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Codebook for Ross Oil and Gas Dataset

These data are based on the best available information about the volume and value of oil and natural gas production in all countries from 1932 to 2011. The volume figures are from the documents listed below; to calculate the total value of production, I multiply the volume by the world price for oil or gas. Since these are world prices for a single (benchmark) type of oil/gas, they only approximate the actual price – which varies by country according to the quality, the terms of contracts, the timing of the transactions, and other factors.

These figures do not tell us how much revenues were collected by governments or companies – only the approximate volume and value of production.

Oil and Gas Production
Data on oil production from 1932 to 1969, and gas production from 1955 (when it first was reported) to 1969, are from the US Geological Survey *Minerals Yearbook,* for various years. Production figures for 1970-2000 are from the World Bank's 'Wealth of Nations' database (http://data.worldbank.org/data-catalog); for 2001-2011, data are drawn from the US Energy Information Administration website for international energy statistics (http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm).

These should be regarded as approximations. The USGS data has been converted from a measure of volume (barrels) to a measure of weight (metric tonnes) using a standard formula, even though the weight of oil varies according to quality. The joining of the three datasets, across 1969-70 and 2000-01, creates an artificial change in some countries, since the two sources disagree slightly. This may be due to whether or not they count products associated with oil production, like 'field condensate.'

Data missing from the World Bank has been filled in for the following states:

Bahrain (1970-00)
Brunei (1970-00)
Cote D'Ivoire (1994)
Equatorial Guinea (1994-00)
Finland (1986-00)
Ghana (86-00)
Portugal (95-00)
Qatar (70-00)
Senegal (2002-04)
Sudan (89-00, 2010-11)
Surinam (86-00)

For these cases, I took figures for the quantity of oil production from the US Energy Information Administration; and for Sudan, from the BP Statistical Yearbooks.

Oil and Gas Prices
Data on oil prices are taken from the BP Statistical Review 2012, and on gas prices from the Energy Information Administration database on US natural gas prices. Only one source is used for the entire, continuous 1932-2011 period. Values are in nominal dollars per million British Thermal Units of natural gas priced at the Henry Hub in Louisiana.

Oil and gas exports
Data on oil and gas exports are taken from the EIA International Energy Statistics for 1984-2010 (oil) and 1990-2011 (gas). Net exports are calculated by subtracting imports, which are also taken from the EIA. Values for oil exports are in thousands of barrels per day, metric tonnes per year, real US dollars (2000) per year (price times net exports), and real dollars per capita. Values for gas exports are in billions of cubic feet per year, millions of barrels of oil equivalent per year, real dollars per year, and real dollars per capita.

Sovereign

The 'sovereign' dummy is drawn from Cheibub, Gandhi, and Vreeland, supplemented by the CIA World Factbook.

Country-specific corrections

Brunei
Prior to 1968, Brunei is listed as "Brunei and Sarawak." My strong impression is that all or almost all of the pre-1968 production nonetheless comes from Brunei.

Cote D'Ivoire
Neither the World Bank nor the USGS Minerals Yearbooks reports data for oil production in 1994. I used the EIA data on oil production to fill in this missing value.

Estonia
For Estonia, oil production values for 1932-1937 are from the USGS Minerals Yearbooks; data available for oil shale production only.

Ghana
There is apparently miscoding for Ghana in both the EIA and WB Rents data, according to USGS reports. There was apparently no production after 1985 or 1986 until 1996, except for a test hole in 1992. A refinery operated part of the time in the intervening years, which might be the source of the confusion. I have set production at zero for the years 1987-95.

Romania
The World Bank data on Romania before 1986 appears to be in error. I have corrected this by replacing pre-1986 Romania data with EIA data.

Tajikistan
World Bank figures for Tajikistan's oil production appear to be incorrect; I have replaced them with EIA data, which go back to 1992 only. The natural gas numbers look okay.

USSR/Russia
Values for the USSR are not explicitly provided; instead values for individual republics is recorded where the data are available. Values for Russia before 1991 are for the Russian Federation (Russian Soviet Federative Socialist Republic) only. For Russia, the data prior to 1985 seem to be erroneous or missing. I've redone the 1932-86 data on oil production, using:

1. up to 1970: Goldman, Marshall. The Enigma of Soviet Oil. 1980
2. after 1970: USGS mineral yearbook

And for natural gas, pre-1987 data were missing, so I took the 1955-86 data from: Stern, Jonathan, *Soviet Natural Gas Development to 1990*, 1980; and USGS mineral yearbook.

For the Russia data, conversion based on conversion rates for liquified natural gas (1 metric ton = 48700 cubic meters LNG). The gas data includes gas formed as byproduct of petroleum production.

Vietnam

The World Bank data on Vietnam before 1986 appears to be in error. I have corrected these by replacing pre-1986 Vietnam oil data with zeros (in accordance with the EIA data). Pre-1976 Vietnam values correspond to South and North Vietnam, where USGS Minerals Yearbook reports that there was no oil or gas production in either country for the entire period of sovereignty (1954-1975). Therefore all values are recorded 0. This is also the case for post-independence Vietnam (1945-1954), when there was no production.

Yemen

The WB data are in error in reporting oil production in Yemen 1978-85. It reports large quantities of oil production, but according to both USGS and BP, there was little to none in either North or South Yemen in these years. I have coded production for these years as zero.

Yugoslavia, Serbia, and Montenegro

Serbia and Montenegro are included in Yugoslavia, Fed. Rep. for all years prior to 2006. Therefore, Yugoslavia, Fed. Rep. is "Yugoslavia" for 1932-1990 and "Serbia and Montenegro" for 1991-2006 and “Serbia” for 2007-2011.