



UNIVERSITY OF
GOTHENBURG

CORRELATES OF THE LEVEL OF DEMOCRACY

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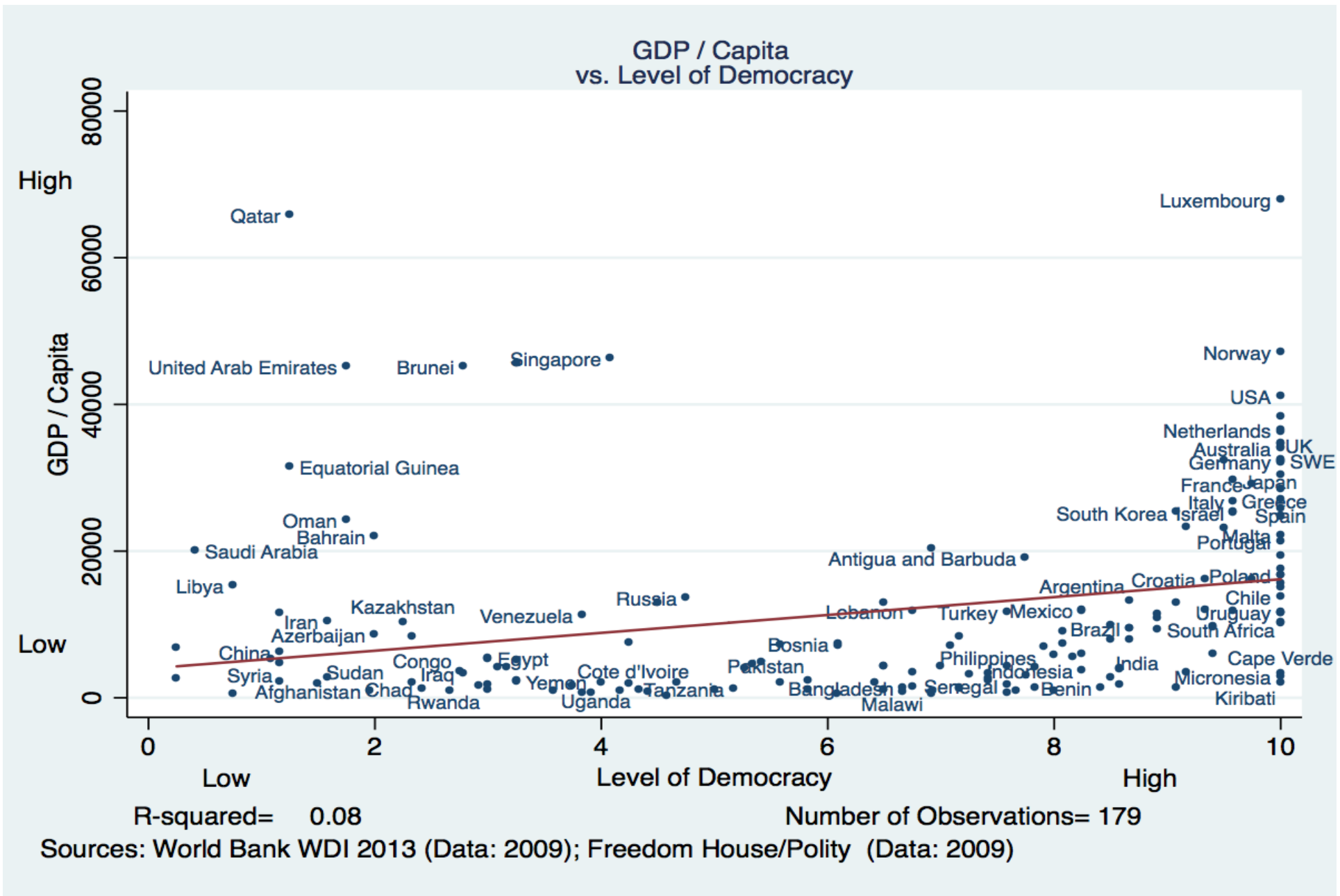
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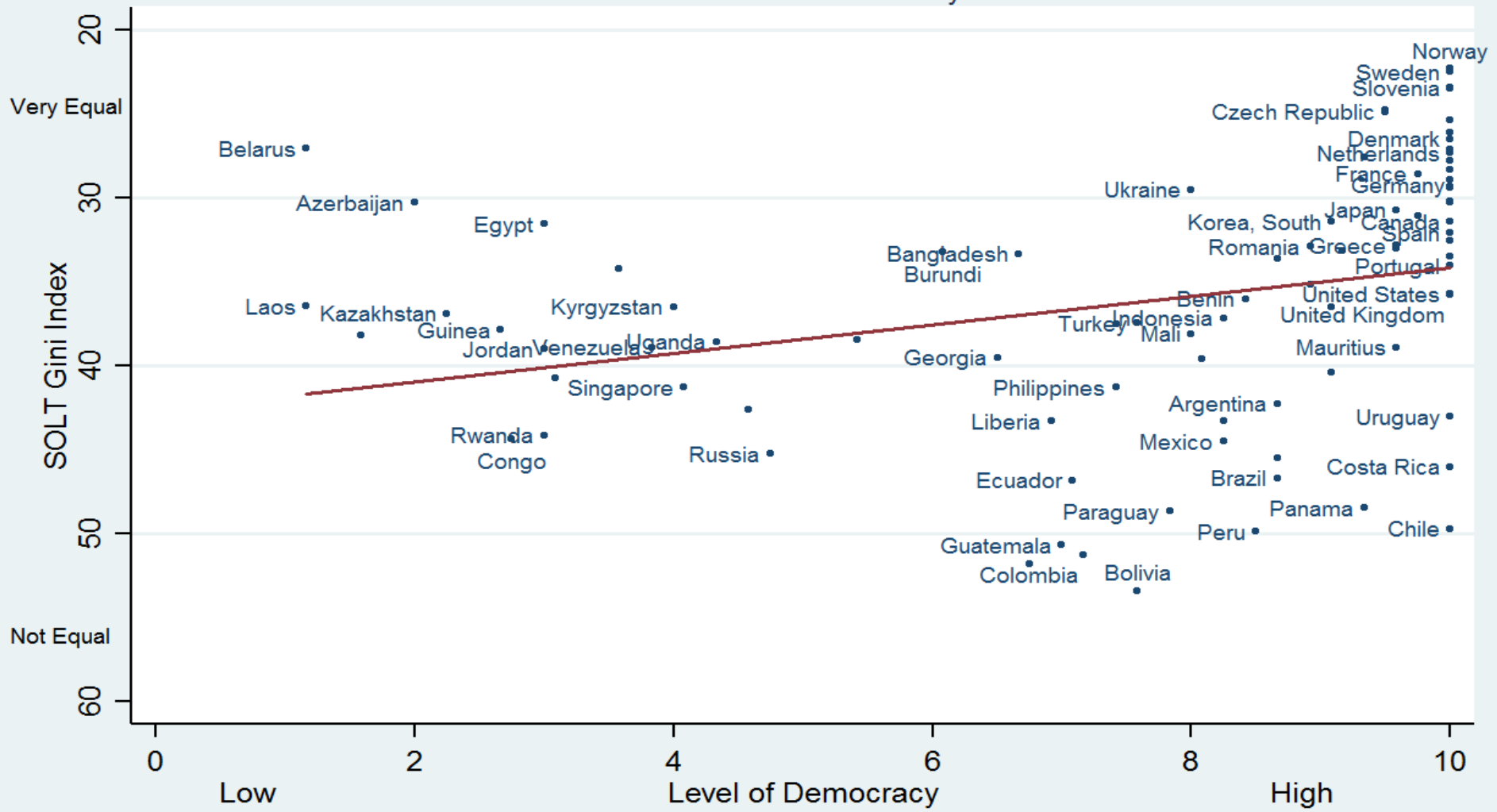
Level of Democracy

Level of Democracy – Freedom House / Polity

Scale ranges from 0-10 where 0 is least democratic and 10 most democratic. Average of Freedom House (fh_pr and fh_cl) is transformed to a scale 0-10 and Polity (p_polity2) is transformed to a scale 0-10. These variables are averaged into fh_polity2. The imputed version has imputed values for countries where data on Polity is missing by regressing Polity on the average Freedom House measure. Hadenius & Teorell (2005) show that this average index performs better both in terms of validity and reliability than its constituent parts.



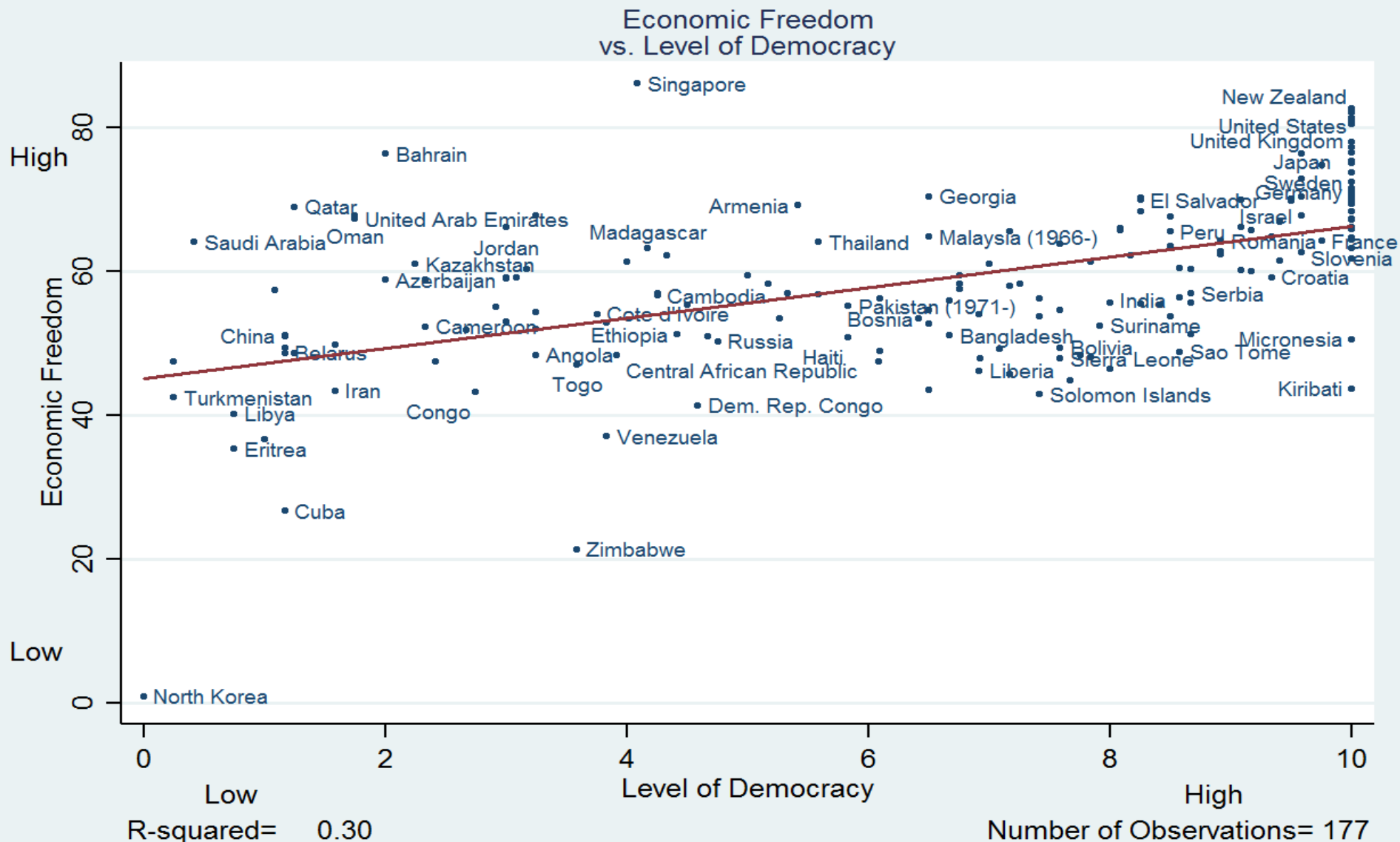
SOLT Gini Index vs. Level of Democracy



R-squared= 0.09

Number of Observations= 88

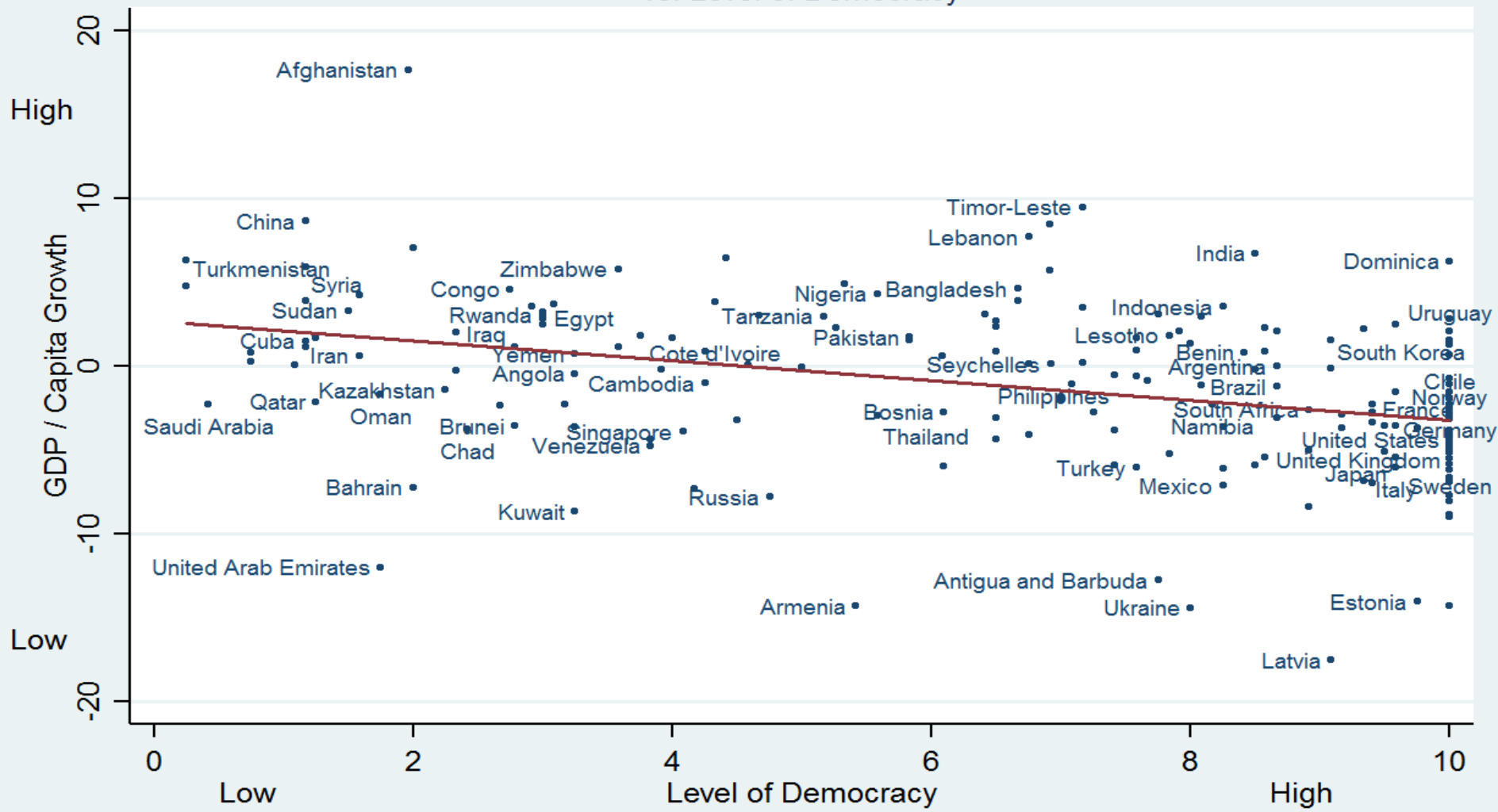
Sources: SOLT (2006-2009); Freedom House/Polity (Data: 2009)



Sources: Heritage Foundation (2009); Freedom House/Polity (Data: 2009)

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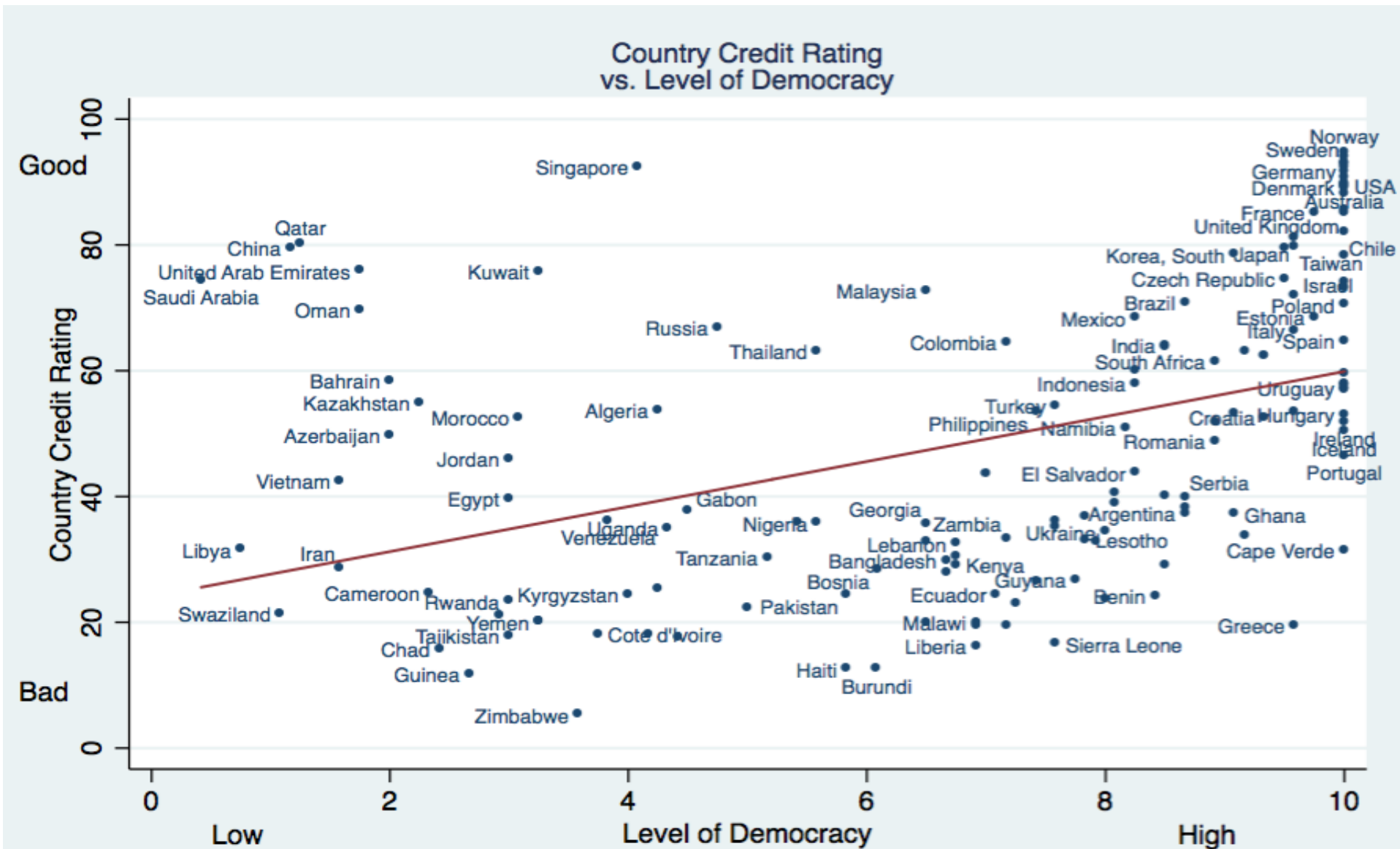
GDP / Capita Growth vs. Level of Democracy



R-squared= 0.14

Number of Observations= 187

Sources: World Bank WDI 2013 (2008-2009); Freedom House/Polity (Data: 2009)

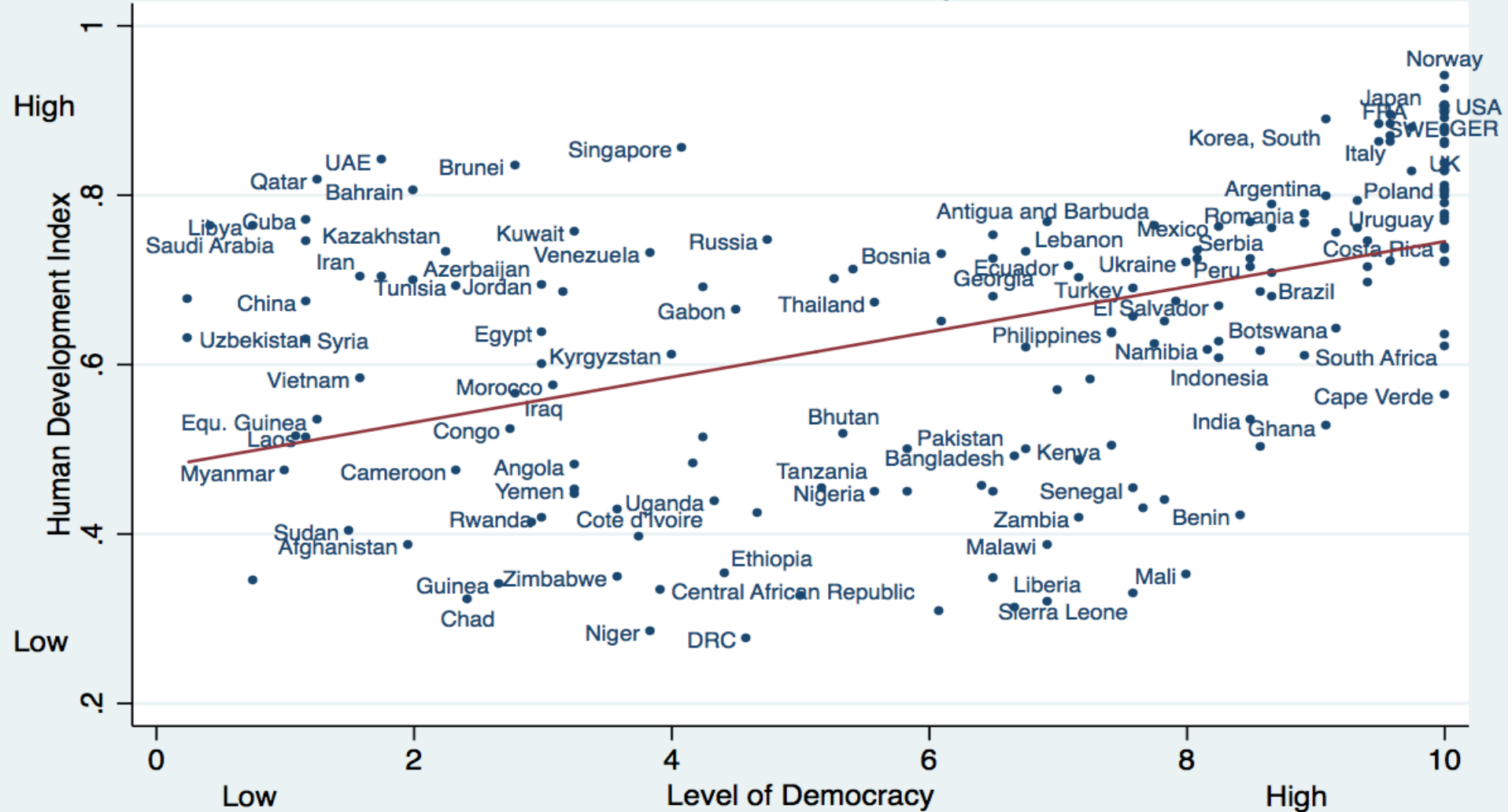


R-squared= 0.18

Number of Observations= 141

Sources: WEF (Schwab 2012), Freedom House/Polity (Data: 2009)

Human Development Index vs. Level of Democracy

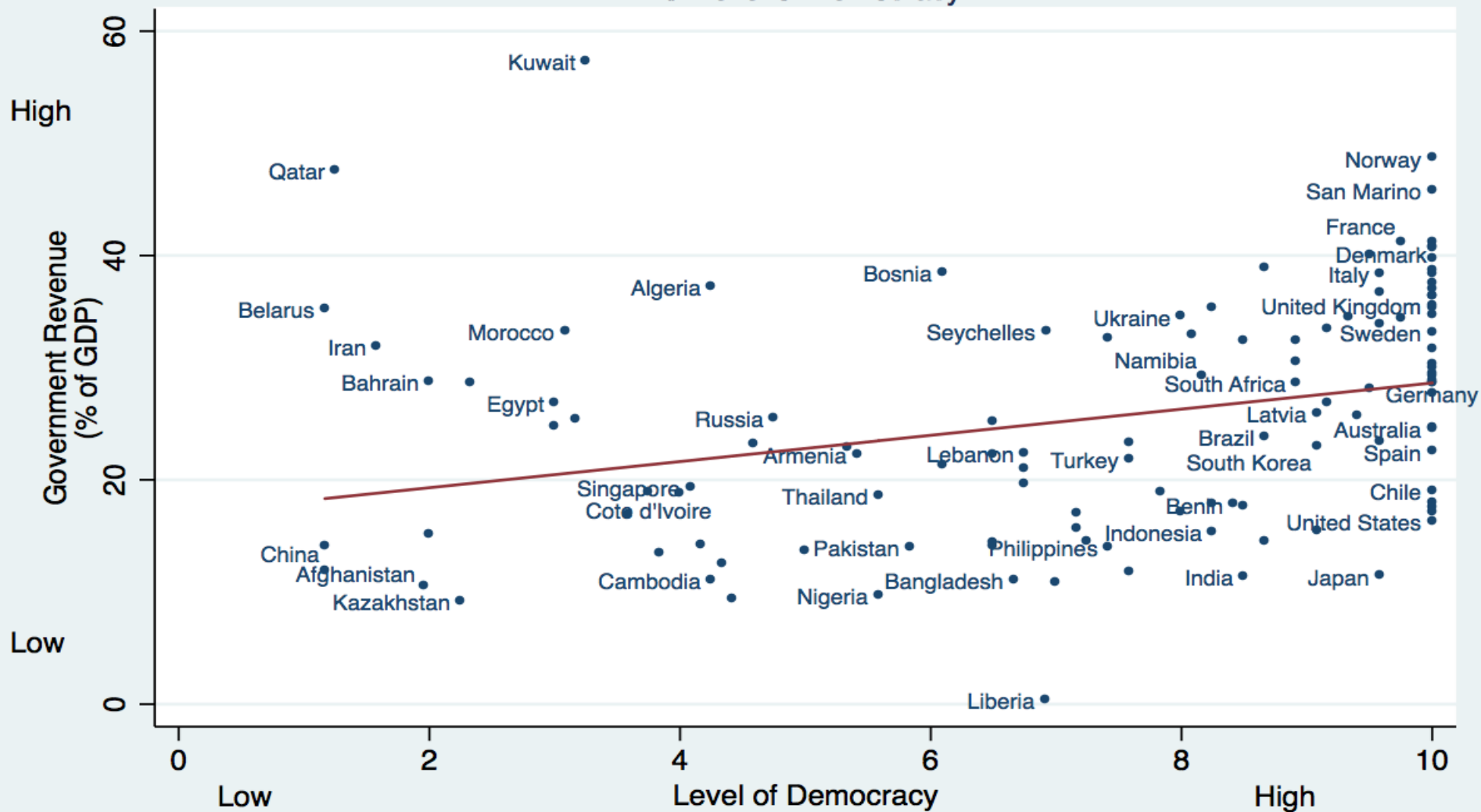


R-squared= 0.22

Number of Observations= 185

Sources: UNDP 2013 (2009-2010); Freedom House/Polity (Data: 2009)

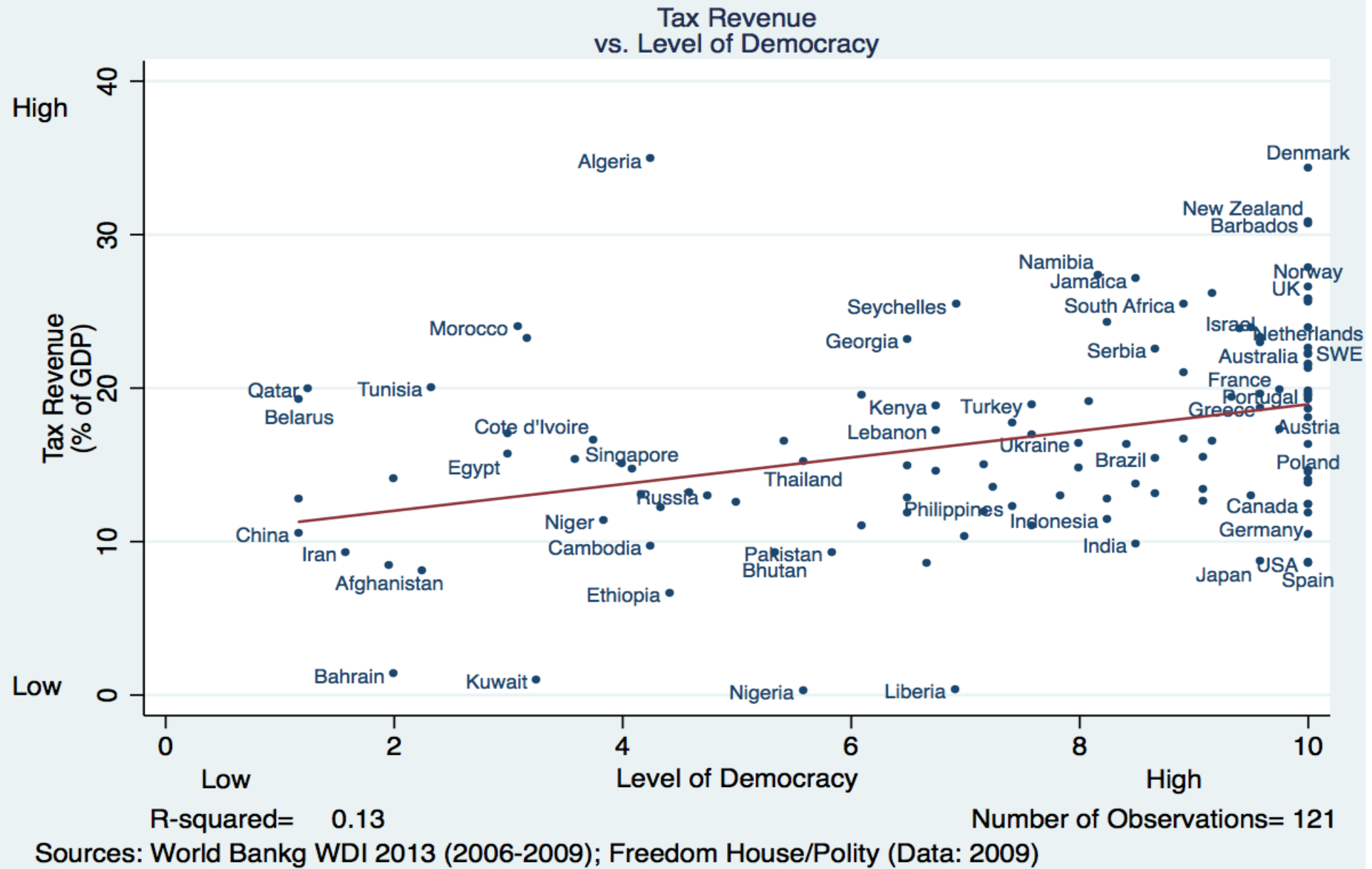
Government Revenue vs. Level of Democracy

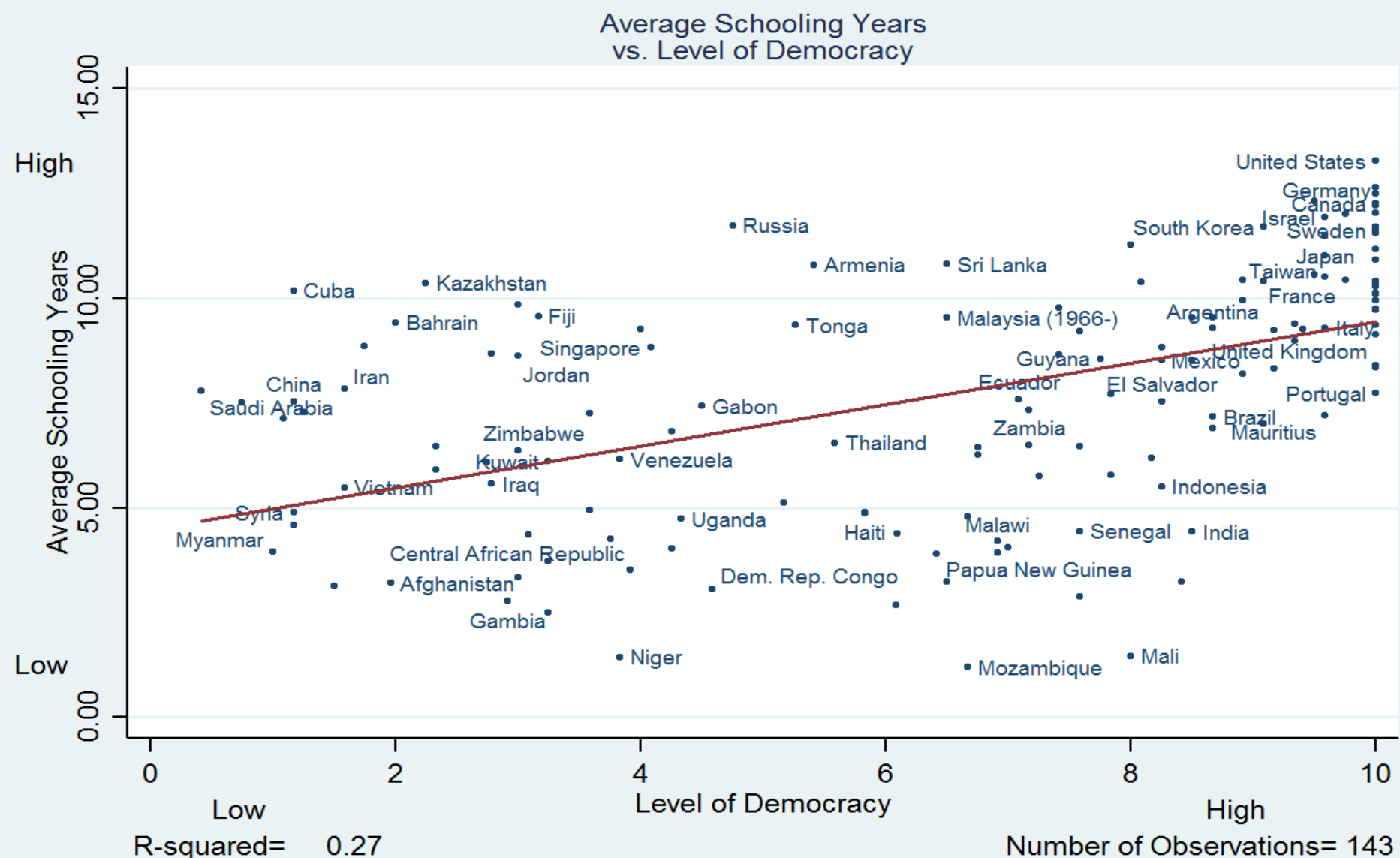


R-squared= 0.09

Number of Observations= 121

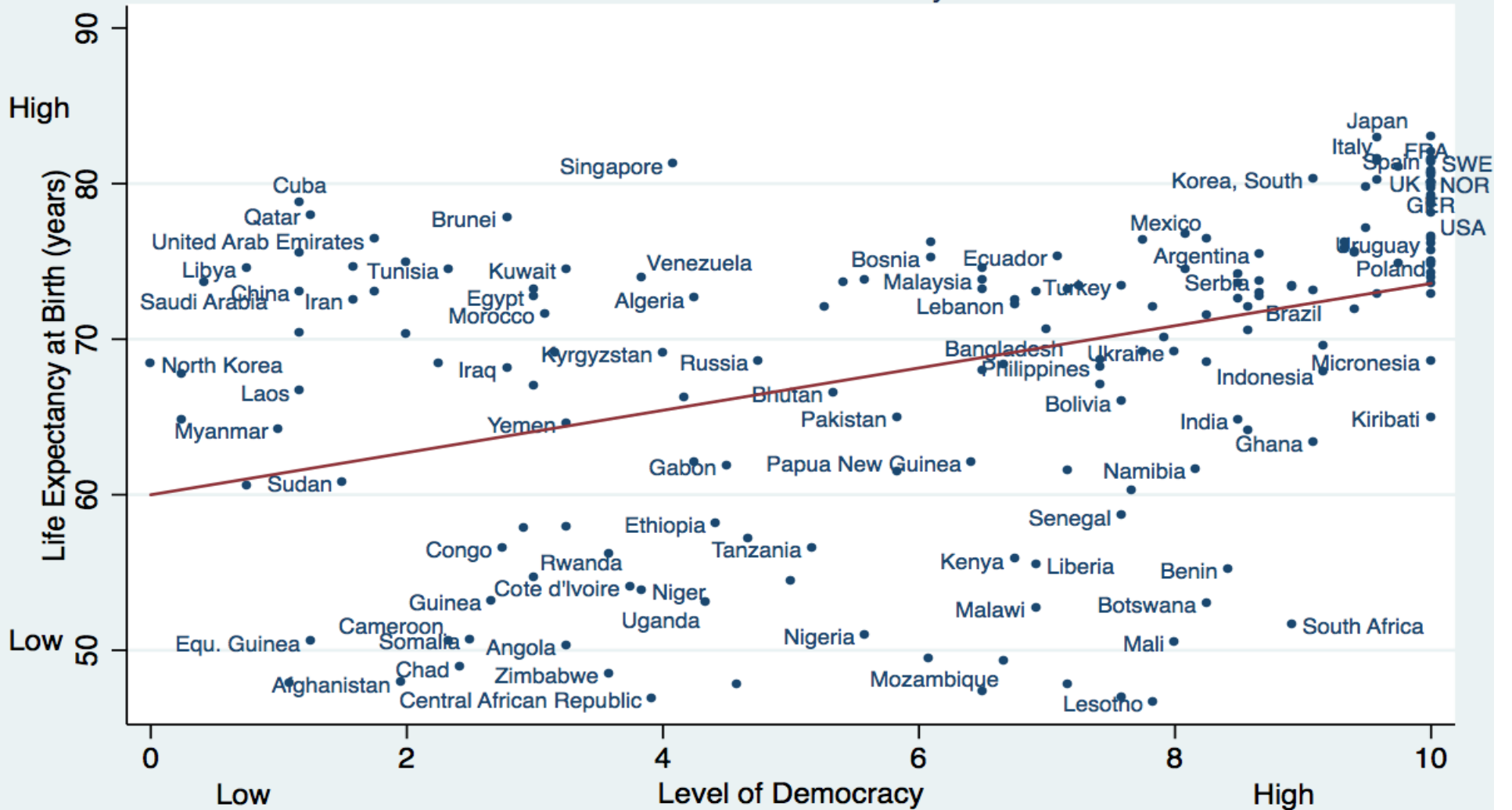
Sources: World Bankg WDI 2013 (2006-2009); Freedom House/Polity (Data: 2009)





Sources: Barro & Lee (2010); Freedom House/Polity (Data: 2009)

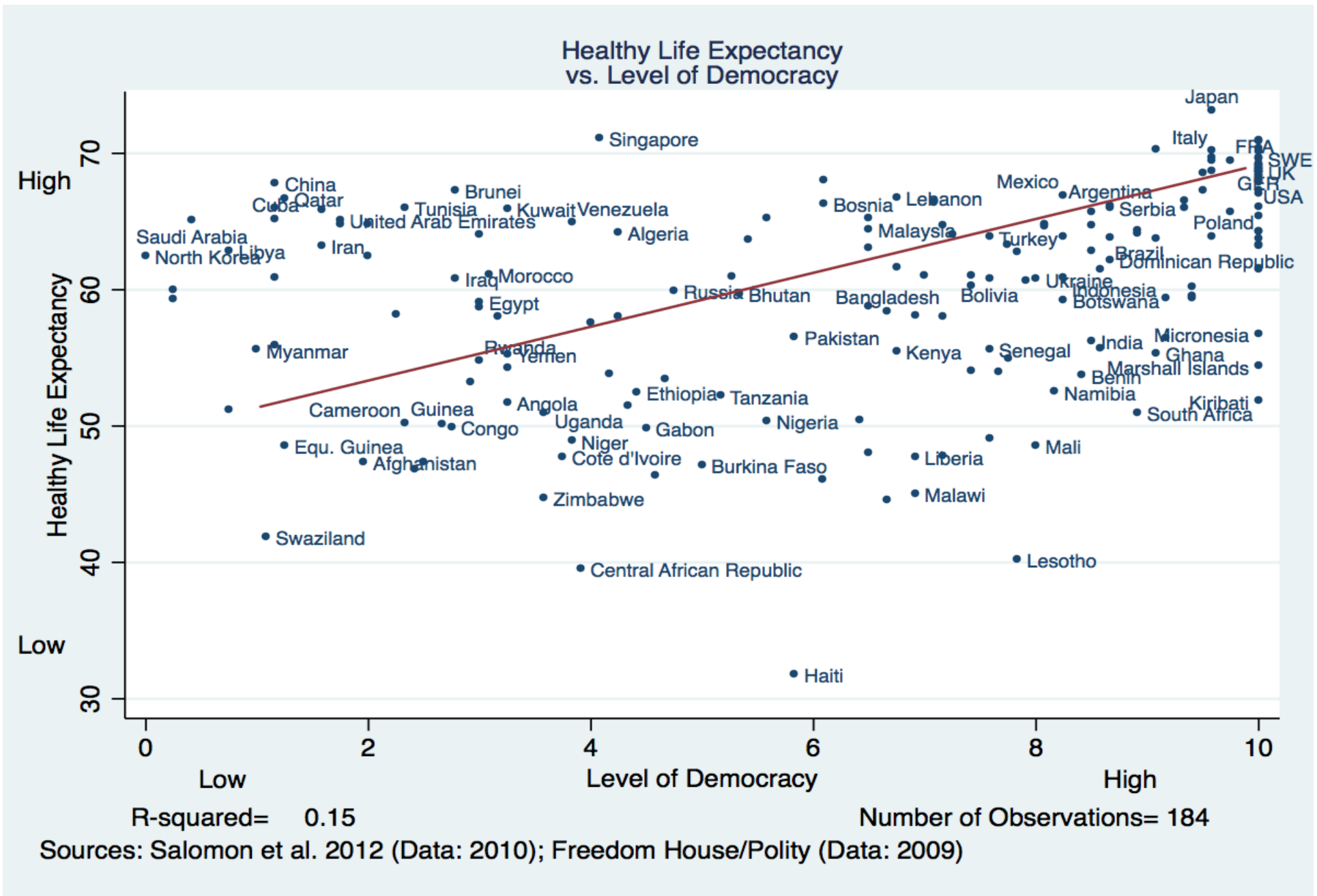
Life Expectancy at Birth vs. Level of Democracy



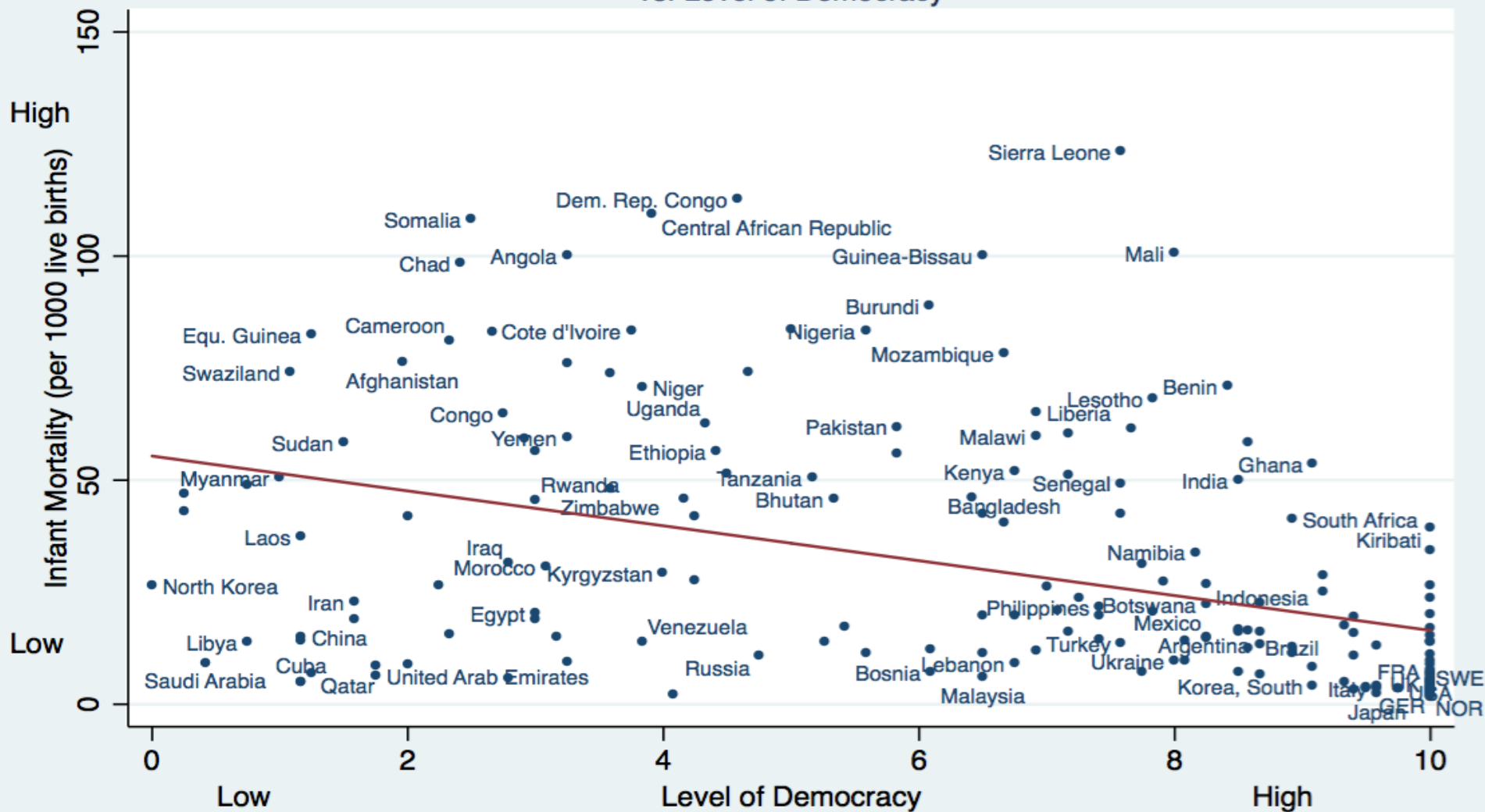
R-squared= 0.18

Number of Observations= 185

Sources: World Bank WDI 2013 (2009-2012); Freedom House/Polity (Data: 2009)



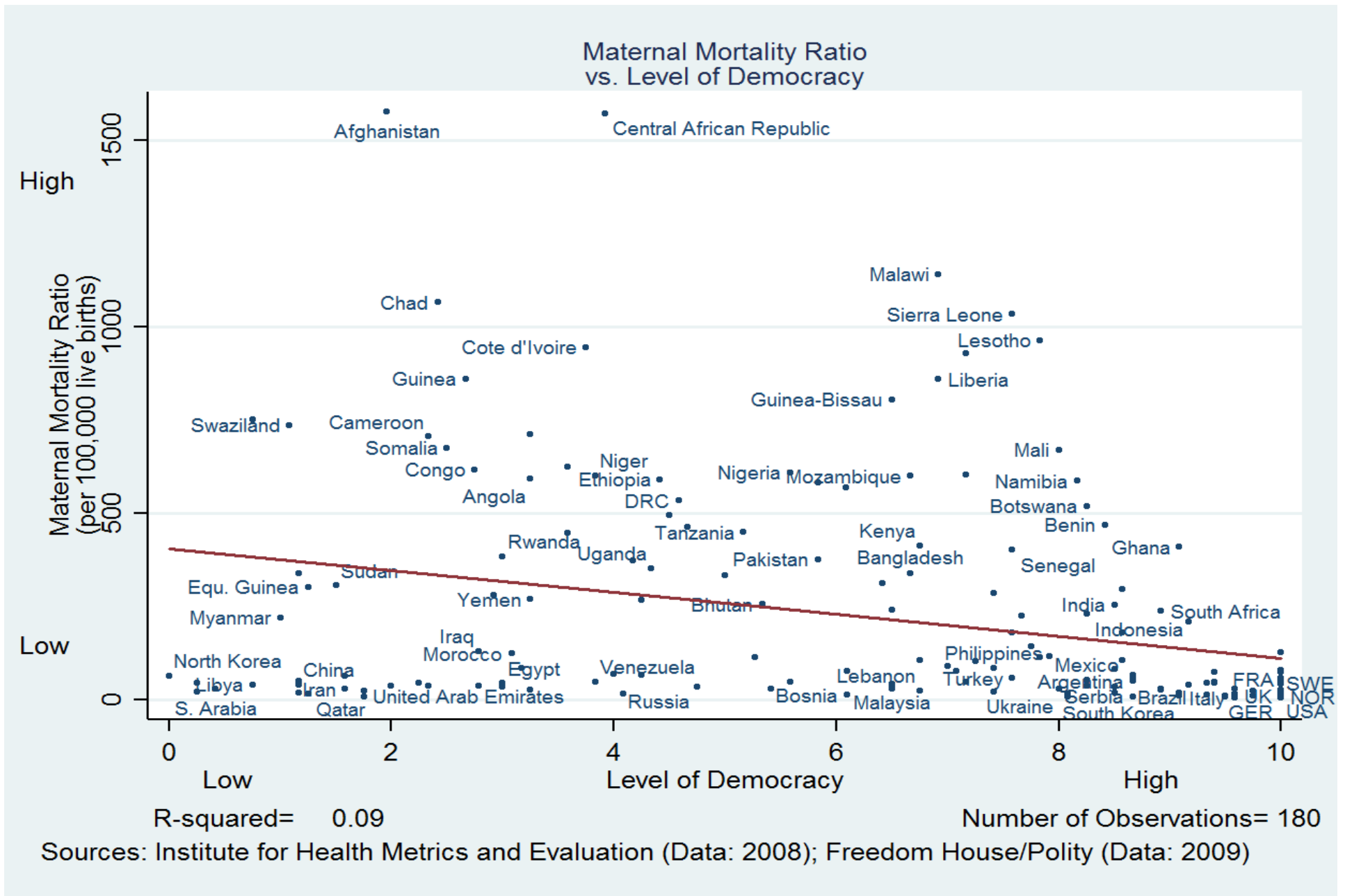
Infant Mortality vs. Level of Democracy

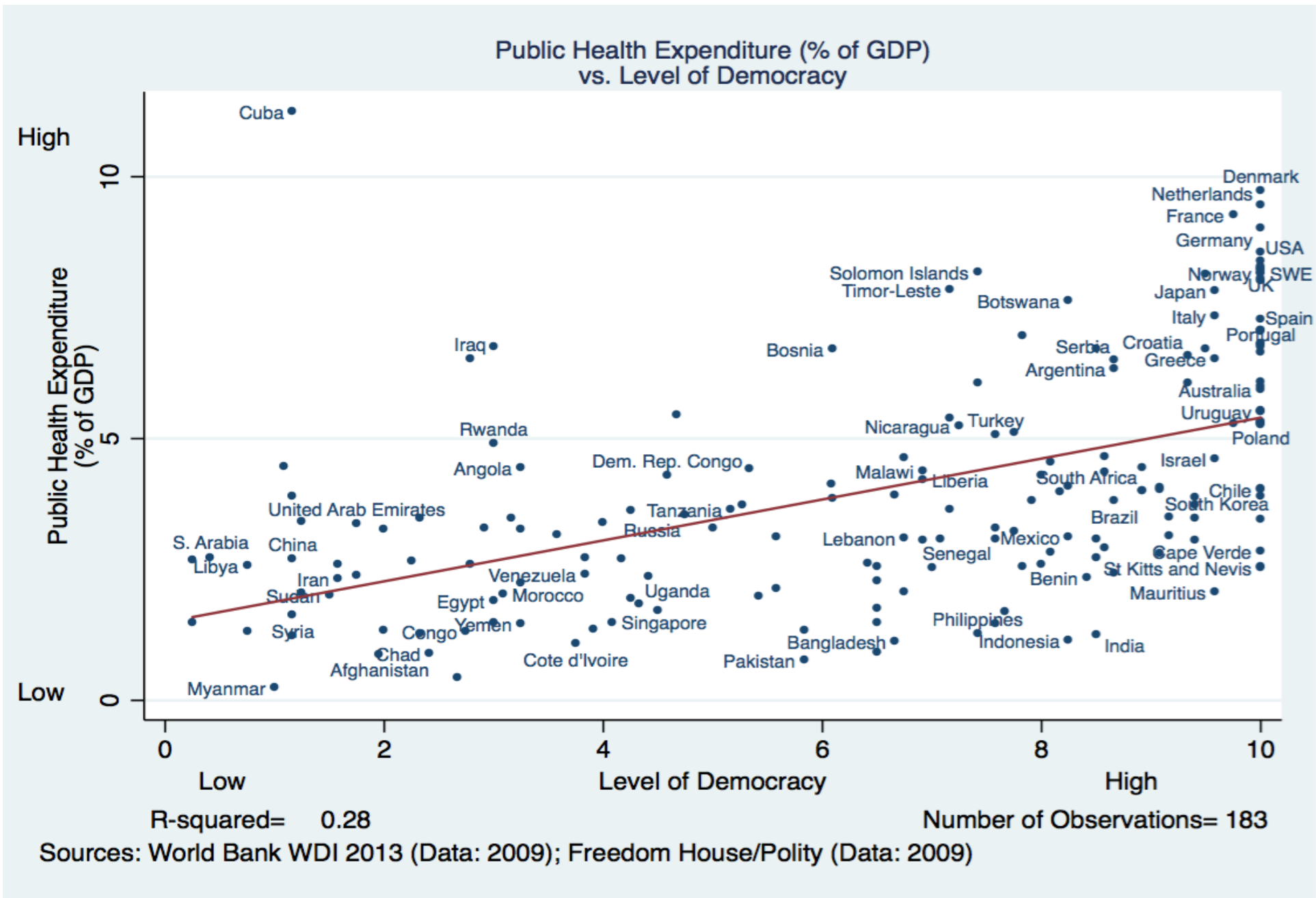


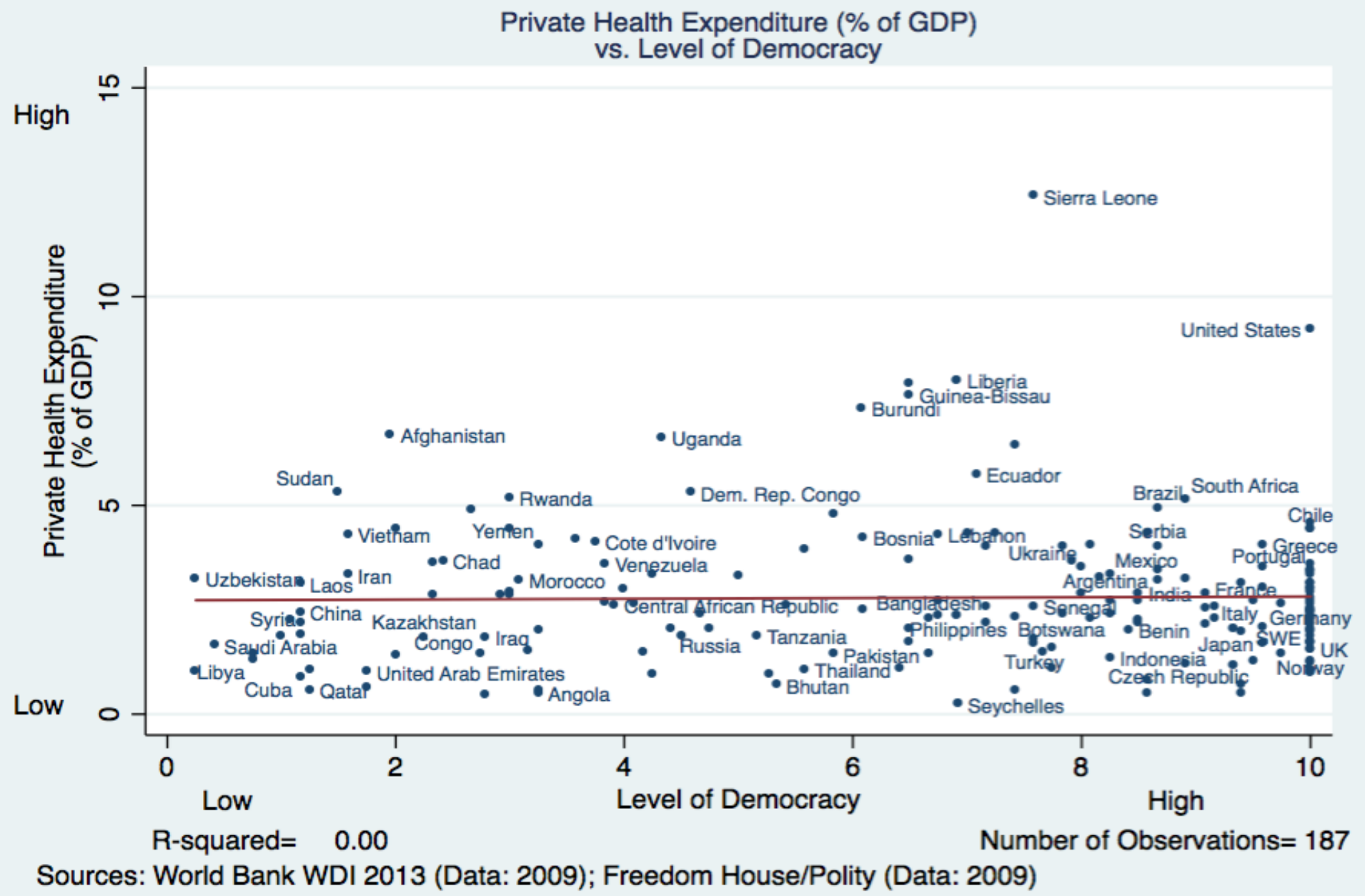
R-squared= 0.18

Number of Observations= 191

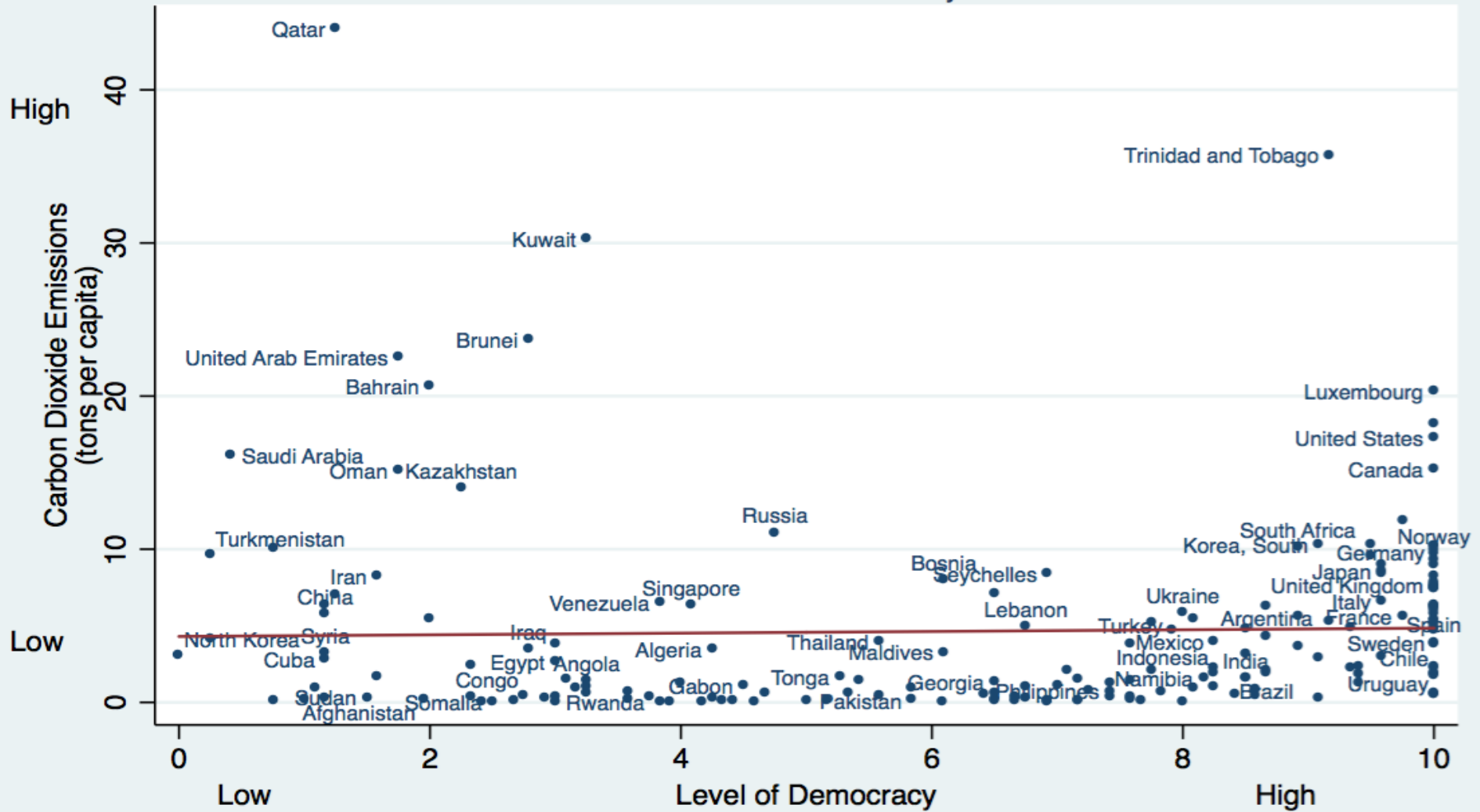
Sources: World Bank WDI 2013 (2009), Freedom House/Polity (Data: 2009)







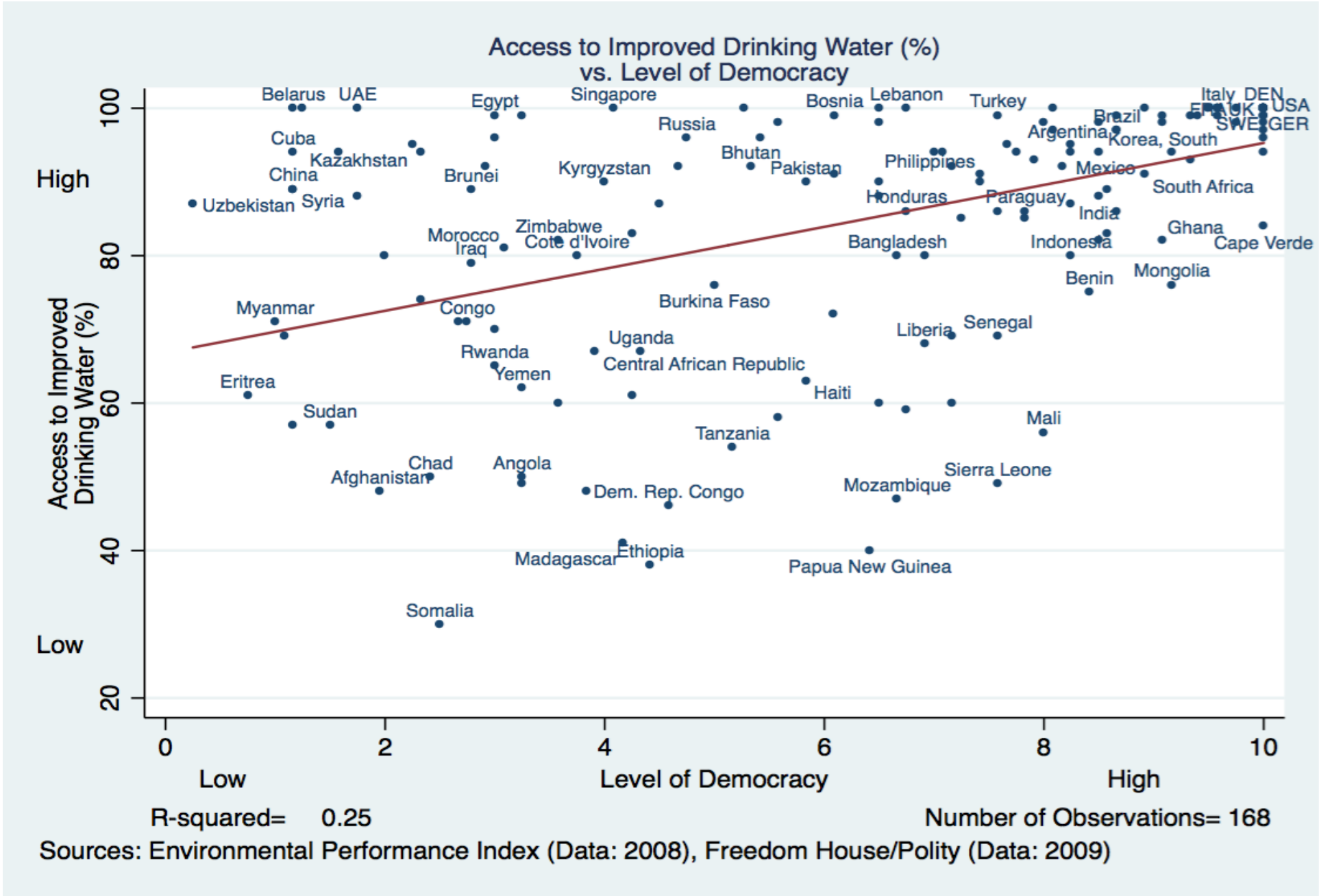
Carbon Dioxide Emissions vs. Level of Democracy

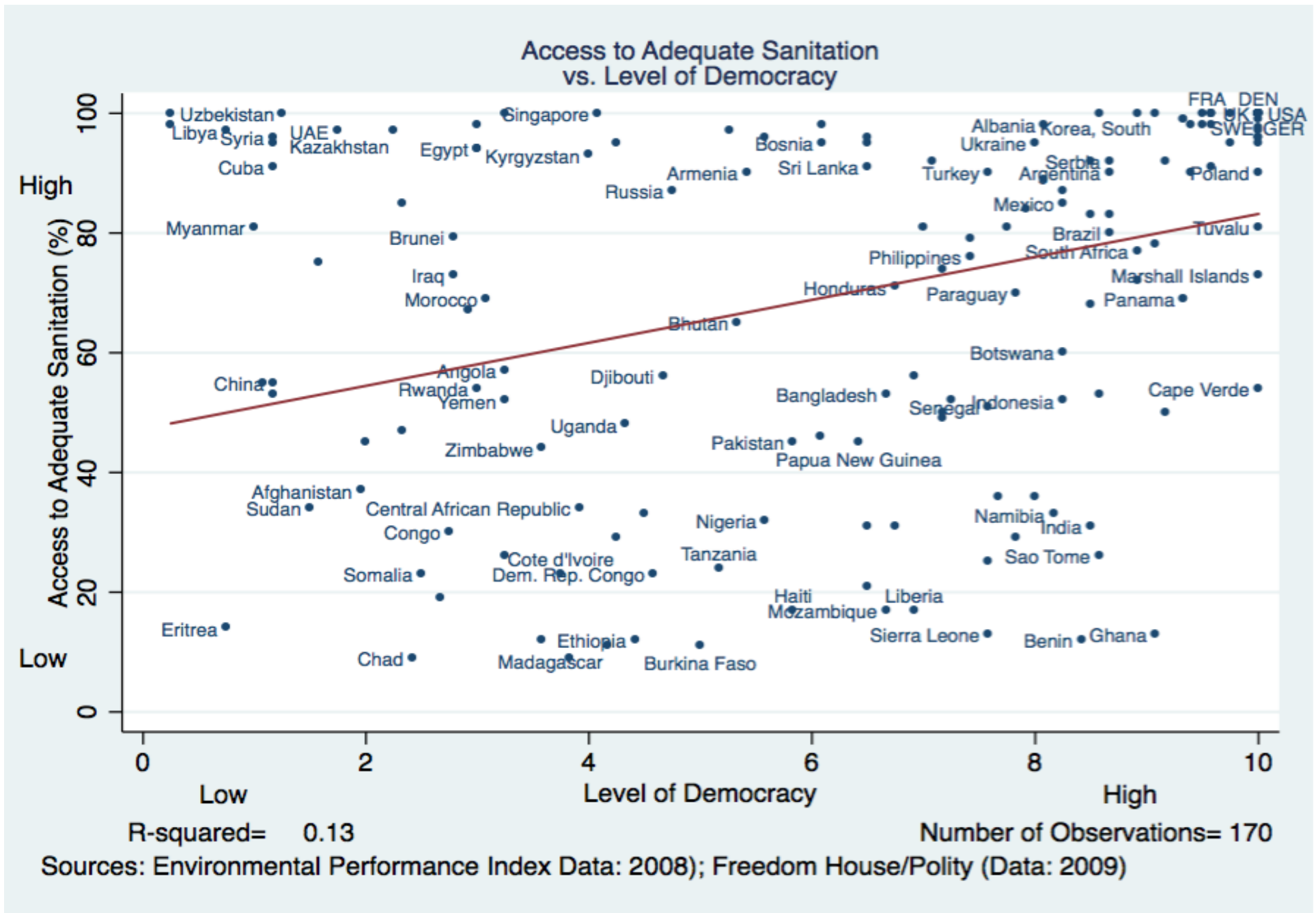


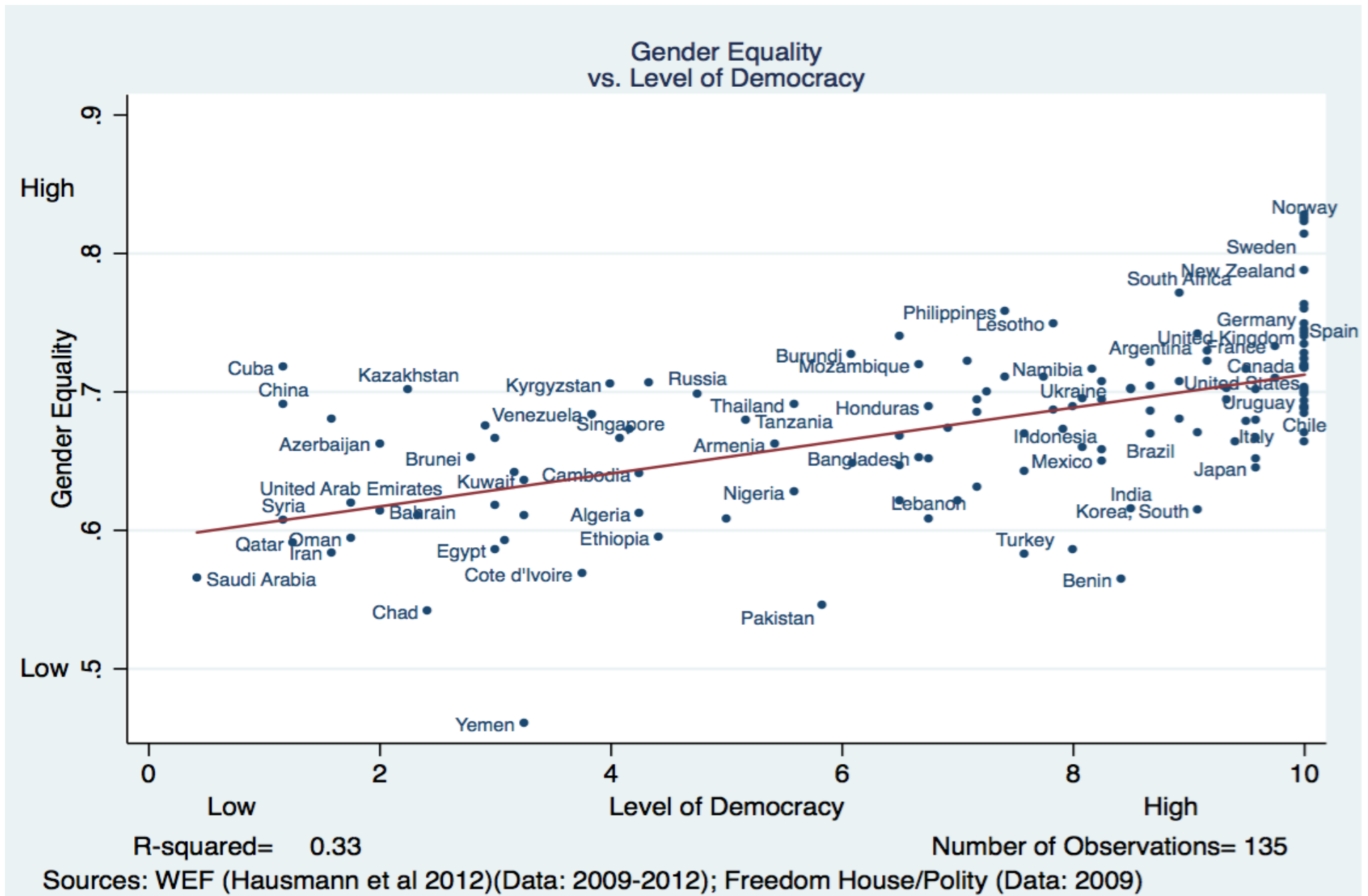
R-squared= 0.00

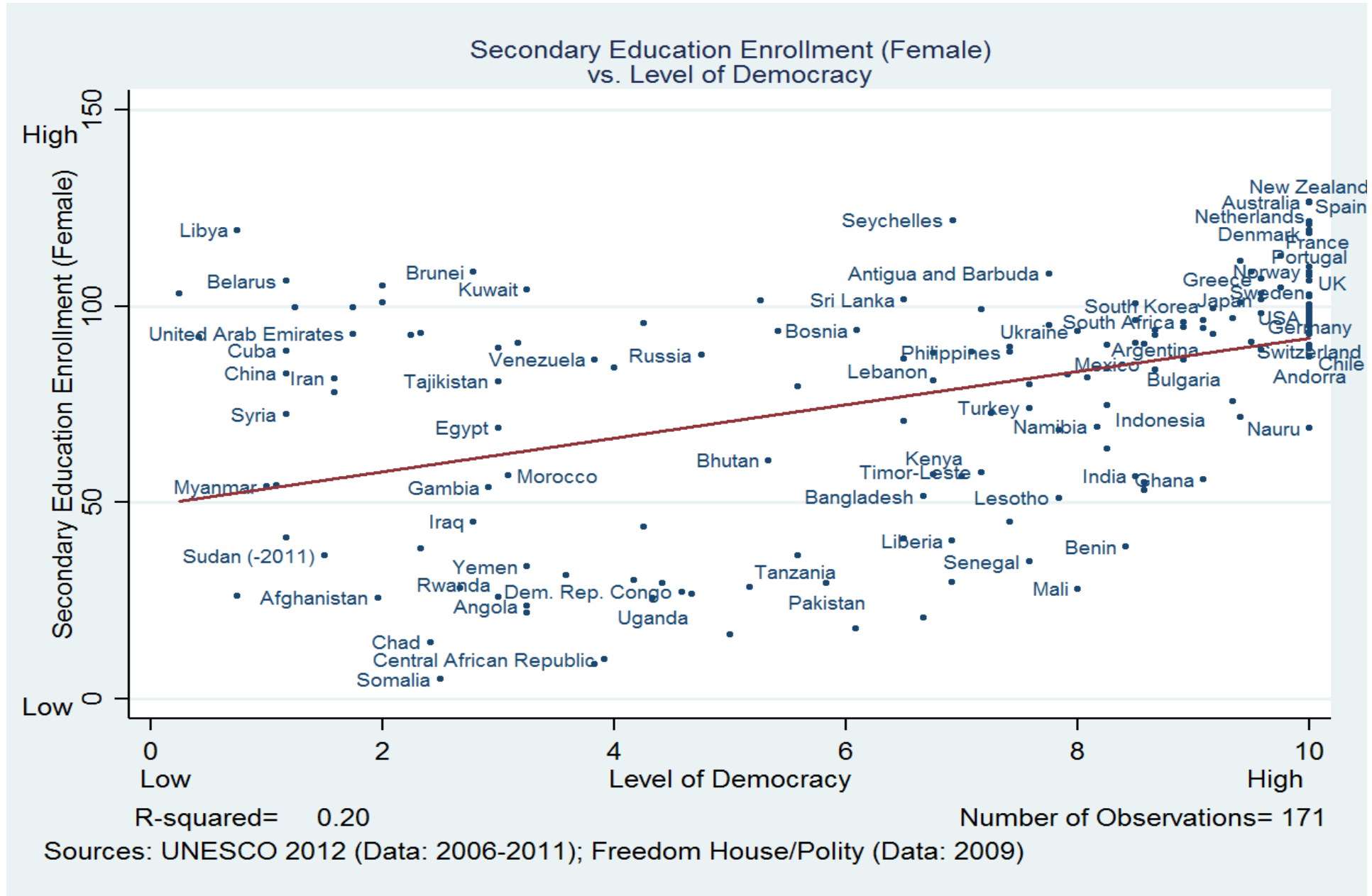
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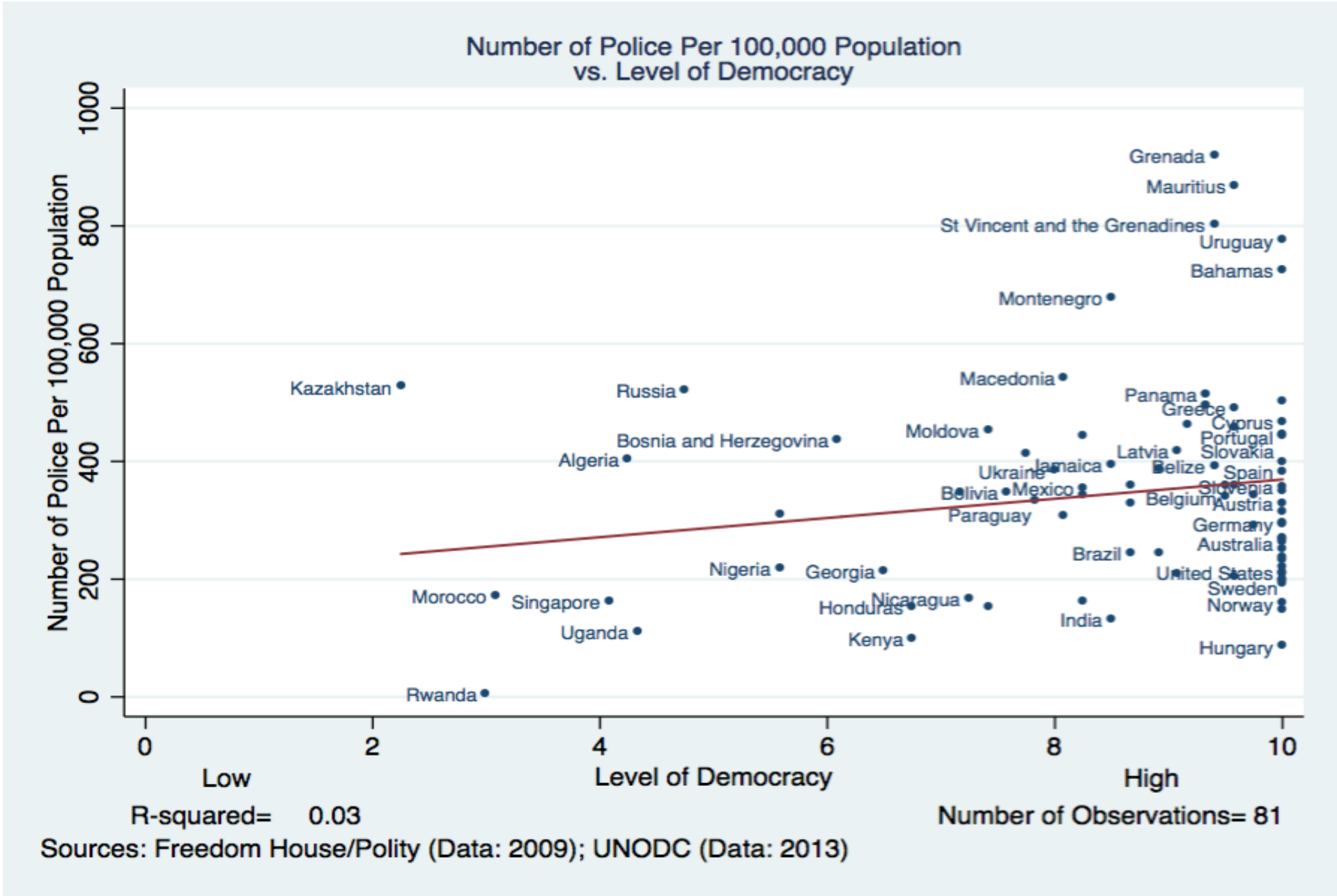
Sources: World Bank WDI 2013 (Data: 2009); Freedom House/Polity (Data: 2009)

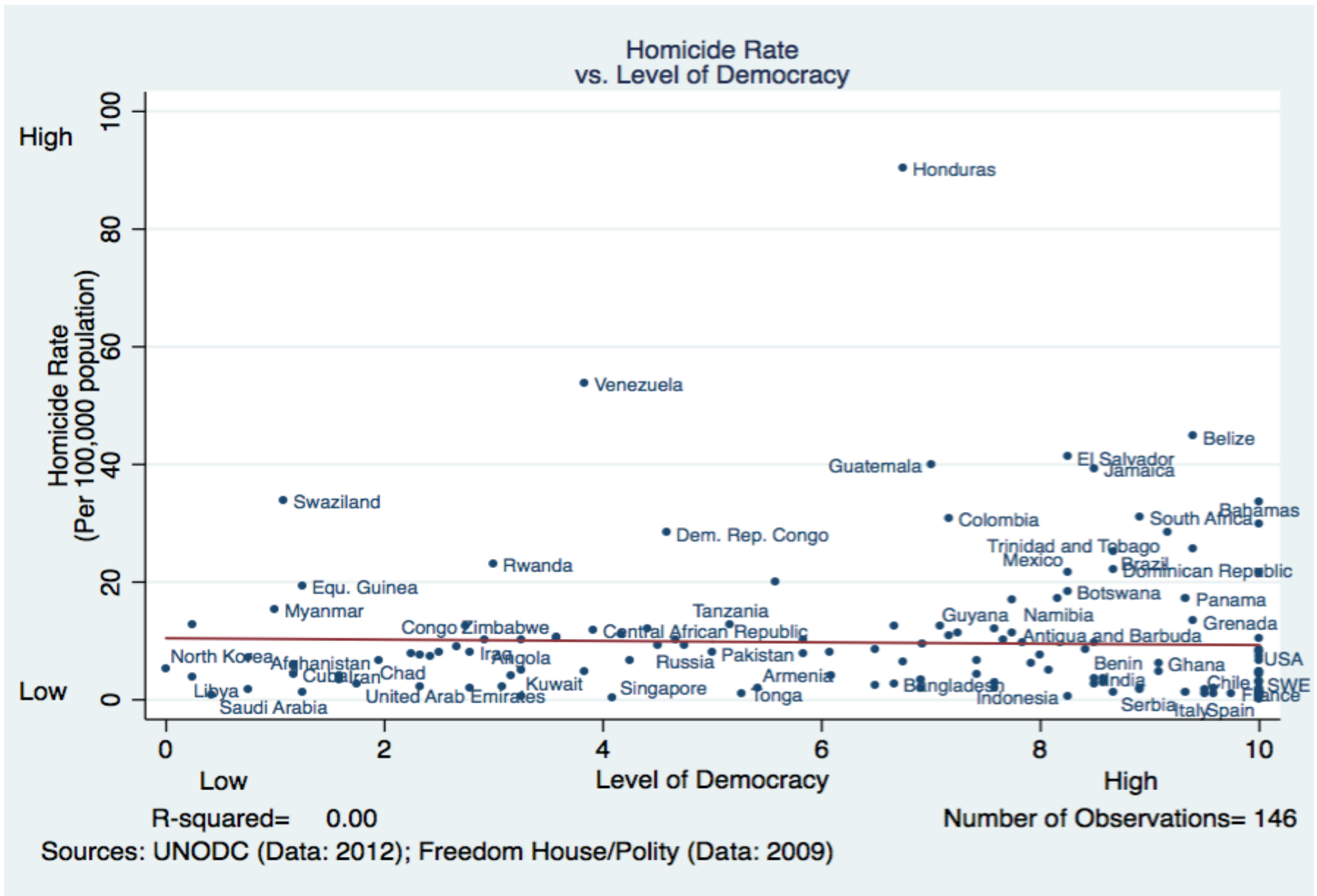


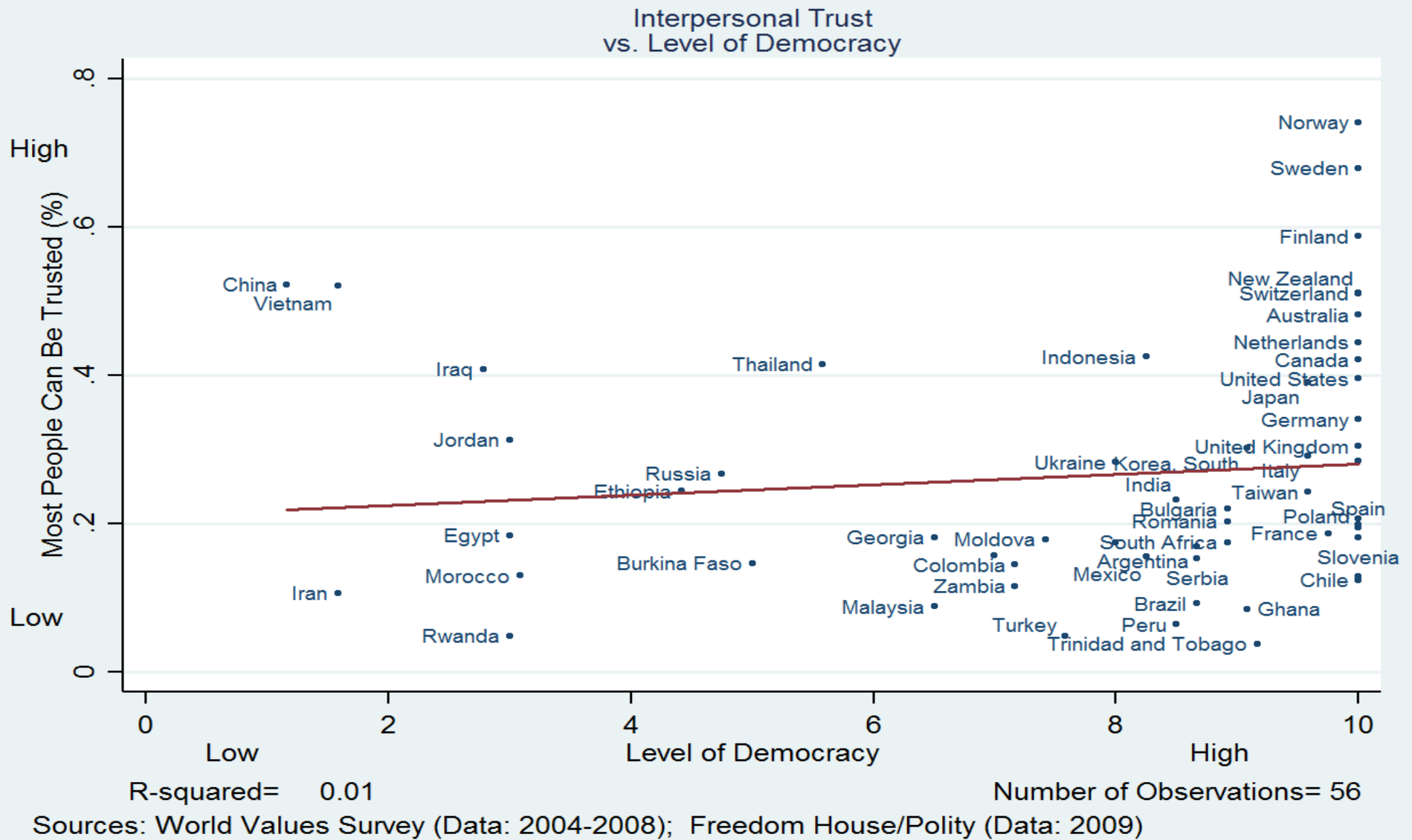




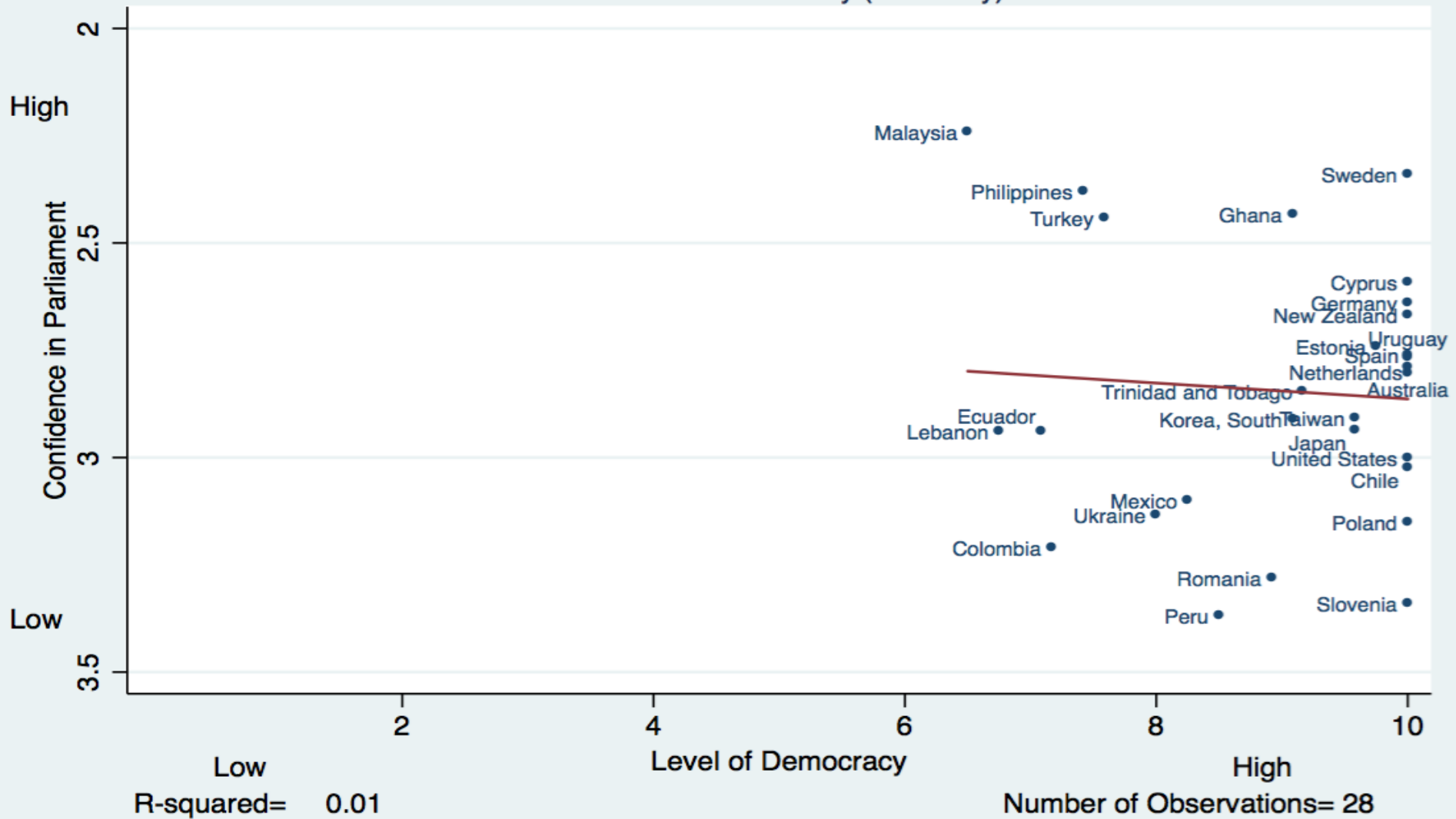






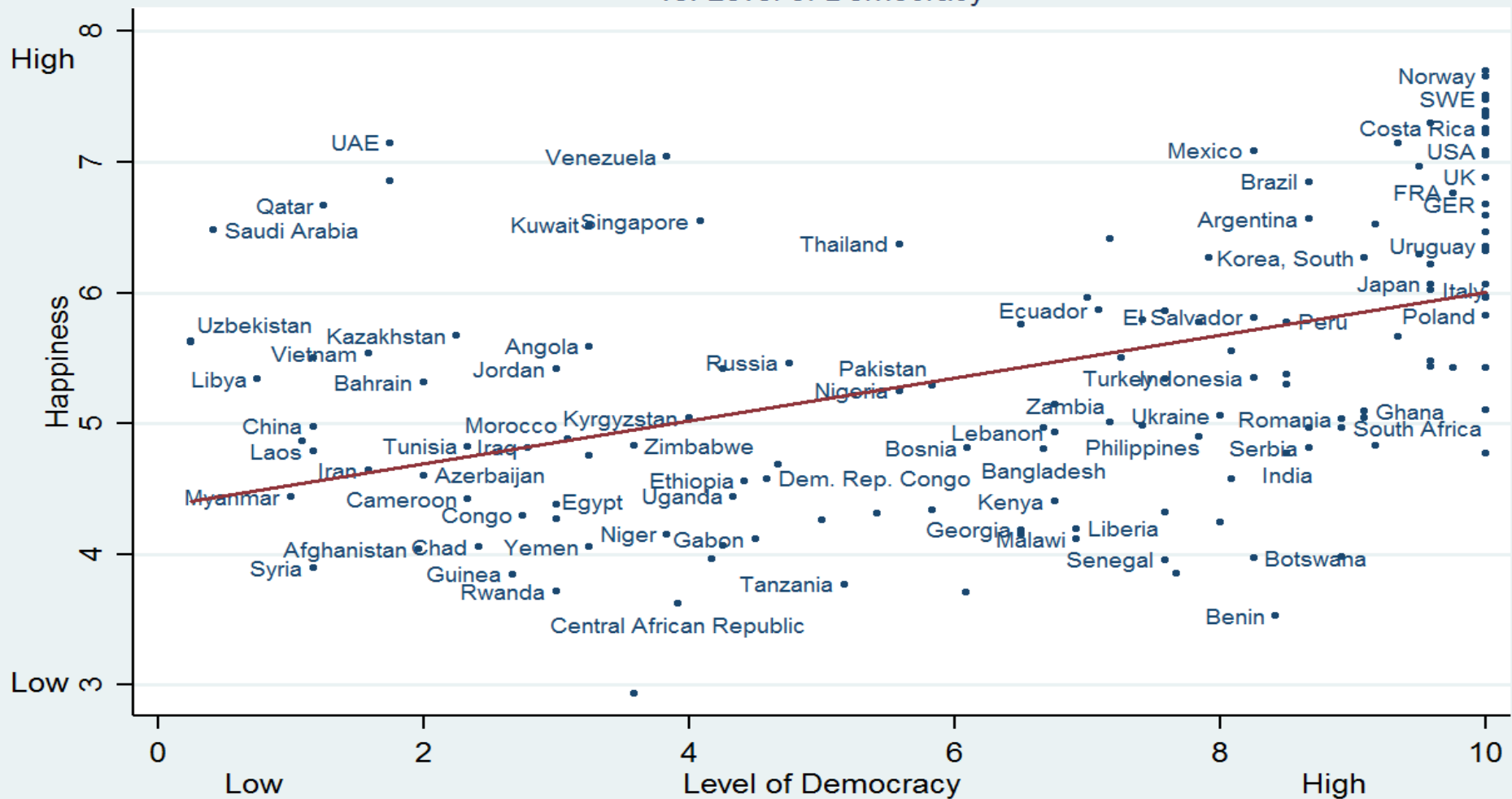


Confidence in Parliament vs. Level of Democracy (Dem only)



Sources: World Values Survey (2010-2014); Freedom House/Polity (Data: 2009)

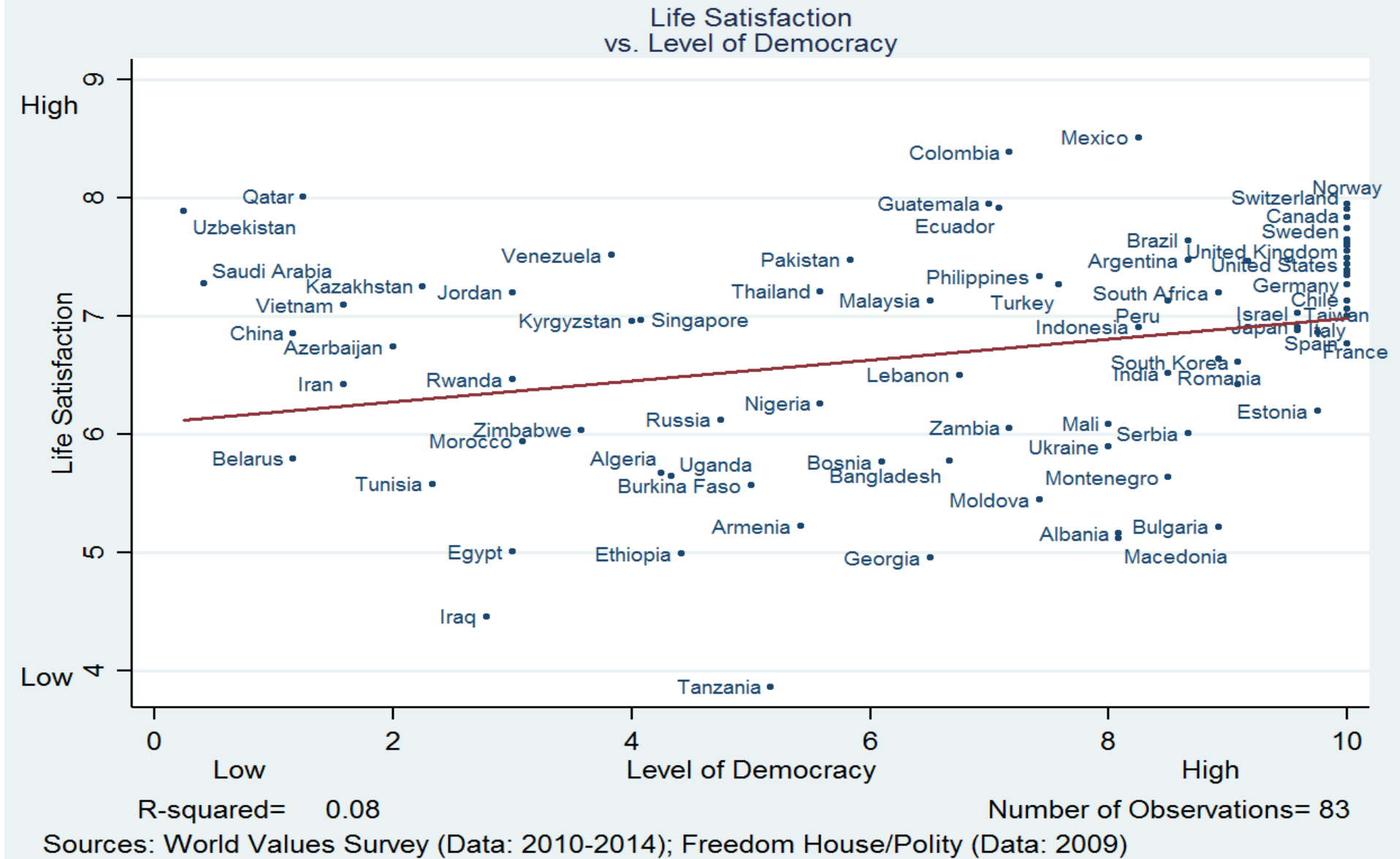
Happiness vs. Level of Democracy

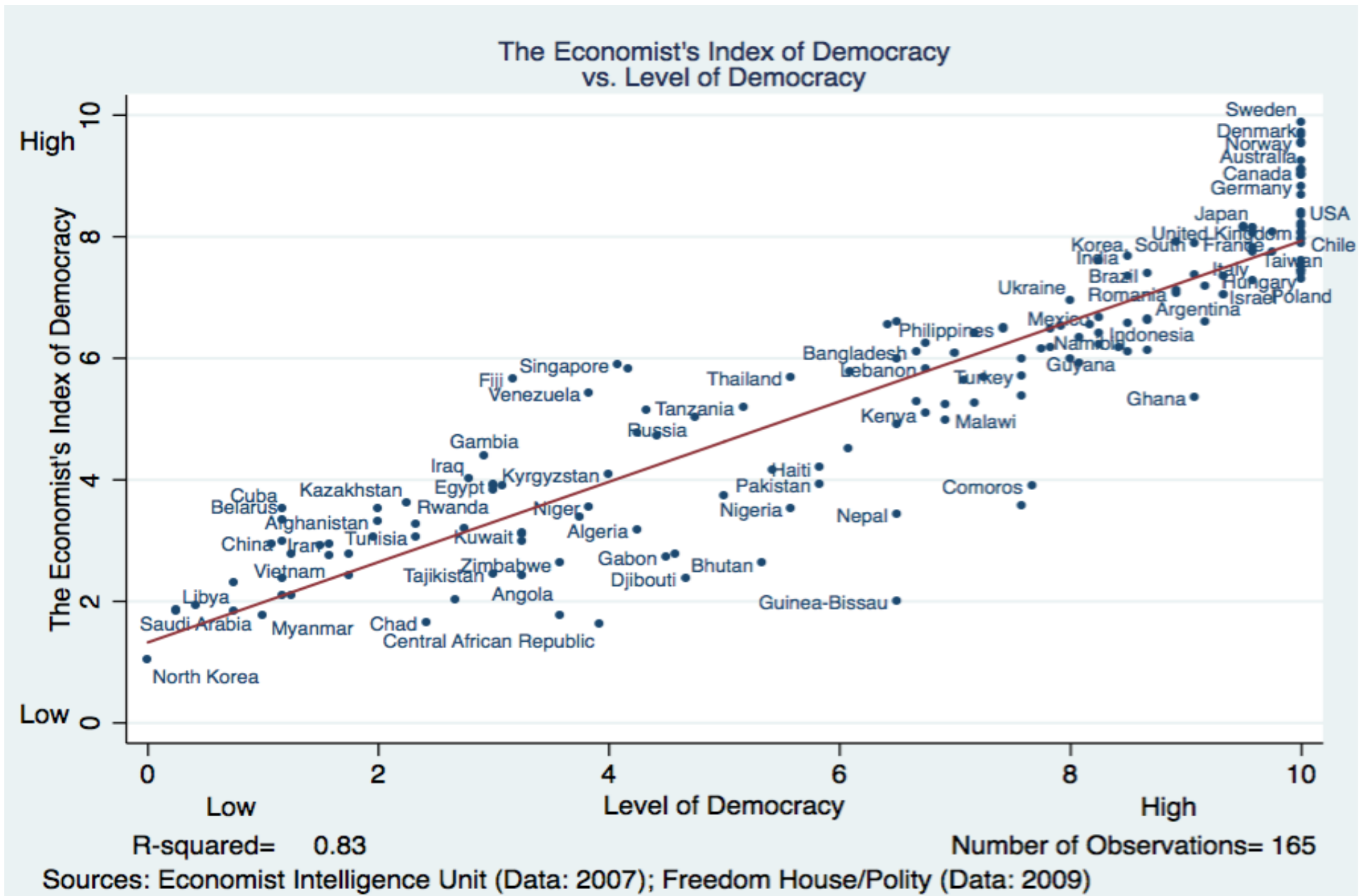


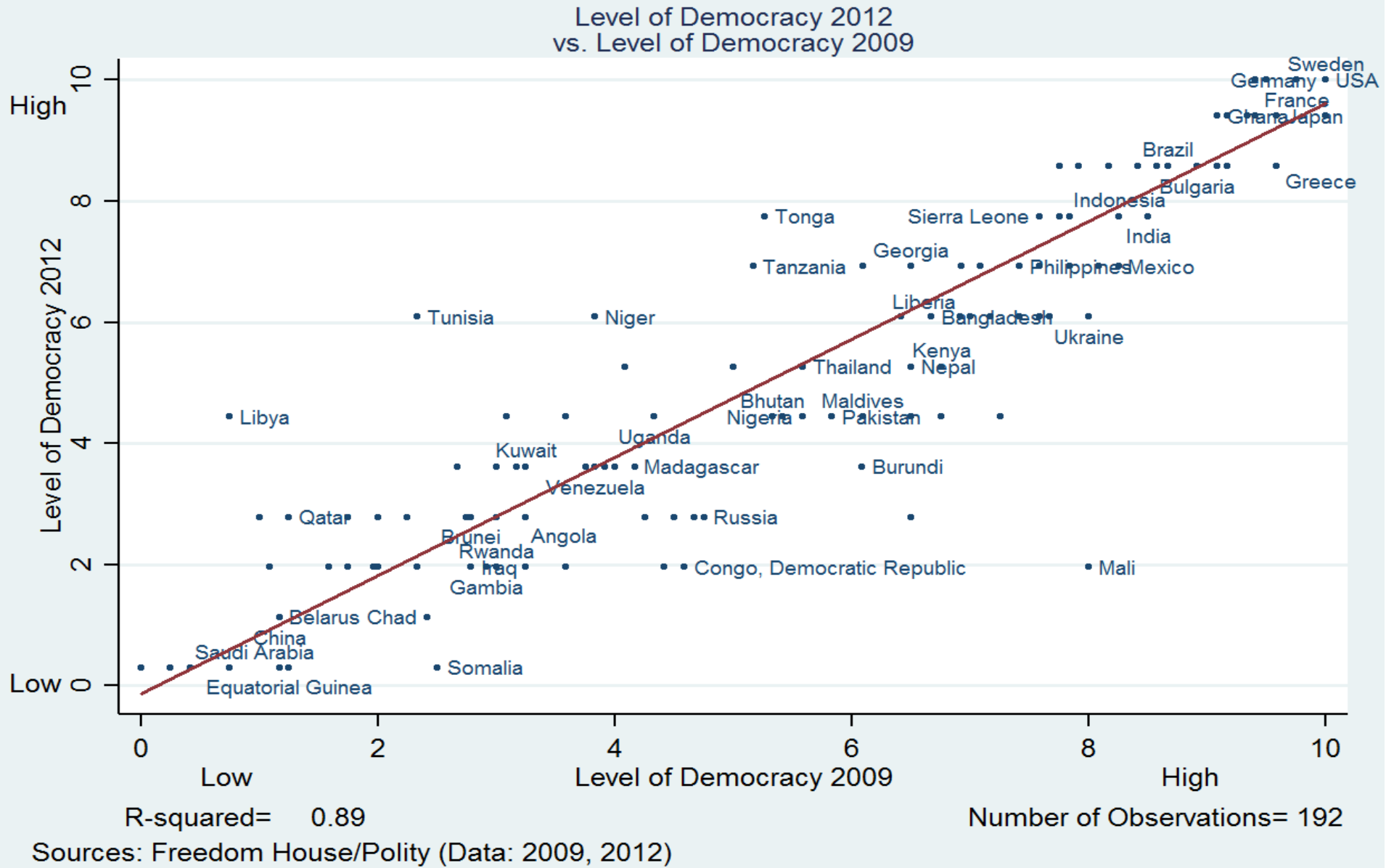
R-squared= 0.20

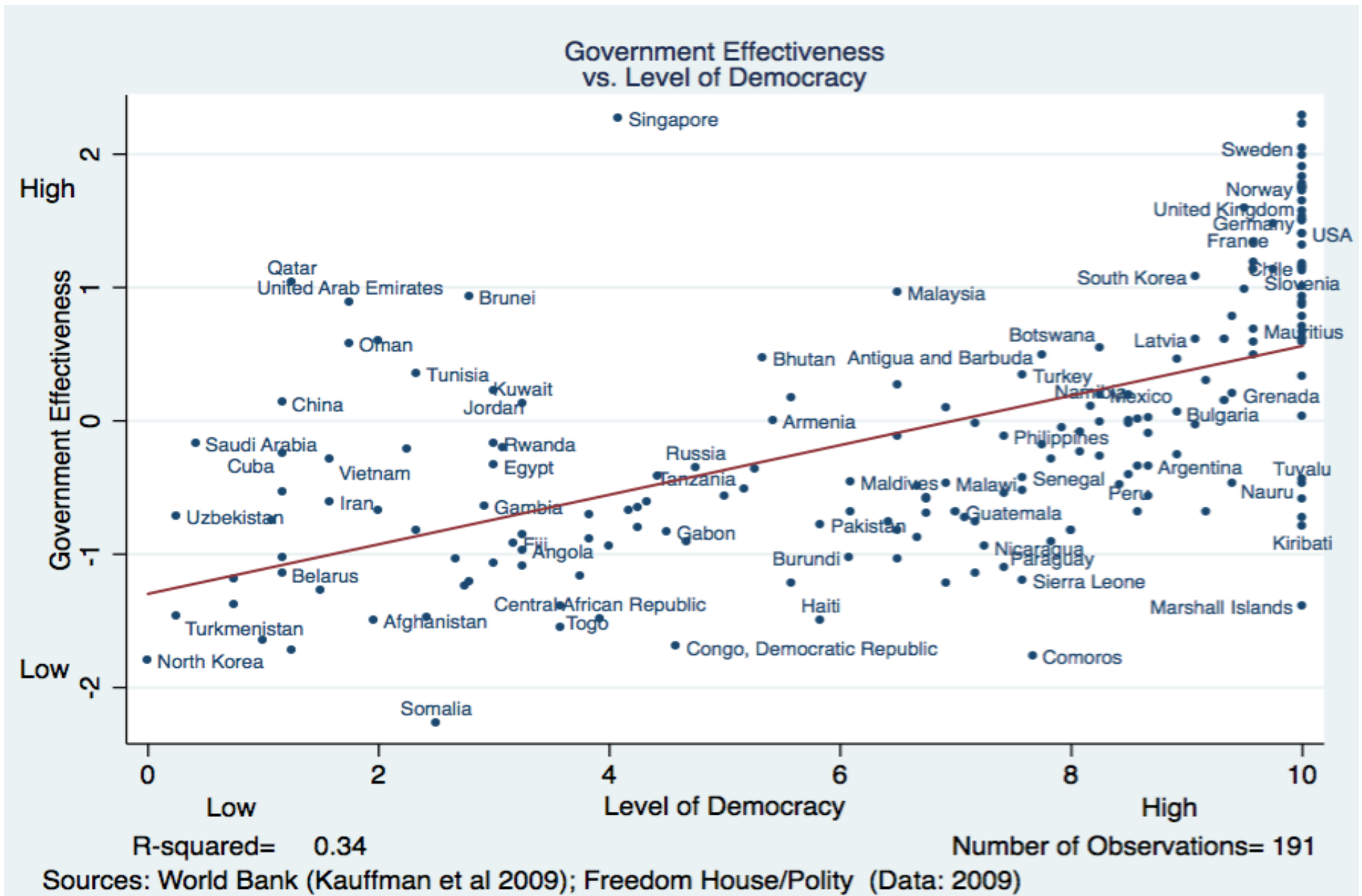
Number of Observations= 150

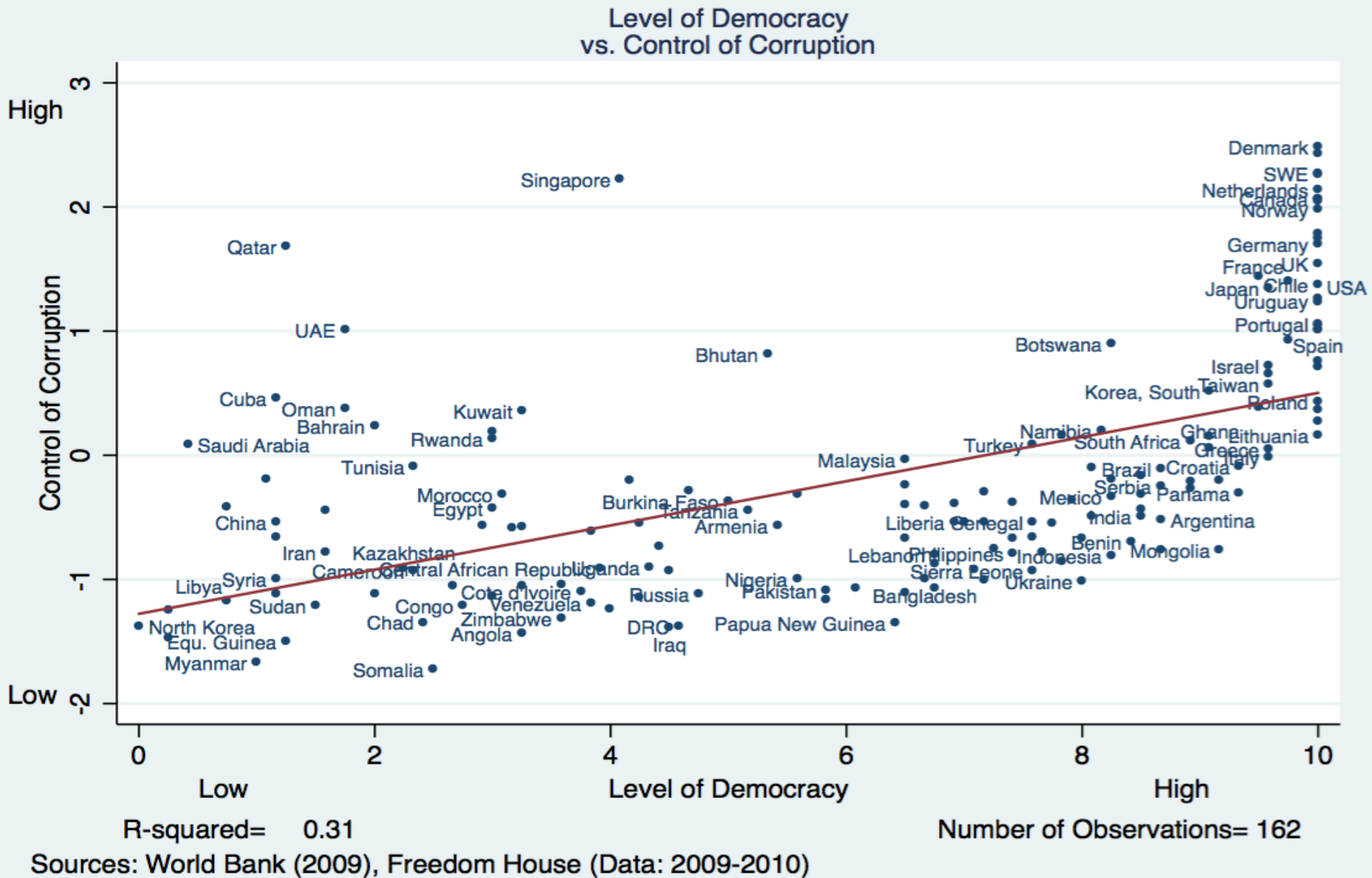
Sources: World Happiness Report (Data: 2013); Freedom House/Polity (Data: 2009)











Correlates of the Level of Democracy¹

GDP per Capita – Gleditsch Expanded Trade and GDP Data

In order to fill in gaps in the Penn World Table's mark 5.6 and 6.2 data (see below: Heston, Summers & Aten), Gleditsch has imputed missing data by using an alternative source of data (the CIA World Fact Book), and through extrapolation beyond available time-series. This is his estimate of GDP per Capita in US dollars at current year international prices

Economic Equality (Gini index) SOLT

Estimate of Gini index of inequality in equivalized (square root scale) household disposable income, using Luxembourg Income Study data as the standard.

Economic Freedom Heritage Foundation

The Economic Freedom index uses 10 specific freedoms, some as composites of even further detailed and quantifiable components:

- Business freedom (hf_business)
- Trade freedom (hf_trade)
- Fiscal freedom (hf_fiscal)
- Freedom from government (hf_govt)
- Monetary freedom (hf_monetary)
- Investment freedom (hf_invest)
- Financial freedom (hf_financ)
- Property rights (hf_prights)
- Freedom from corruption (hf_corrupt)
- Labor freedom (hf_labor)

Each of these freedoms is weighted equally and turned into an index ranging from 0 to 100, where 100 represents the maximum economic freedom. Although changes in methodology have been undertaken throughout the measurement period, continuous backtracking has been used to maximize comparability over time.

GDP / Capita growth World Development Indicators

Annual percentage growth rate of GDP per capita based on constant local currency. Sources: World Bank and OECD.

¹ Some of the variables have been reversed in the scatterplots in order to make the interpretation more intuitive. Felix Hartmann provided research assistant.

Country Credit Rating – World Economic Forum

Expert assessment of the probability of sovereign debt default on a 0–100 (lowest probability) scale. March 2012.

Human Development Index UNDP Human Development Report

The Human Development Index (HDI) is a composite index that measures the average achievements in a country in three basic dimensions of human development: a long and healthy life, as measured by life expectancy at birth;; knowledge, as measured by the adult literacy rate and the combined gross enrolment ratio for primary, secondary and tertiary schools;; and a decent standard of living, as measured by GDP per capita in purchasing power parity (PPP) US dollars.

Government Revenue (% of GDP) World Development Indicators

Revenue is cash receipts from taxes, social contributions and other revenues. Grants are excluded here. Measured as a percentage of GDP. Source: International Monetary Fund. (World Bank and OECD for GDP estimates.)

Tax Revenue (% of GDP) World Development Indicators

Tax revenue refers to compulsory transfers to the central government for public purposes. Certain compulsory transfers such as fines, penalties, and most social security contributions are excluded. Measured as a percentage of GDP. Source: International Monetary Fund. (World Bank and OECD for GDP estimates.)

Average Schooling Years Barro & Lee

Average schooling years in the total population aged 25 and over.

Life Expectancy World Development Indicators

Life expectancy at birth indicates the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life. Sources: United Nations Population Division, national statistical offices, Eurostat, Secretariat of the Pacific Community, and U.S. Census Bureau.

Healthy life expectancy – Salomon et al. (IHME)

HALE was calculated by extending the conventional life table that is used to translate a schedule of agespecific death rates into estimates of life expectancy at different ages. Information on the average level of health experienced over each age interval was incorporated into the life table.

Three sets of inputs from GBD 2010 were used, including age-specific information on mortality rates and prevalence of 1,160 conditions resulting from specific diseases, by sex, country, and year, and disability weights associated with the set of 220 distinct health states relating to those sequelae.

Estimates of average levels of overall health were computed for each age-sex group, adjusting for comorbidity using a Monte Carlo simulation approach to capture the many ways in which multiple prevalent morbidities may combine in a given individual. These estimates of average health were incorporated in the life table using the Sullivan method, yielding healthy life expectancy estimates for each population in the study.

Results were evaluated across country and over time, and changes were evaluated to estimate the relative contributions of changes in child mortality, adult mortality, and disability prevalence as drivers of overall change in population health between 1990 and 2010

Infant Mortality Rate World Development Indicators

Infant mortality rate is the number of infants dying before reaching one year of age, per 1,000 live births in a given year. Source: Inter-agency Group for Child Mortality Estimation (UNICEF, WHO, World Bank, UNPD, universities and research institutions).

Maternal Mortality Rate Institute for Health Metrics and Evaluation University of Washington

Number of maternal deaths per 100,000 live Births.

Government Expenditure on Health (% of total health) WHO Statistical Information System

Government expenditure on health care services and goods as a percentage of total expenditure on health. Expenditures on health include final consumption, subsidies to producers, and transfers to households (chiefly reimbursements for medical and pharmaceutical bills). Besides domestic funds it also includes external resources (mainly as grants passing through the government or loans channeled through the national budget).

Private Expenditure on Health (% of total health) WHO Statistical Information System

Private expenditure on health-care services and goods as a percentage of total expenditure on health.

CO2 Emissions / Capita Environmental Performance Index

Emissions of greenhouse gases per capita, measured in tons of carbon dioxide equivalents.

Access to Improved Drinking Water Environmental Performance Index

The percentage of population with an access to an improved water source. Original source is WHO.

Access to Adequate Sanitation Environmental Performance Index

The percentage of population with an access to an improved source of sanitation. Original source is WHO.

Gender Equality World Economic Forum

All scores are reported on a scale of 0 to 1, with 1 representing maximum gender equality. The study measures the extent to which women have achieved full equality with men in five critical areas:

- Economic participation
- Economic opportunity
- Political empowerment
- Educational Attainment
- Health and well-being

Secondary Education Enrollment (female) UNESCO Institute for Statistics

All values given are gross enrollment rate (GER). GER is defined as the number of pupils enrolled at a given level of education, regardless of age, expressed as a percentage of the population in the theoretical age group for the same level of education. Gross enrollment rate can be over 100% due to the inclusion of over-aged and under-aged pupils/students because of early or late entrants, and grade repetition. In this case, a rigorous interpretation of GER needs additional information to assess the extent of repetition, late entrants, etc.

UNODC – Intentional homicide count and rate per 100,000 population, by country/territory (2000-2012)

Intentional homicide is defined as unlawful death purposefully inflicted on a person by another person.

UNODC – Police Personnel

"Police Personnel" means personnel in public agencies as at 31 December whose principal functions are the prevention, detection and investigation of crime and the apprehension of alleged offenders. Data concerning support staff (secretaries, clerks, etc.) should be excluded.

Interpersonal Trust World Values Survey

Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?

- (1) Most people can be trusted
- (2) Can't be too careful

Confidence in Parliament World Values Survey

The respondents level of confidence in the parliament.

1. A great deal
2. Quite a lot
3. Not very much
4. Not at all

Ranking of Happiness: UN World Happiness Report (Gallup World Poll)

In the Gallup World Poll respondents are asked (using fresh annual samples of 1,000 respondents aged 15 or over in each of more than 150 countries) to evaluate the quality of their lives on an 11-point ladder scale running from 0 to 10, with the bottom rung of the ladder (0) being the worst possible life for them and 10 being the best possible.

Life Satisfaction World Values Survey

All things considered, how satisfied are you with your life as a whole these days?

- (1) Dissatisfied
- (2)
- (3)
- (4)
- (5)
- (6)
- (7)
- (8)
- (9)
- (10) Satisfied

Level of Democracy Freedom House / Polity

Scale ranges from 0-10 where 0 is least democratic and 10 most democratic. Average of Freedom House (fh_pr and fh_cl) is transformed to a scale 0-10 and Polity (p_polity2) is transformed to a scale 0-10. These variables are averaged into fh_polity2. The imputed version has imputed values for countries where data on Polity is missing by regressing Polity on the average Freedom House measure. Hadenius & Teorell (2005) show that this average index performs better both in terms of validity and reliability than its constituent parts.

Government Effectiveness World Bank Governance Indicators

“Government Effectiveness” combines into a single grouping responses on the quality of public service provision, the quality of the bureaucracy, the competence of civil servants, the independence of the civil service from political pressures, and the credibility of the government’s commitment to policies. The main focus of this index is on “inputs” required for the government to be able to produce and implement good policies and deliver public goods.

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