwide
- Annual data, designed for international comparability
- Open access
- Host 4 databases:
 - World Development Indicators
 - International Debt Statistics
 - Africa Development Indicators
 - Subnational Population Database





World Development Indicators

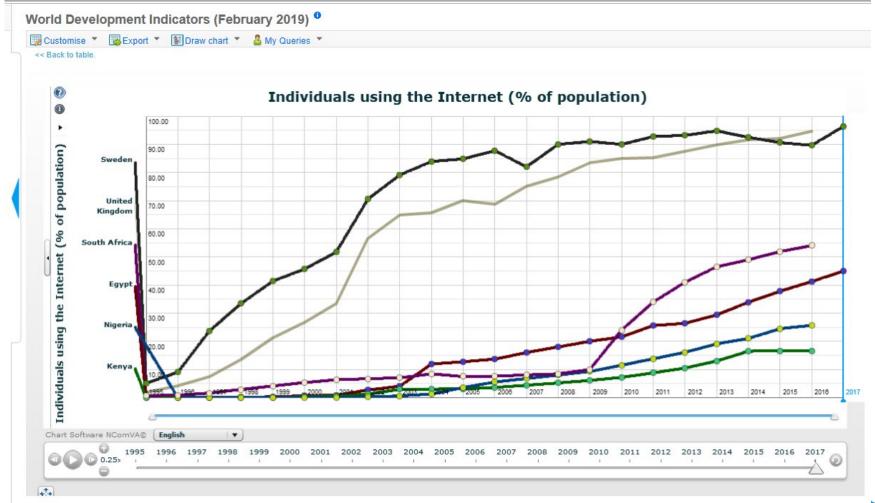


- Covers over 200 countries
- Annual data starting 1960
- Widely cited
- Our most popular database

Around 1,400 indicators for each country



World Development Indicators: example

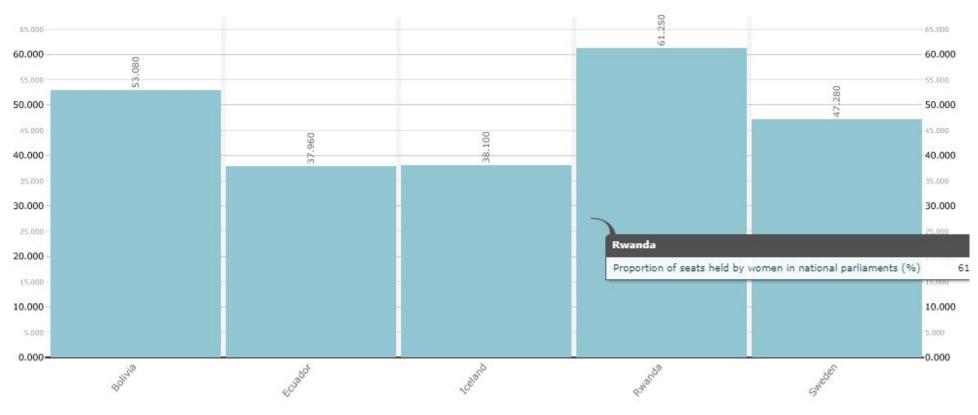




Which country had the largest proportion of women in parliament during 2019?



Proportion of seats held by women in national parliaments, 2019 (%)



World Bank (2019): World Development Indicators (Data downloaded: December 2019). UK Data Service. https://doi.org/10.5257/wb/wdi/2019Q4





International Debt Statistics

- Financial flows
- Contains the Bank's projections for debt repayments for next five years
- Annual data starting 1970s
- Replaces Government Development Finance



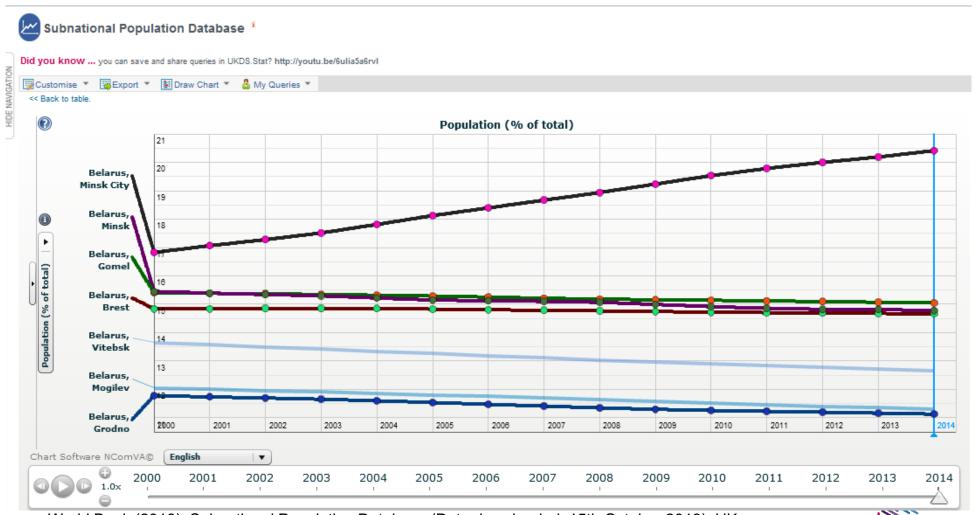


Subnational Population Database

- Provinces, states, or regions below the national level
- 2000 to 2016
- Subnational areas and the shares relative to total national population estimates
- Allows researchers, students and practitioners to investigate population and intra-country migration trends



Belarus subnational data



World Bank (2018): Subnational Population Database (Data downloaded: 15th October 2018). UK Data Service. DOI: https://doi.org/10.5257/wb/spd/2018-10



IMF databanks

- International Financial Statistics
- Government Finance Statistics
- Balance of Payments Statistics
- Direction of Trade
- World Economic Outlook
- Open access



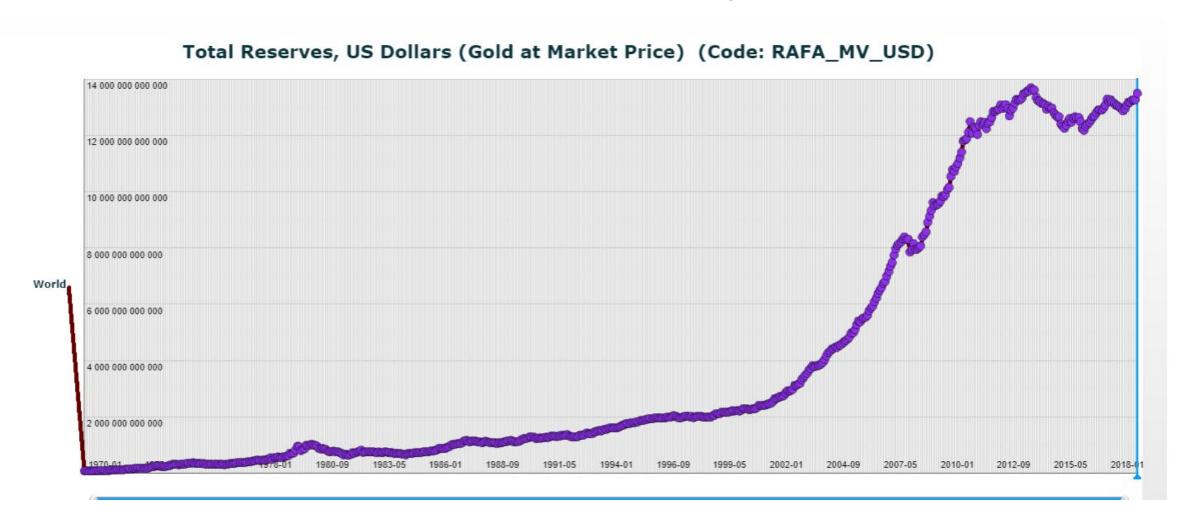


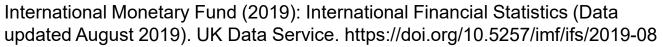
IMF International Financial Statistics

- Standard source for all aspects of international and domestic finance
- Monthly, Quarterly, and Annual data
- Includes over 200 countries
- Reports time series data on exchange rates, international liquidity, money and banking, interest rates, prices, production, national accounts...



International Financial Statistics: example







IMF Direction of Trade



- Exports and imports
- Bilateral data between countries
- Monthly, quarterly and annual data are presented
- 1980 onwards

Long and consistent time series

Stable data domains

Good geographic and temporal coverage

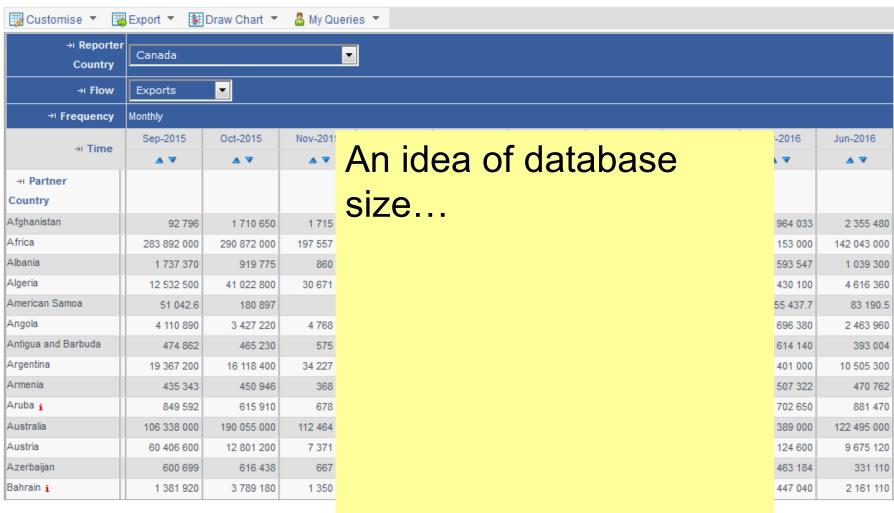
Up-to-date data



Inside the database – IMF Direction of Trade



Did you know ... how to change the layout in UKDS.Stat? http://youtu.be/_ZnS0aGBQ3s





IMF Balance of Payments Statistics



- Balance of payment components and international investment positions of countries worldwide
- 204 countries and country groups worldwide
- 1970s onwards
- Quarterly and annual data



IMF Government Finance Statistics



- Data on government income
- Expenditure by sector
- All levels of government
- 174 countries worldwide
- Annual time series data, running 1990 onwards.



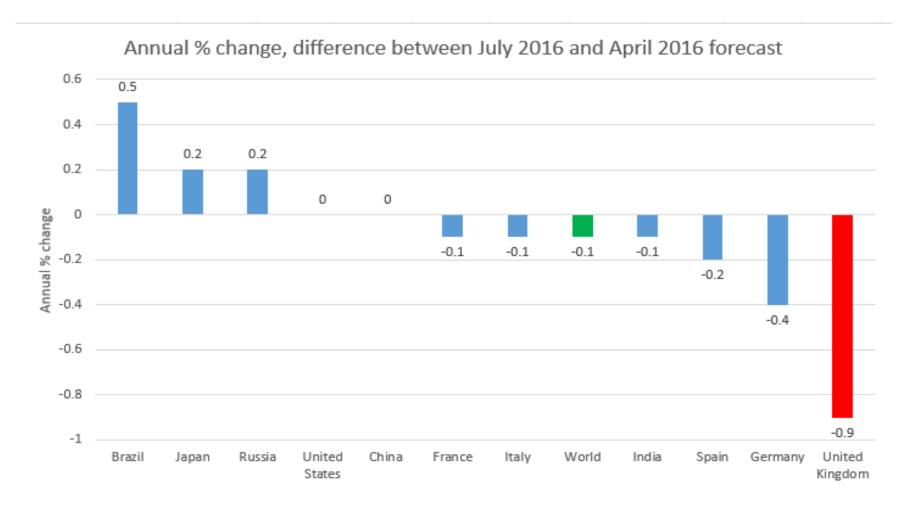
World Economic Outlook



- World Economic Outlook report
- Data on national accounts, inflation, unemployment rates, balance of payments, fiscal indicators, and commodity prices
- Projections for most indicators run up to 2024



IMF revision of GDP growth forecasts for 2017

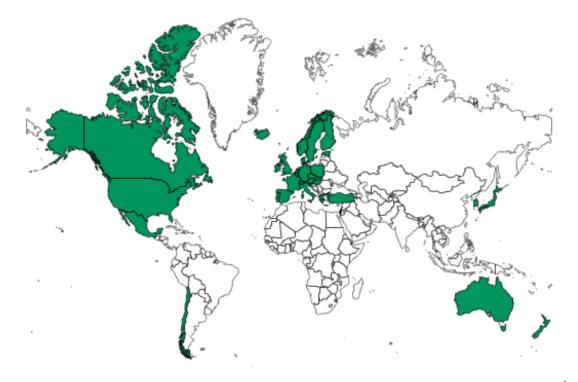






Organisation for Economic Cooperation and Development (OECD) Data

- Open data
- Comparable data
- Limited number of countries
- Wide range of data







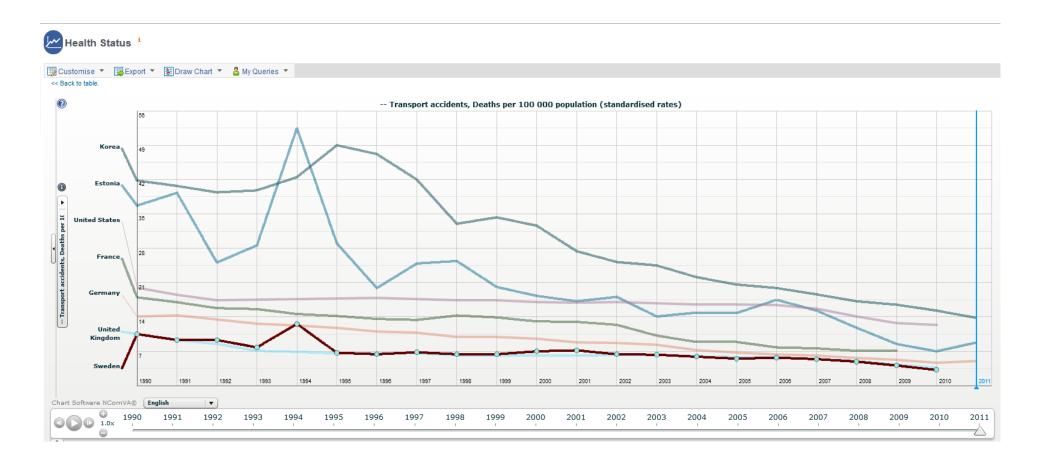
OECD data

- Banking Statistics
- Economic Outlook
- Education and Training
- Employment and Labour Market Statistics
- Environment Statistics
- Health Statistics
- Institutional Investors Statistics
- Insurance Statistics
- International Development Statistics
- International Direct Investment Statistics
- International Trade in Services
- International Migration Statistics
- Main Economic Indicators
- Main Science and Technology Indicators

- Measuring Globalisation
- Monthly Statistics of International Trade
- National Accounts
- Patent Statistics
- Pensions Statistics
- Product Market Regulation
- Productivity Statistics
- Regional Statistics
- Social and Welfare Statistics
- Structural Analysis
- Tax Statistics
- Telecommunications and Internet Statistics



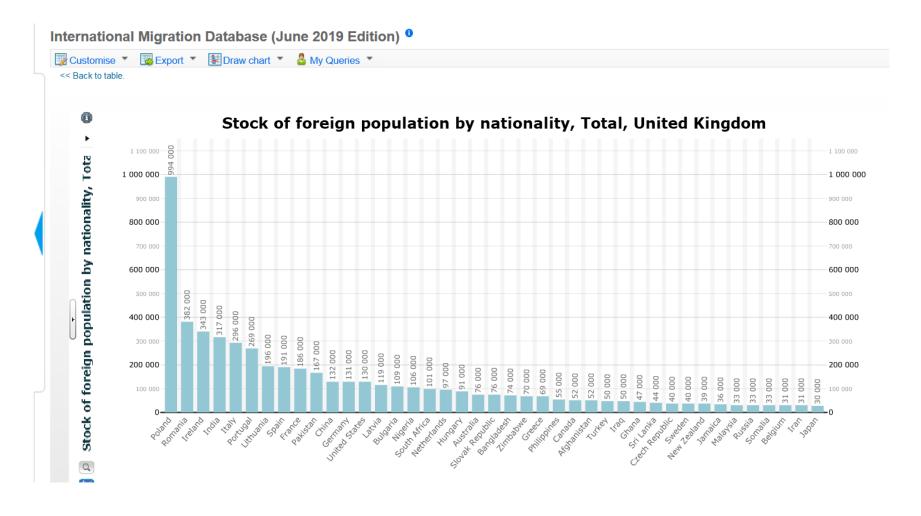
OECD Health Statistics



Organisation for Economic Cooperation and Development (2014): OECD Health Statistics (Data downloaded: 2014-06). UK Data Service.

DOI: http://dx.doi.org/10.5257/oecd/health/2014-06

Nationalities in the UK in 2017



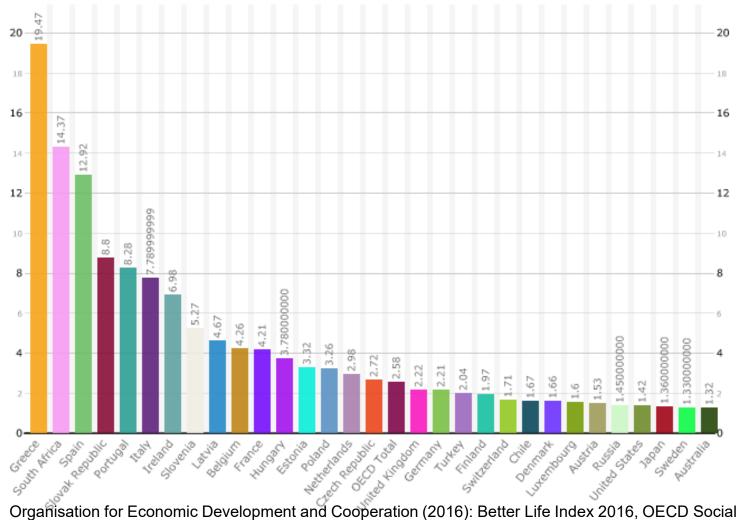
Organisation for Economic Cooperation and Development (2019): International Migration Statistics (Updated: June 2019). UK Data Service. DOI: http://dx.doi.org/10.5257/oecd/ims/2019-06

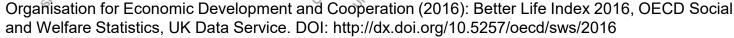


Which country had the highest long term unemployment rate in 2016?



Long-term unemployment rate % (2016)





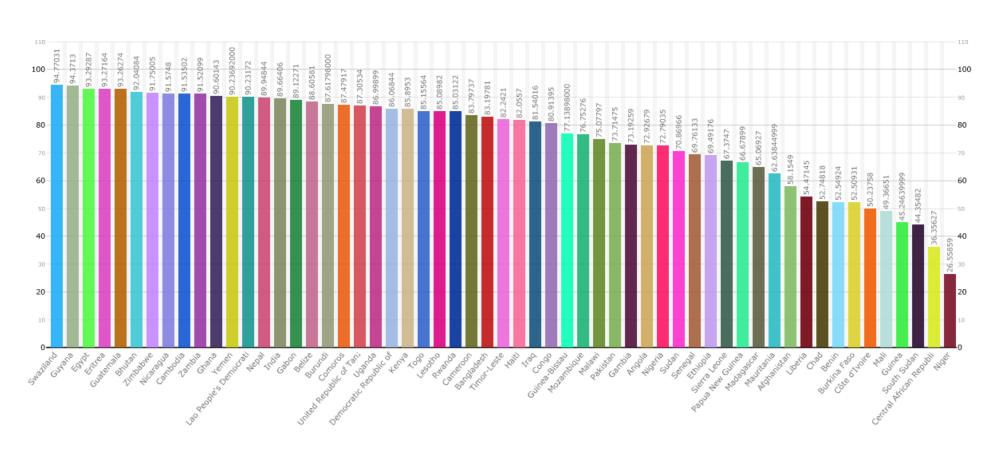


UNESCO

- Open data
- Education Statistics (1970 onwards)
 - Out of school, progression, attainment, literacy, student migration, teachers, financial resources and much more
- Innovation Statistics (2005 onwards)
 - R&D activity data
- Culture
 - Cultural employment (2009 onwards)
 - Feature film statistics (1995 onwards)
- Communication and information (1995 onwards)



Youth literacy rate, population 15-24 years, both sexes (%)





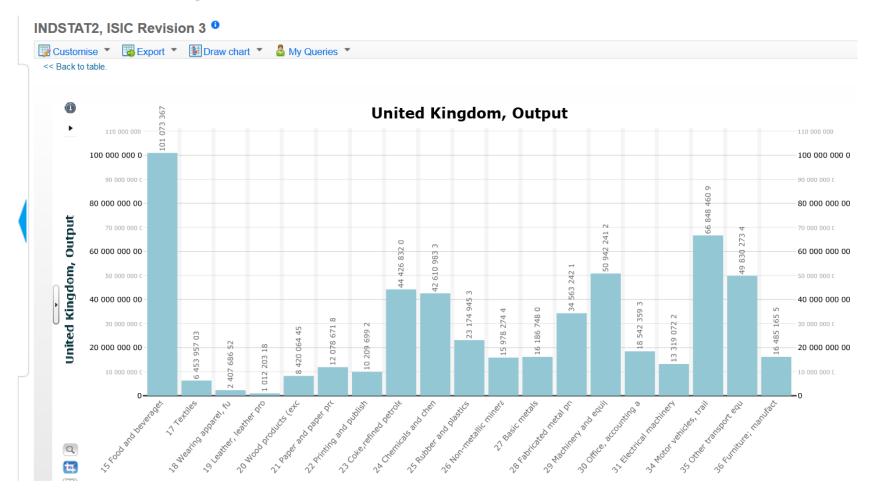
United Nations Industrial Development Organization (UNIDO)

- Restricted to UK FE/HE
- UNIDO Industrial Statistics Databases
 Employment, wages and trade world-wide, broken down by manufacturing sector
 - -INDSTAT2
 - -INDSTAT4
- UNIDO Industrial Demand Supply Balance Databases Imports, exports and apparent consumption by manufacturing sector, from 1990 onwards
- Annual data, updated each year

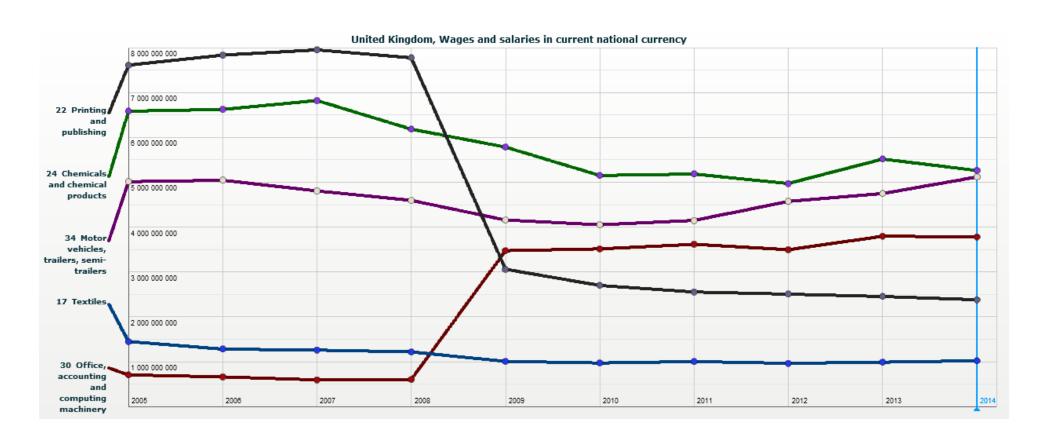




UNIDO data: Output UK 2017



UK Wages and salaries

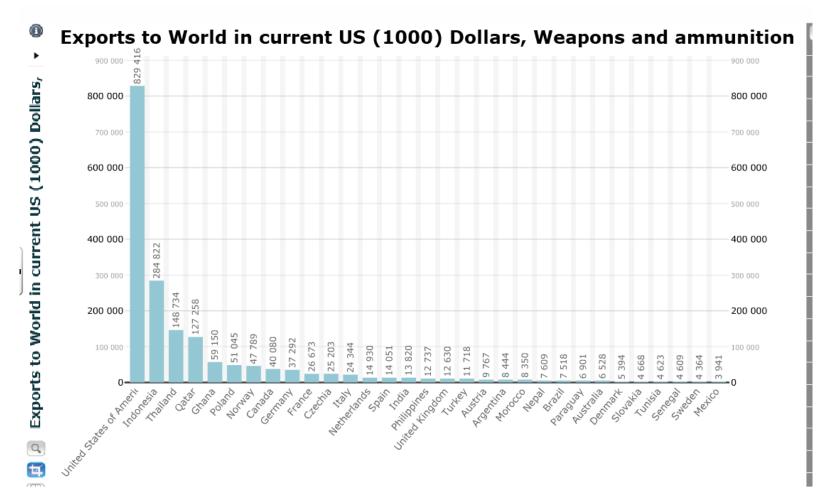




The US had the highest value of weapons and ammunition exports in 2016. But which country came second?



Weapons and ammunition Exports (current US\$ (1000) in 2016



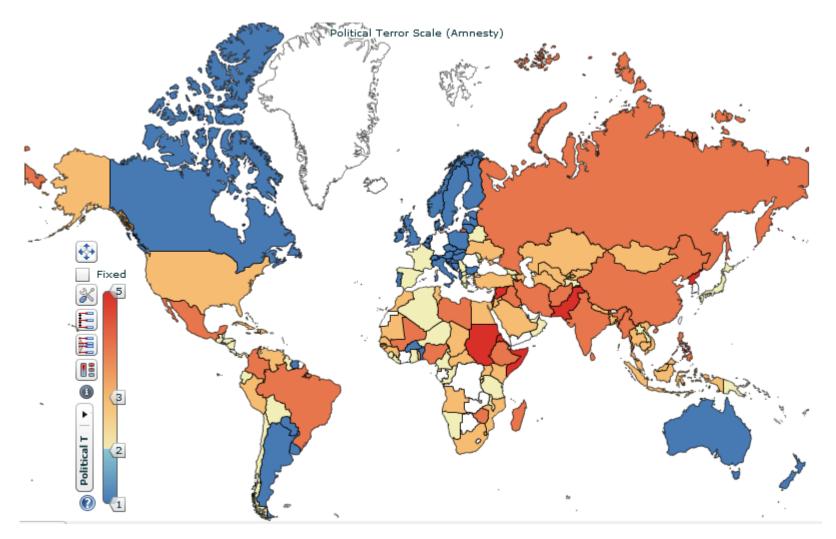


Human Rights Atlas

- Open data
- 1981 2012
- 240 indicators
- Combines data from World Bank, UN, academia, and non-governmental organisation
- ESRC funded project



Political Terror Scale (Amnesty, 2012)





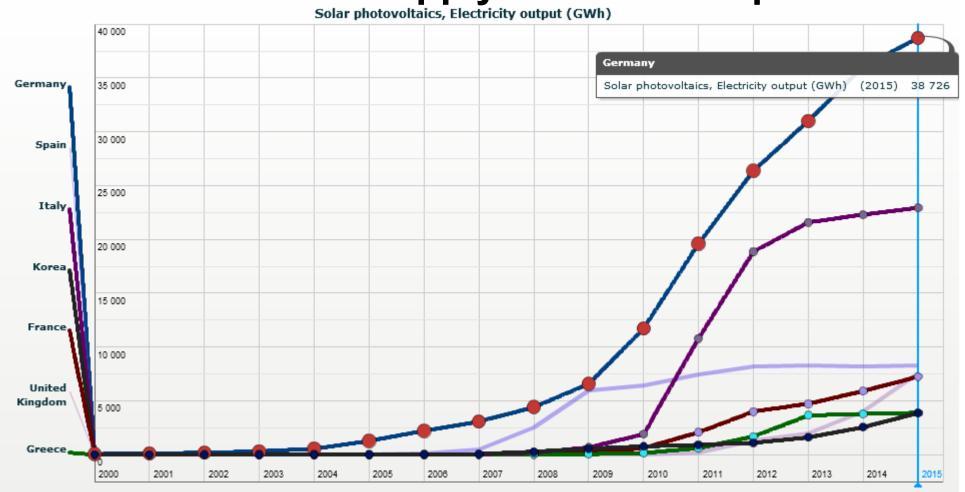
International Energy Agency

- Restricted to UK FE/HE
- CO₂ Emissions from Fuel Combustion
- Energy Prices and Taxes
- Energy Technology Research and Development Database
- World Energy Statistics and Balances
- Specialist databanks:
 - Electricity information
 - Coal Information
 - Natural Gas Information
 - Oil Information
 - Renewables Information





IEA Renewables Supply and Consumption



International Energy Agency: Renewables Information : OECD Renewables Supply and Consumption (2017 Preliminary Edition), 1990-2015 (Data downloaded: 28 June 2017). UK Data Service, DOI: http://dx.doi.org/10.5257/iea/ri/2017-04



Some tips on using the databanks

Tip 1: choose your data from the same databank or family of databanks

 comparability issues between data from different databanks, even for series with well-established standards

theoretically identical series can have slightly different values in

different databanks

	US GDP (US\$ billions as reported by the World Bank and IMF)	
000		
000		
000		
000 -		
000		
000 -		
000		
000 -		
000 -		
000 -		
	2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 20	15 2016

Time	VVorld Bank	IMF
2000	10284.8	10284.8
2001	10621.8	10621.8
2002	10977.5	10977.5
2003	11510.7	11510.7
2004	12274.9	12274.9
2005	13093.7	13093.7
2006	13855.9	13855.9
2007	14477.6	14477.6
2008	14718.6	14718.6
2009	14418.7	14418.7
2010	14964.4	14964.4
2011	15517.9	15517.9
2012	16155.3	16155.3
2013	16663.2	16691.5
2014	17348.1	17393.1
2015	17947.0	18036.7
2016		18567

Morld Donk IME

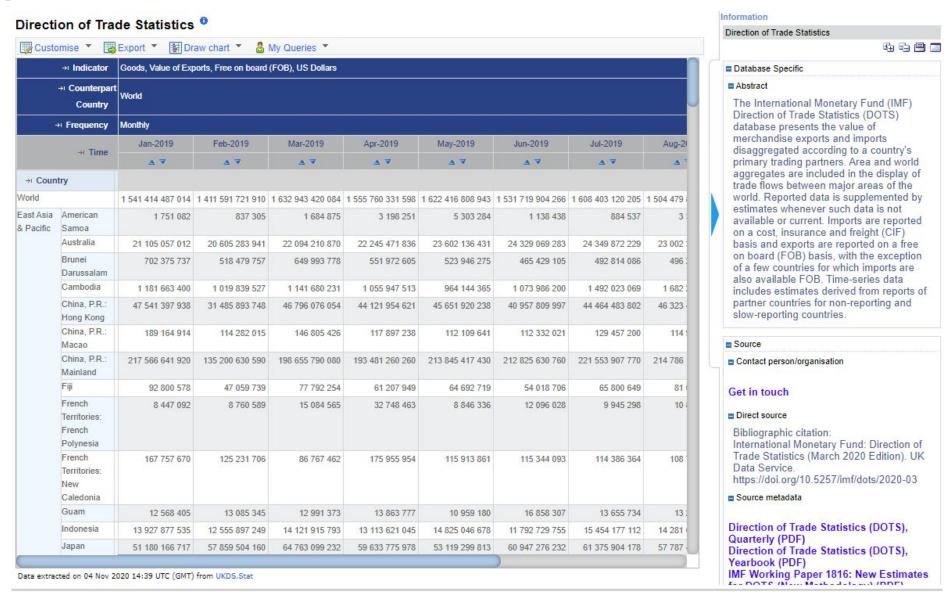


World Development Indicators (December 2014)

Sustomise ▼ Support ■ Sup										
→ Subject	Gross intake ratio in first grade of primary education, female (% of relevant age group)							▼ i		
→ Time	2003	2004 ▲▼	2005 △ ▽	2006	2007 ▲▼	2008 ▲▼	2009 ▲▼	2010 ▲▼	2011 △ ▼	
→ Location										
Afghanistan i	143.80228		86.01333		73.16143		83.8826	91.17004	96.26532	
Albania i	93.8336									
Algeria i	94.86725	96.3032	94.91865	93.78017	97.56141	102.66329	103.49781	112.37794	110.10127	
All Developing Countries	110.0799484253	110.5738601685	111.2811737061	112.1305770874	114.0525131226	115.3629379272	112.446647644	113.6741409302	113.0870437622	
American										
Samoai										
Andorra i										
Angola i						i 146.83711	144.99312	i 144.82924	143.01736	
Antigua and Barbuda					101.31062	97.8975	i 93.28947		92.54328	
Arab World	91.5697097778	92.9570617676	94.8448028564	j 95.7619400024	97.5129928589	98.6844711304	• 98.4914474487	99.3586273193	99.8152923584	
Argentina :	110.65418	109.56736	109.12878	111.2247	111.04491	111.9544	114.636	114.58618	115.12126	
Armenia i	94.74919	95.57744	103.16127	107.40804		97.70087	99.55503			
Aruba i	100.26954	97.83784	104.25824	107.173	104.29185	104.92754	105.27859	100.59084		
Australia i										
Austria <u>i</u>	100.62708	100.35125	100.85993	101.09645	101.68413	100.8848	102.15114	101.77528	98.73741	
Azerbaijan <u>i</u>	i 90.85901	i 96.65539	i 85.6781	i 85.40494	i 90.51734	i 95.00388	i 93.52972	i 88.34544	i 98.17106	
Bahrain i										
Bangladesh i			122.26803	123.61365	105.79672	i 107.7326	i 113.15207	i 116.4747	i 129.56105	
Barbados i	101.05438	101.88356	108.99008	109.70018	115.44334	i 105.52647	i 107.81609	i 99.26052	100.73738	
Belarus i	97.24097	96.19421	97.05026	103.42414	105.49501	106.92582	102.1328	98.89578	98.16708	



Tip 4: metadata is in the sidebar





What we provide

- Data free at point of use
- Single portal and search across a wide range of international databanks from several intergovernmental organisations
- Consistent and comprehensive documentation
- Training, user support, knowledgeable helpdesk
- Web: ukdataservice.ac.uk



Data Skills modules

- Survey
- Longitudinal
- Aggregate
- <u>ukdataservice.ac.uk/use-data/data-skills-modules</u>



Demo

https://stats.ukdataservice.ac.uk/

