



UNIVERSITY OF
GOTHENBURG

INFLUENCE OF PERKINING ON CORRUPTION
AND SAMPLING ESTIMATING QUALITY

CORRELATES OF ELECTORAL DEMOCRACY

SÖREN HOLMBERG

BO ROTHSTEIN

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Electoral Democracy Index

This index is based on the question: To what extent is the ideal of electoral democracy in its fullest sense achieved?

Clarifications:

The electoral principle of democracy seeks to embody the core value of making rulers responsive to citizens, achieved through electoral competition for the electorate's approval under circumstances when suffrage is extensive; political and civil society organizations can operate freely; elections are clean and not marred by fraud or systematic irregularities; and elections affect the composition of the chief executive of the country. In between elections, there is freedom of expression and an independent media capable of presenting alternative views on matters of political relevance. In the VDem conceptual scheme, electoral democracy is understood as an essential element of any other conception of (representative) democracy - liberal, participatory, deliberative, egalitarian, or some other. Aggregation: The index is formed by taking the average of, on the one hand, the sum of the indices measuring freedom of association (thick), suffrage, clean elections, elected executive (de jure) and freedom of expression; and, on the other, the five-way interaction between those indices. This is half way between a straight average and strict multiplication, meaning the average of the two. It is thus a compromise between the two most well known aggregation formulas in the literature, both allowing "compensation" in one sub-component for lack of polyarchy in the others, but also punishing countries not strong in one sub-component according to the "weakest link" argument. The aggregation is done at the level of Dahls sub-components (with the one exception of the non-electoral component).

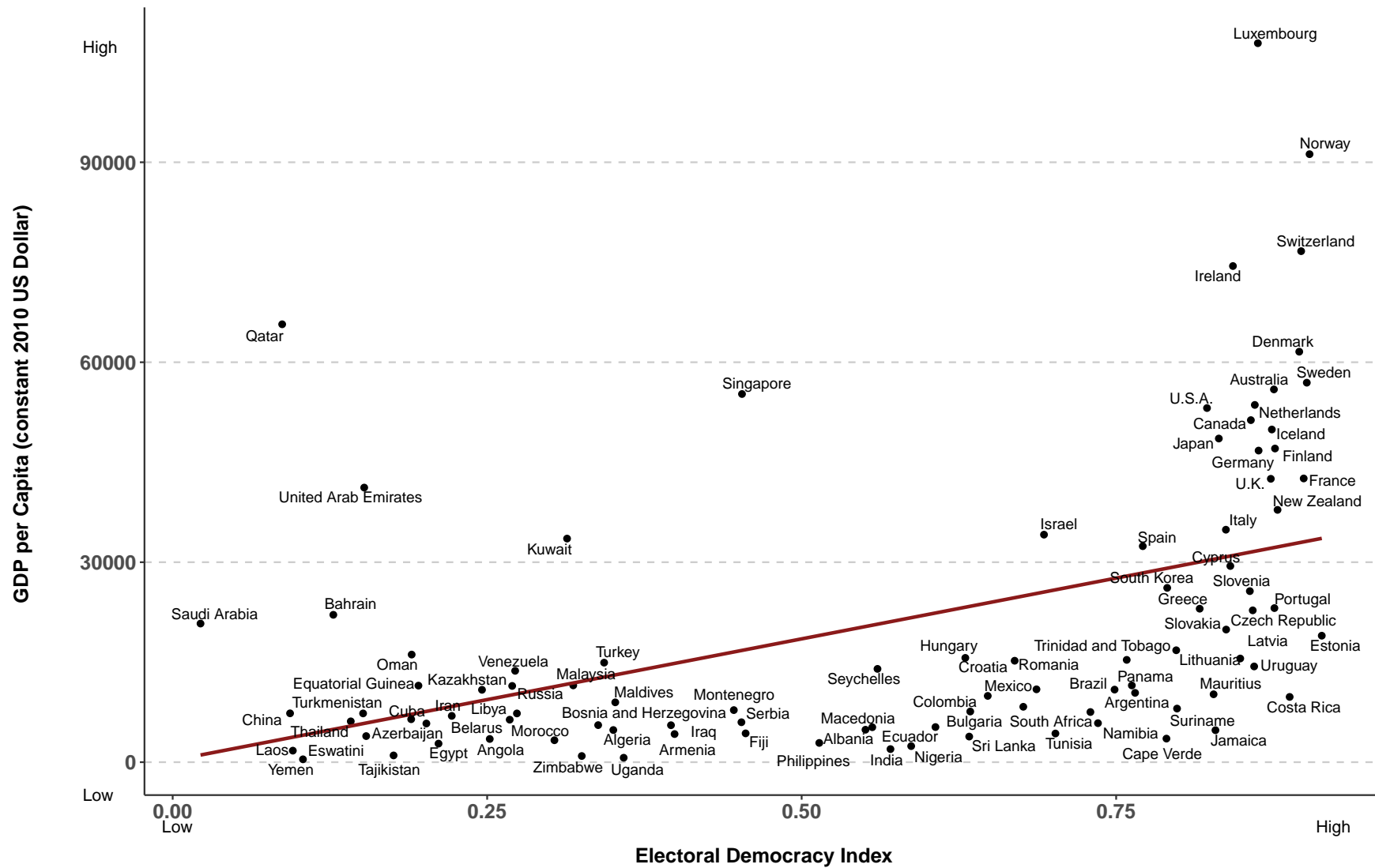
Source: Varieties of Democracy (V-Dem) Project

<https://v-dem.net/en/data/>

(Downloaded on 2018-07-09)

Dataset: Varieties of Democracy Dataset version 8 Varieties of Democracy (V-Dem) is a new approach to conceptualizing and measuring democracy. It is a collaboration among more than 50 scholars worldwide which is co-hosted by the Department of Political Science at the University of Gothenburg, Sweden; and the Kellogg Institute at the University of Notre Dame, USA.

GDP per Capita (constant 2010 US Dollar) vs. Electoral Democracy Index



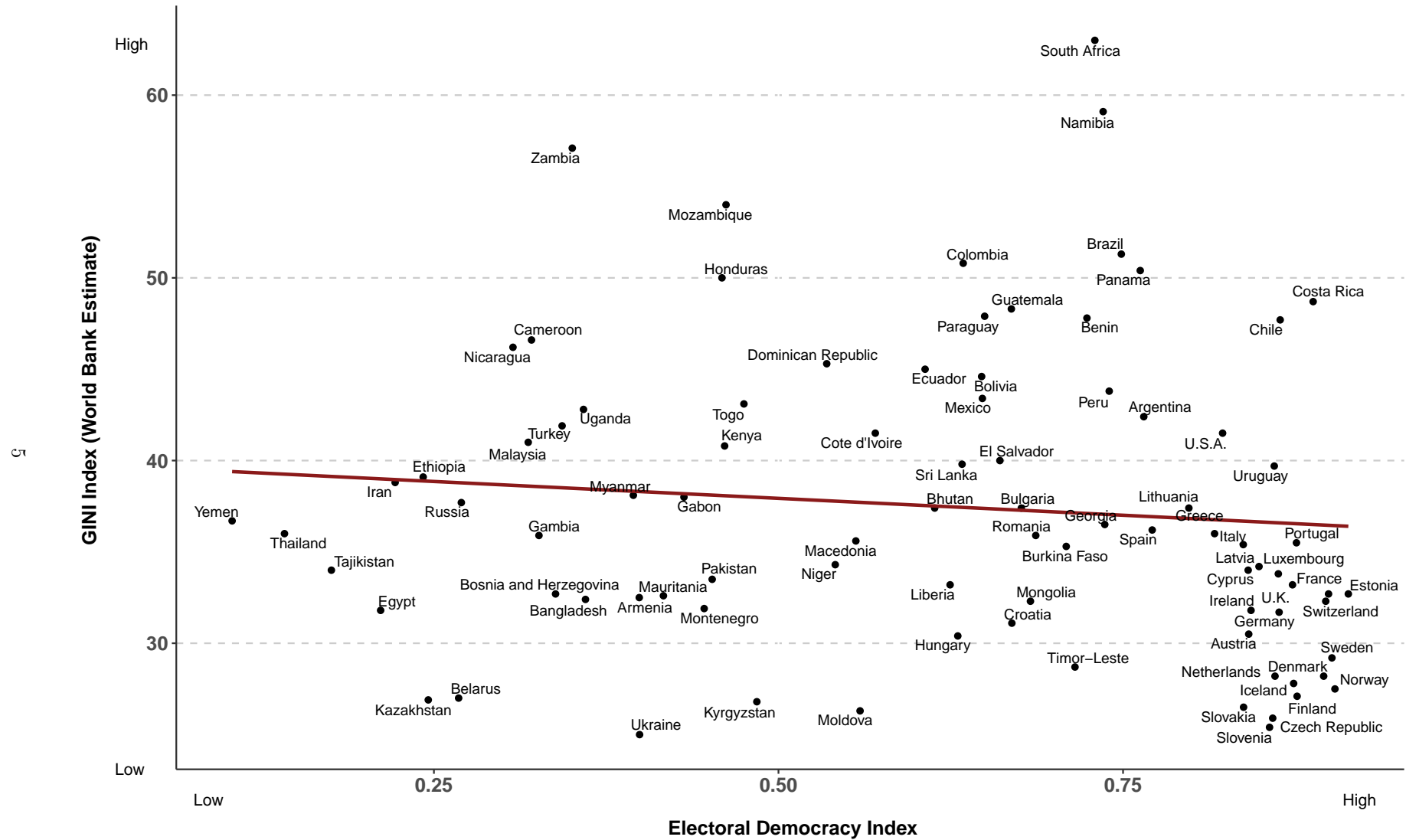
4

Number of observations: 164

R-Squared: 0.20

Sources: The World Bank Group (2014 – 2017) & Varieties of Democracy (V-Dem) Project (2017)

GINI Index (World Bank Estimate) vs. Electoral Democracy Index

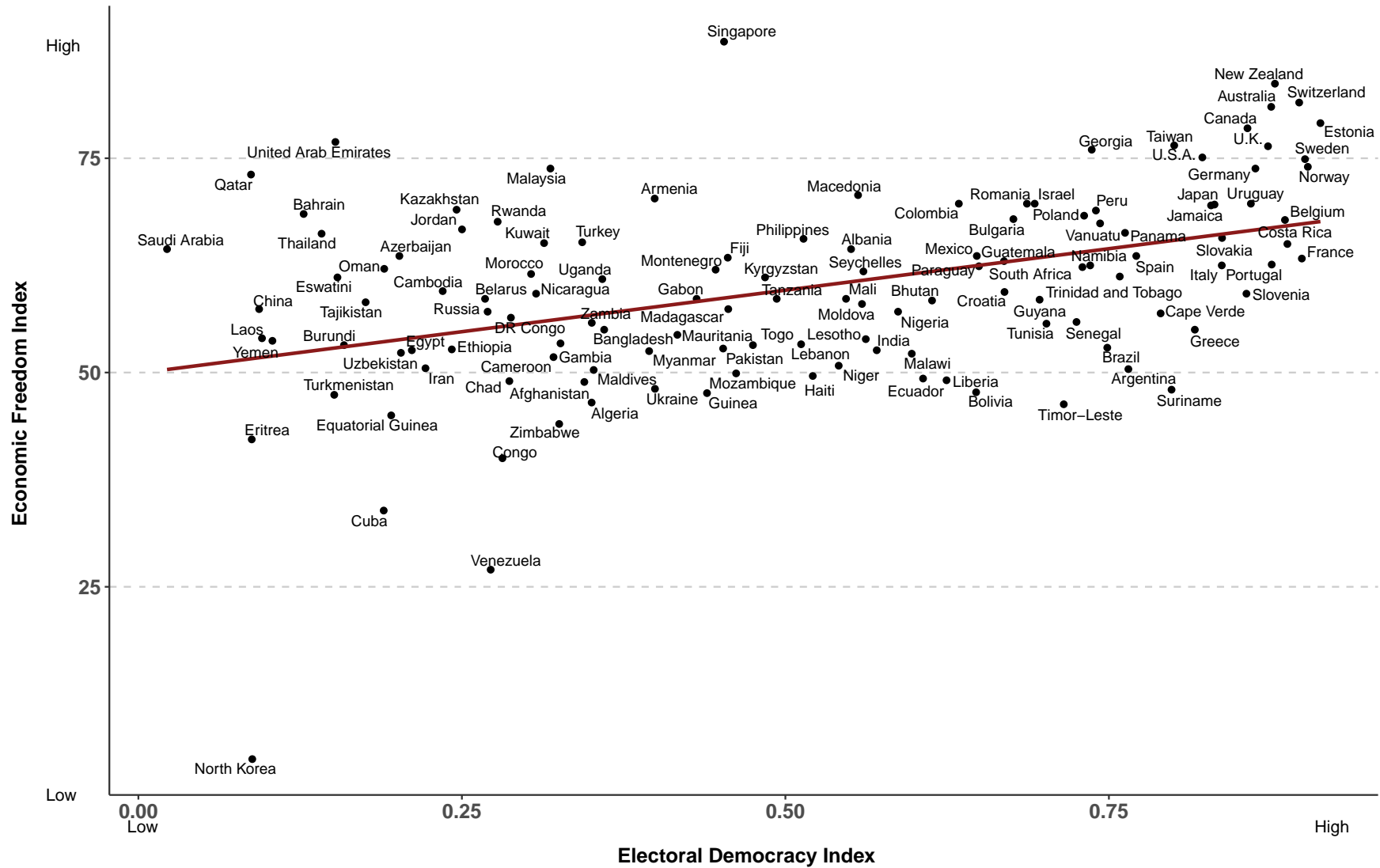


Number of observations: 89

R-Squared: 0.01

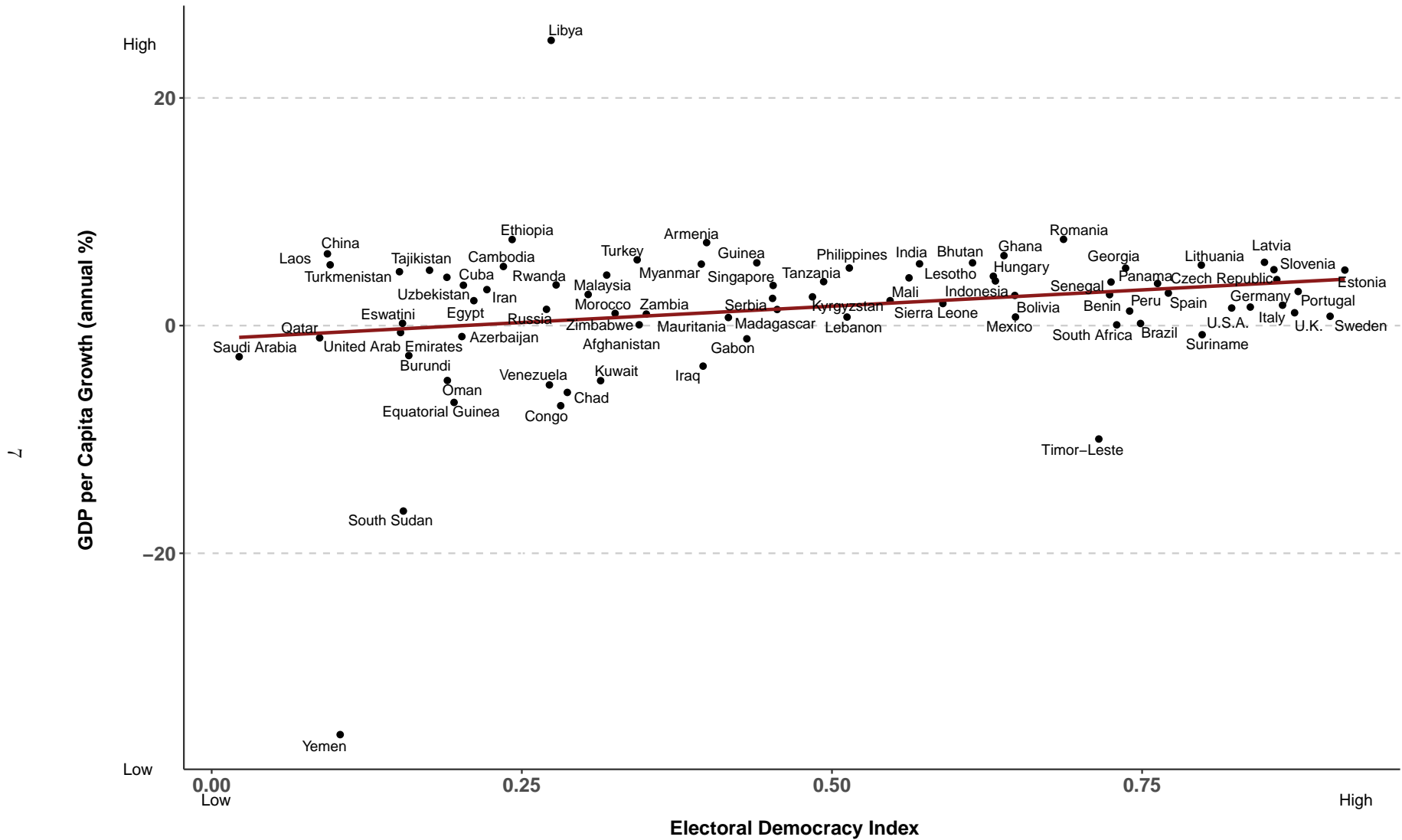
Sources: The World Bank Group (2014 – 2017) & Varieties of Democracy (V-Dem) Project (2017)

Economic Freedom Index vs. Electoral Democracy Index



Number of observations: 166
R-Squared: 0.26
Sources: Heritage Foundation (2015 – 2017) & Varieties of Democracy (V-Dem) Project (2017)

GDP per Capita Growth (annual %) vs. Electoral Democracy Index

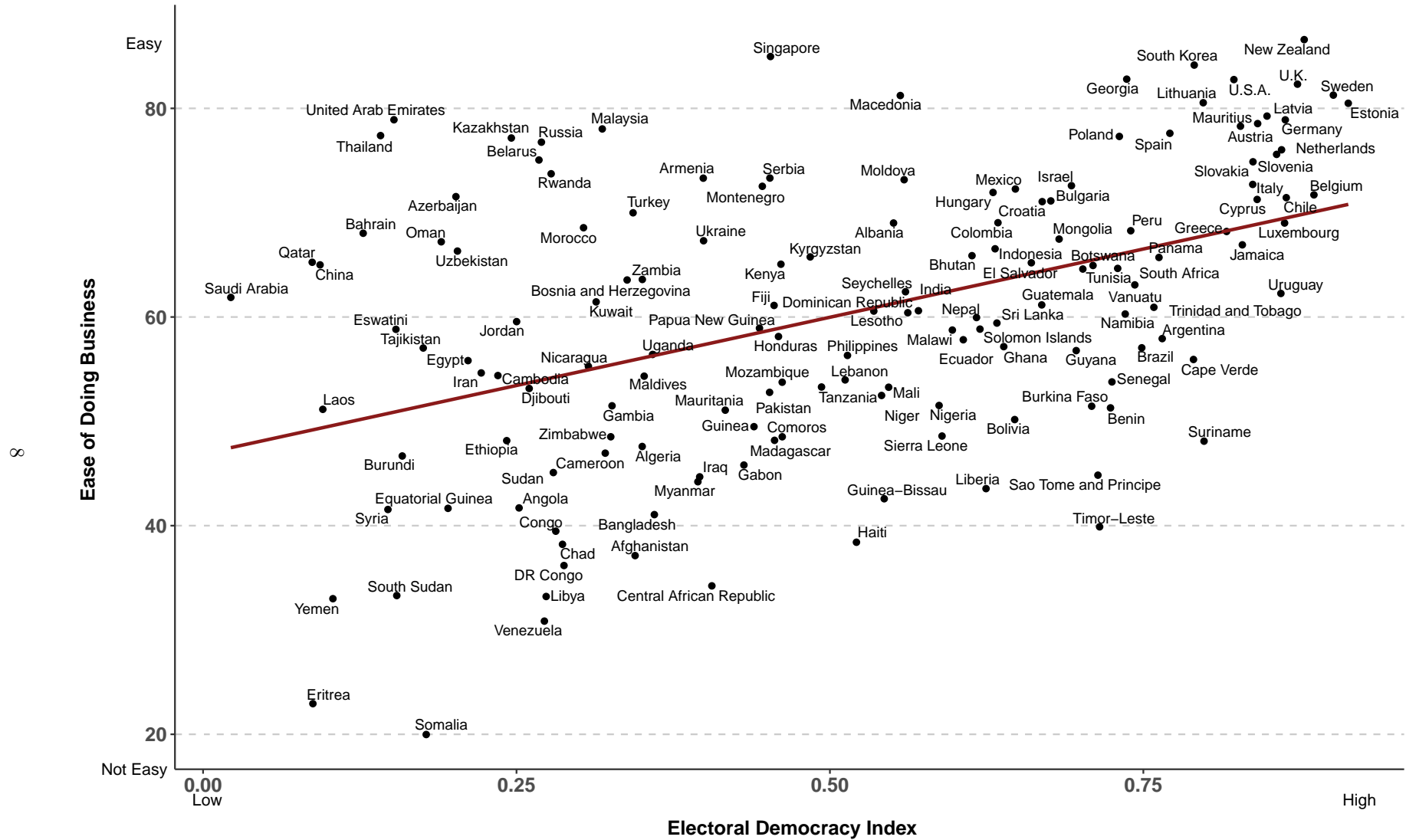


Number of observations: 166

R-Squared: 0.03

Sources: The World Bank Group (2014 – 2017) & Varieties of Democracy (V-Dem) Project (2017)

Ease of Doing Business vs. Electoral Democracy Index

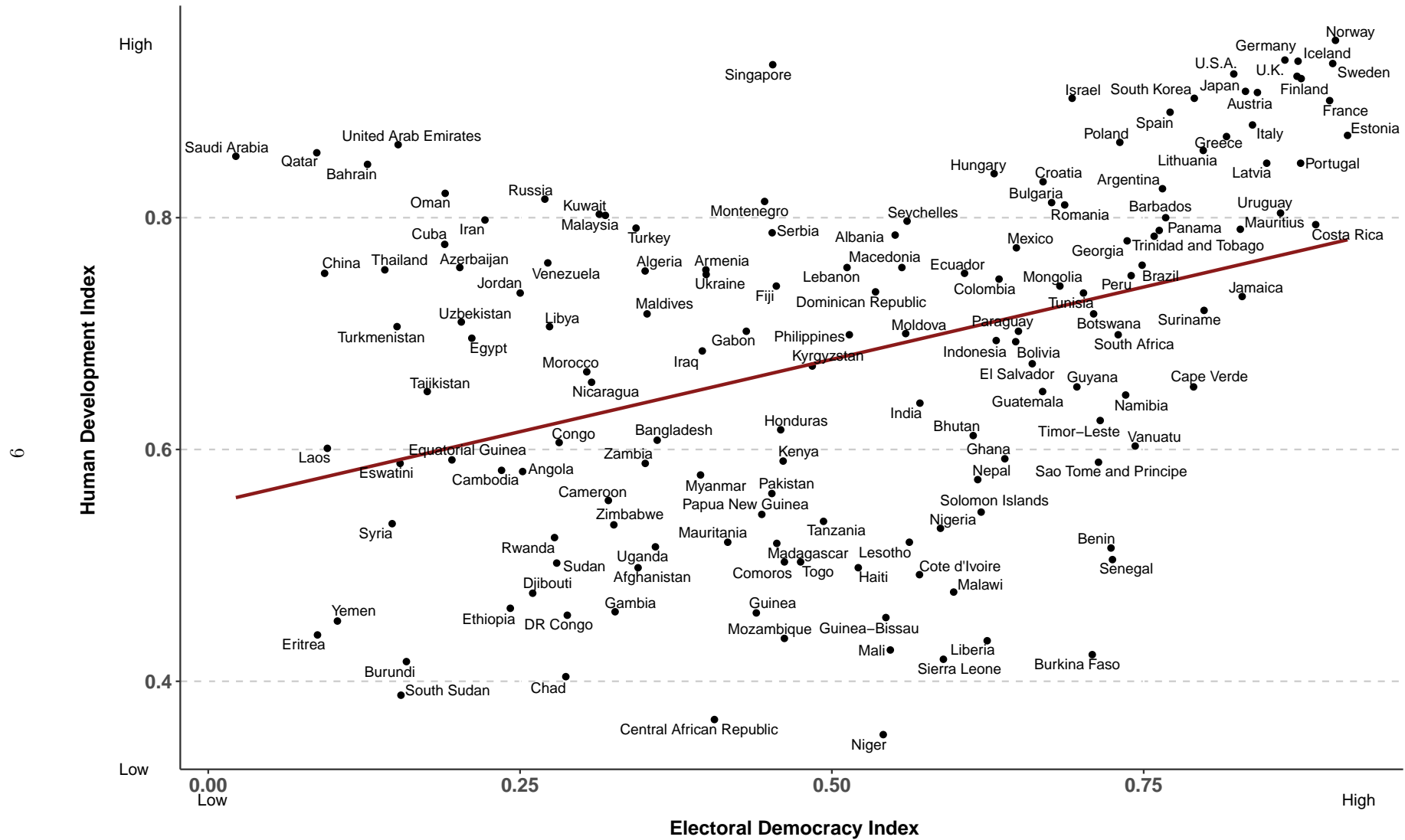


Number of observations: 168

R-Squared: 0.27

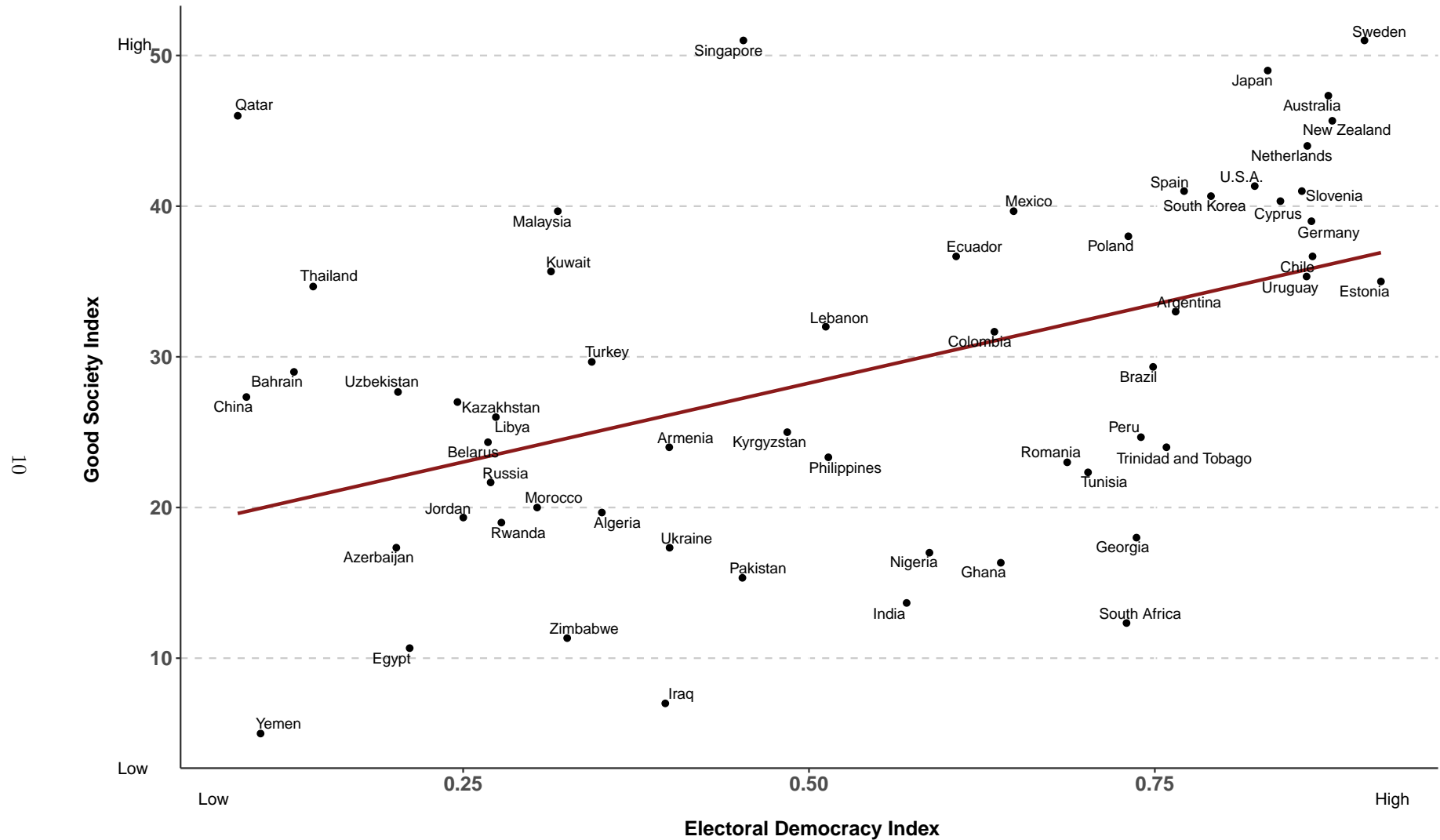
Sources: Ease of Doing Business Report (DB17–19 methodology) (2017) & Varieties of Democracy (V-Dem) Project (2017)

Human Development Index vs. Electoral Democracy Index



Number of observations: 168
 R-Squared: 0.22
 Sources: United Nations Development Program (2017) & Varieties of Democracy (V-Dem) Project (2017)

Good Society Index vs. Electoral Democracy Index

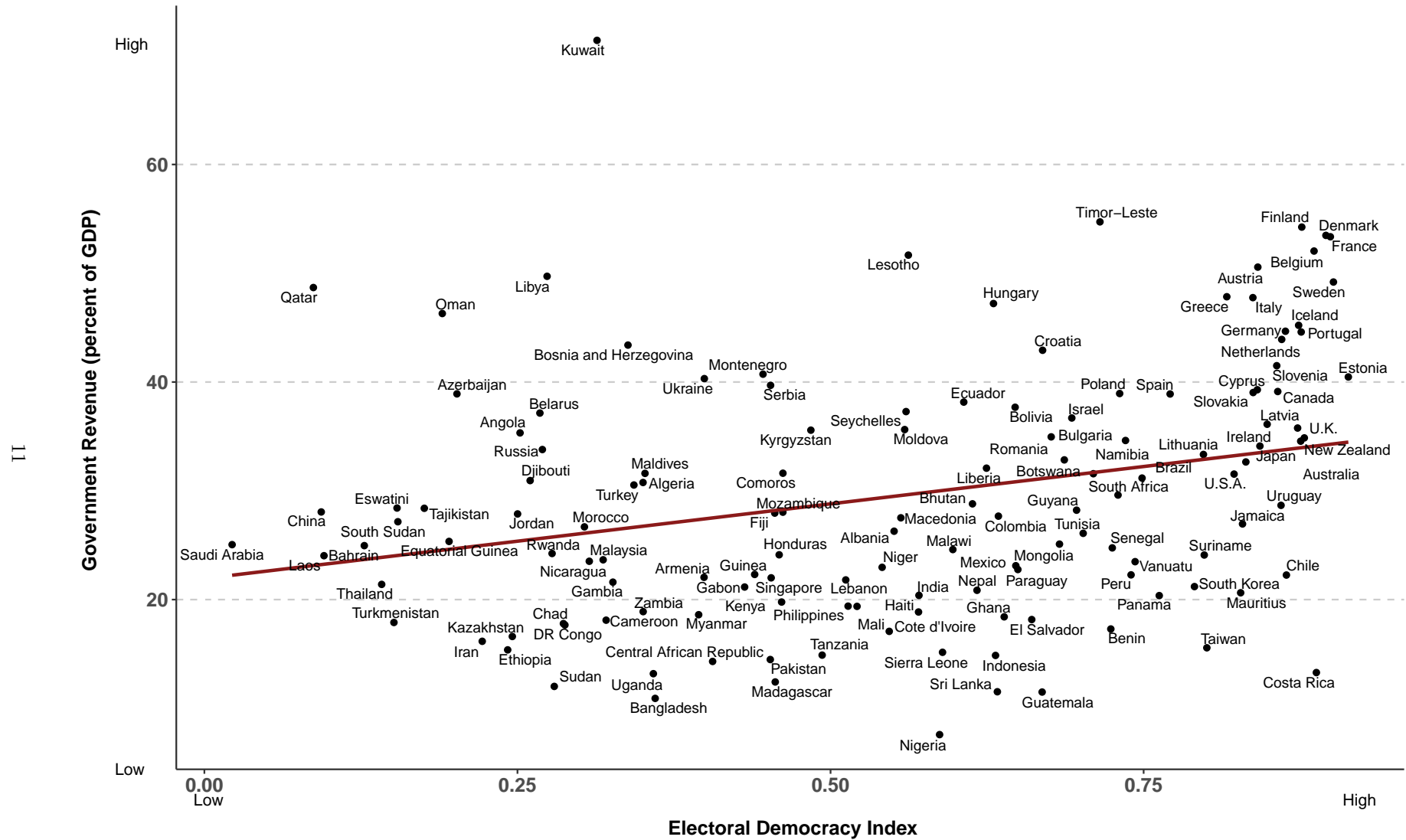


Number of observations: 57

R-Squared: 0.22

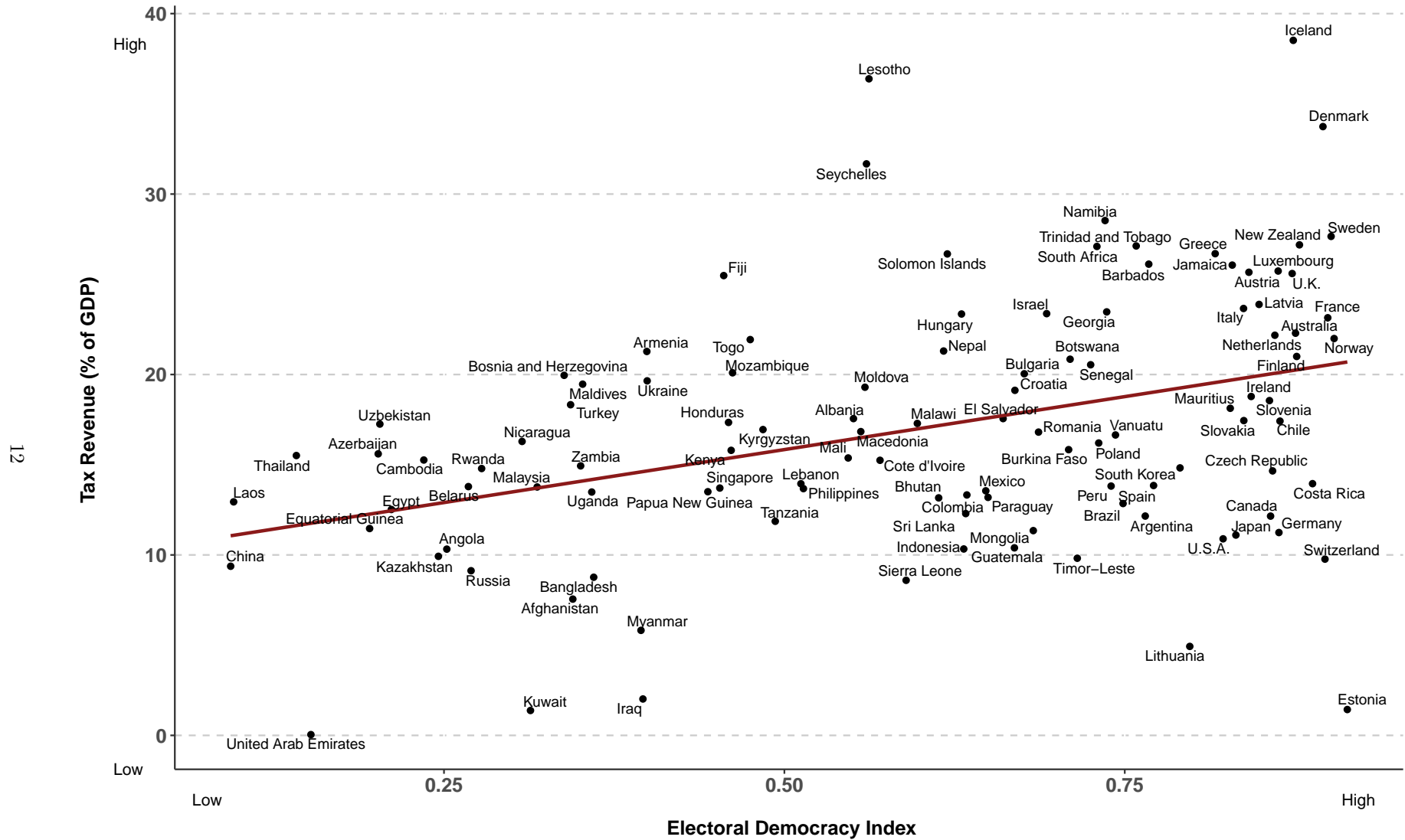
Sources: Holmberg, 2007. Made with data from: World Value Survey (Happiness) and World Development Indicators (Life Expectancy and Infant Mortality) (2014 – 2017) & Varieties of Democracy (V-Dem) Project (2017)

Government Revenue (percent of GDP) vs. Electoral Democracy Index



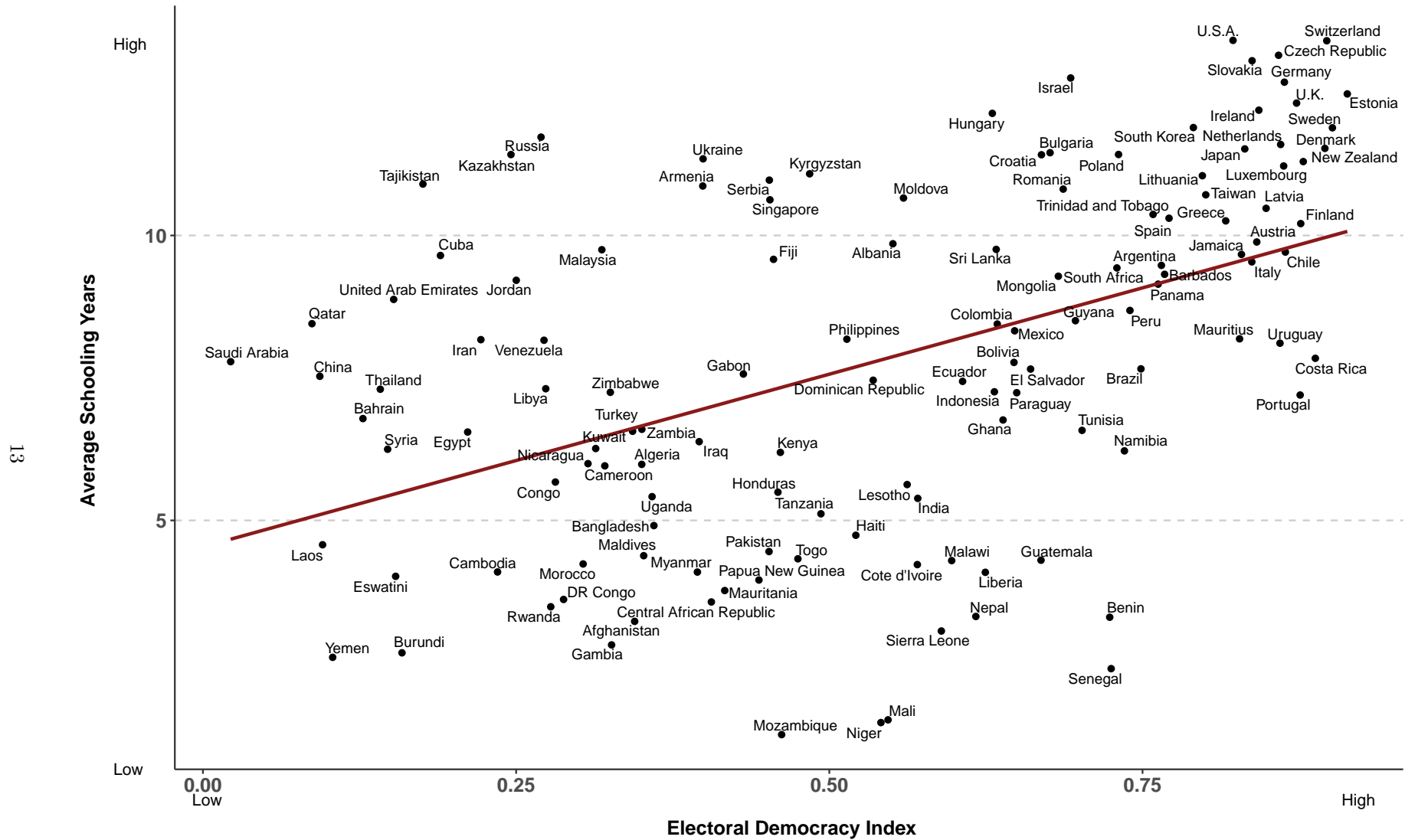
Number of observations: 150
 R-Squared: 0.09
 Sources: International Monetary Fund (2014 – 2015) & Varieties of Democracy (V-Dem) Project (2017)

Tax Revenue (% of GDP) vs. Electoral Democracy Index



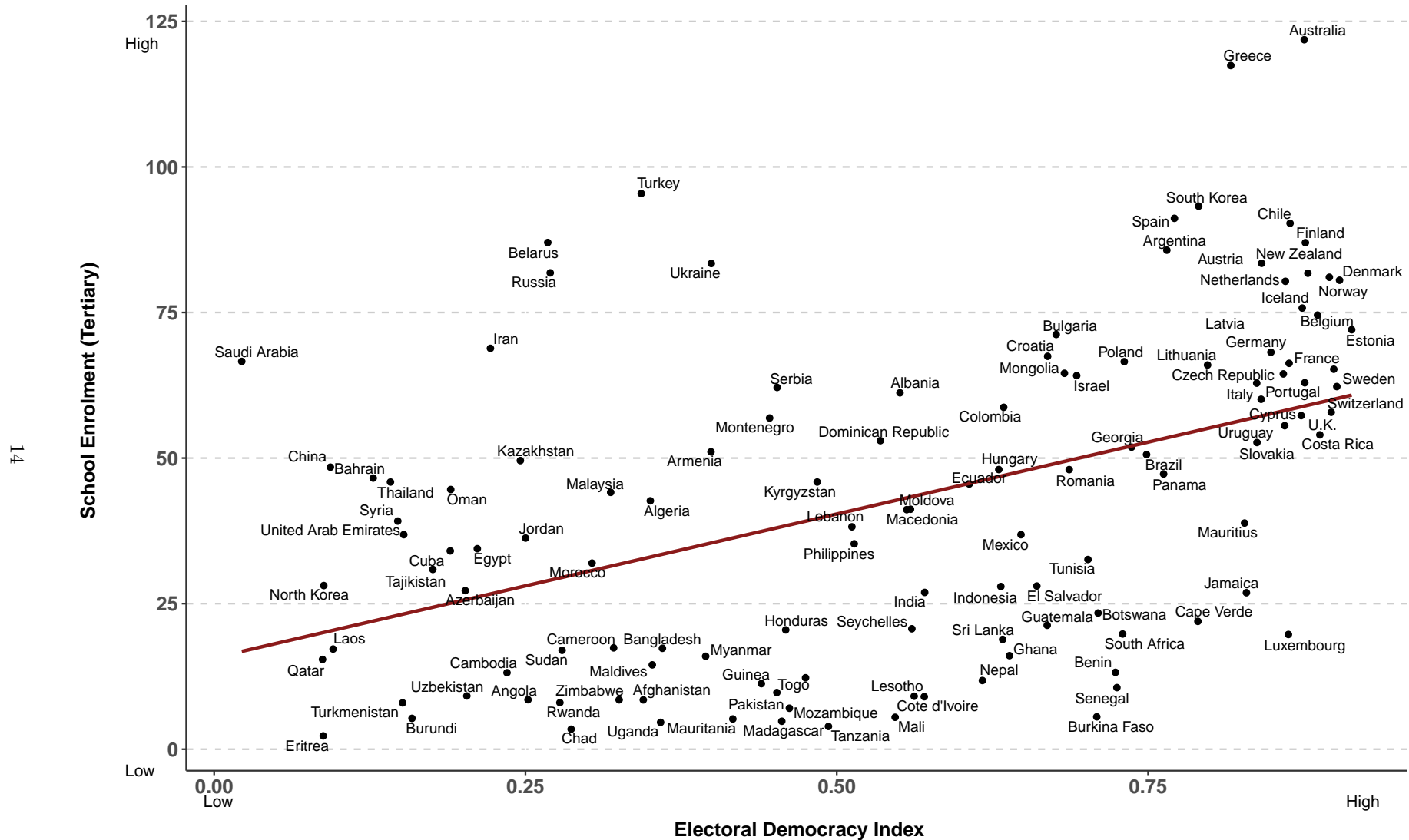
Number of observations: 115
 R-Squared: 0.16
 Sources: The World Bank Group (2014 – 2017) & Varieties of Democracy (V-Dem) Project (2017)

Average Schooling Years vs. Electoral Democracy Index



Number of observations: 137
 R-Squared: 0.27
 Sources: Barro & Lee (2010) & Varieties of Democracy (V-Dem) Project (2017)

School Enrolment (Tertiary) vs. Electoral Democracy Index

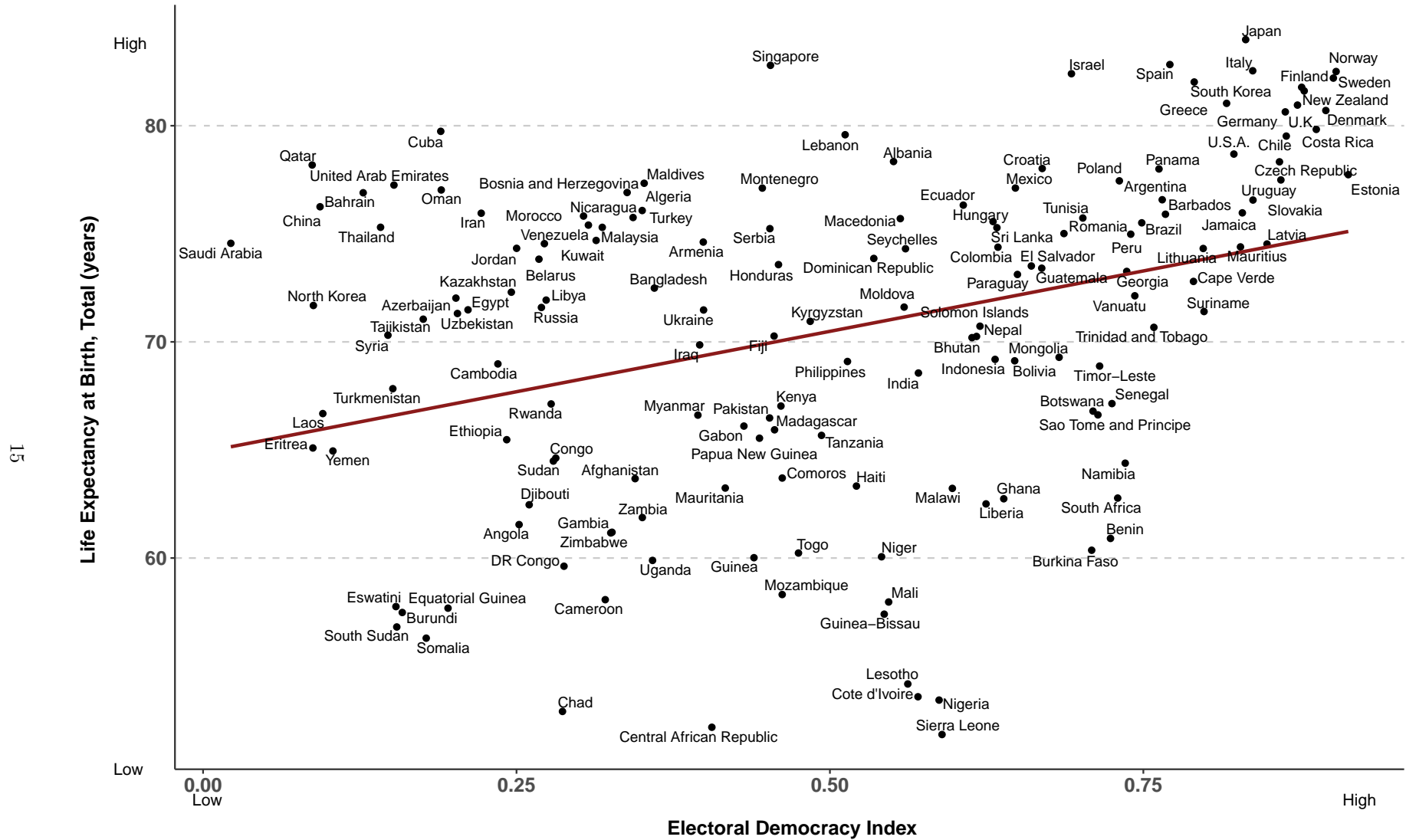


Number of observations: 127

R-Squared: 0.22

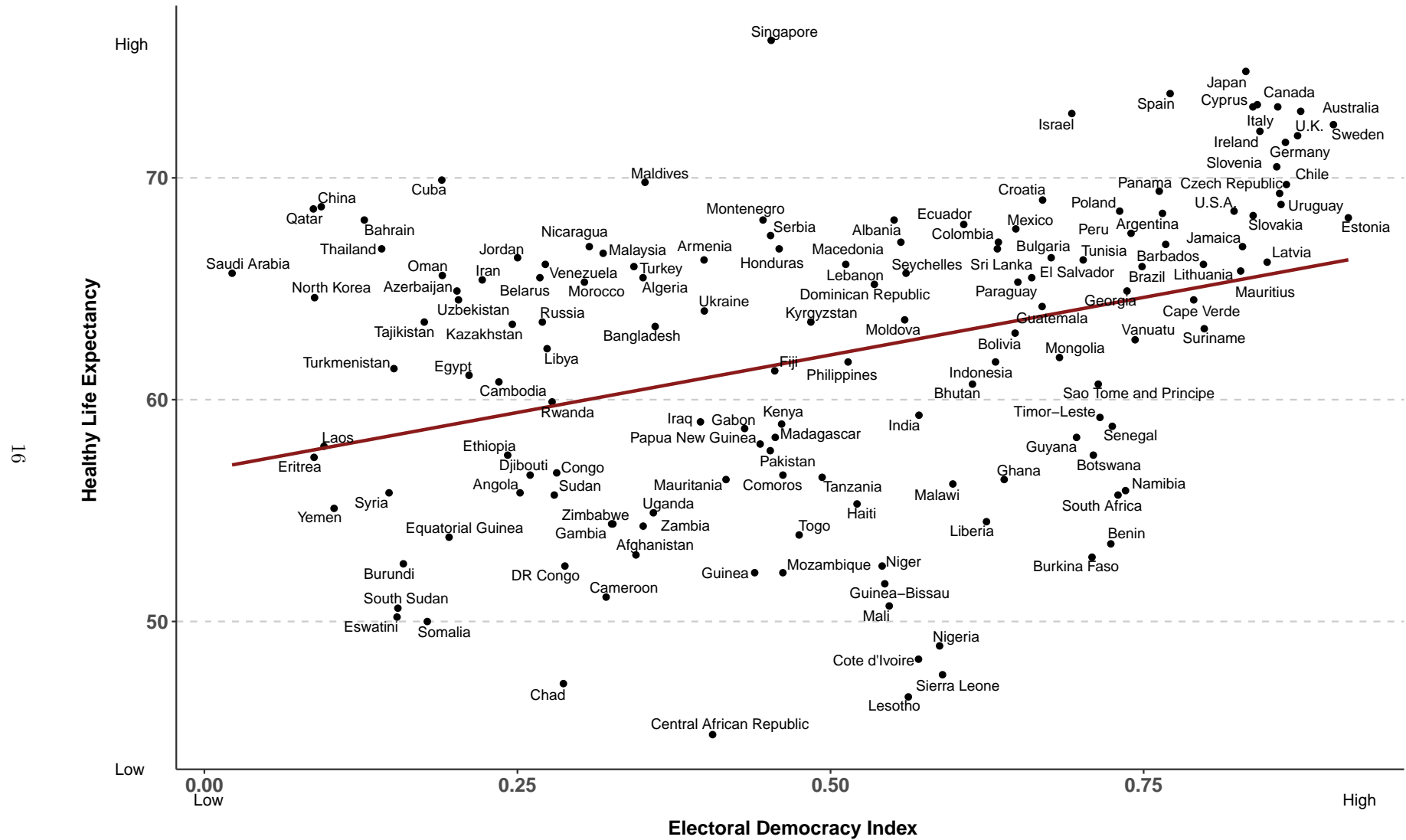
Sources: The World Bank Group (Ratio of total enrolment) (2014 – 2017) & Varieties of Democracy (V-Dem) Project (2017)

Life Expectancy at Birth, Total (years) vs. Electoral Democracy Index



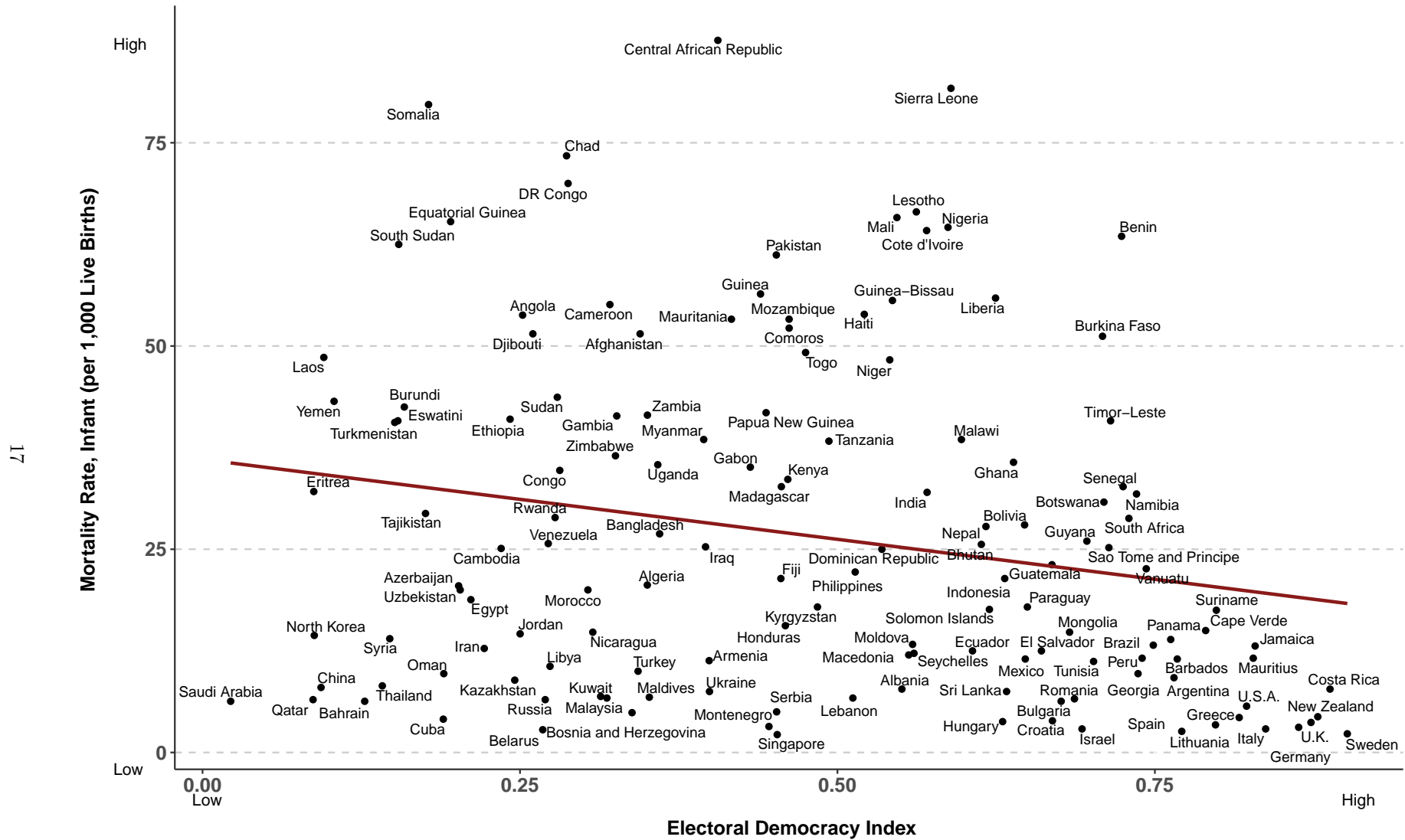
Number of observations: 170
 R-Squared: 0.19
 Sources: The World Bank Group (2016) & Varieties of Democracy (V-Dem) Project (2017)

Healthy Life Expectancy vs. Electoral Democracy Index



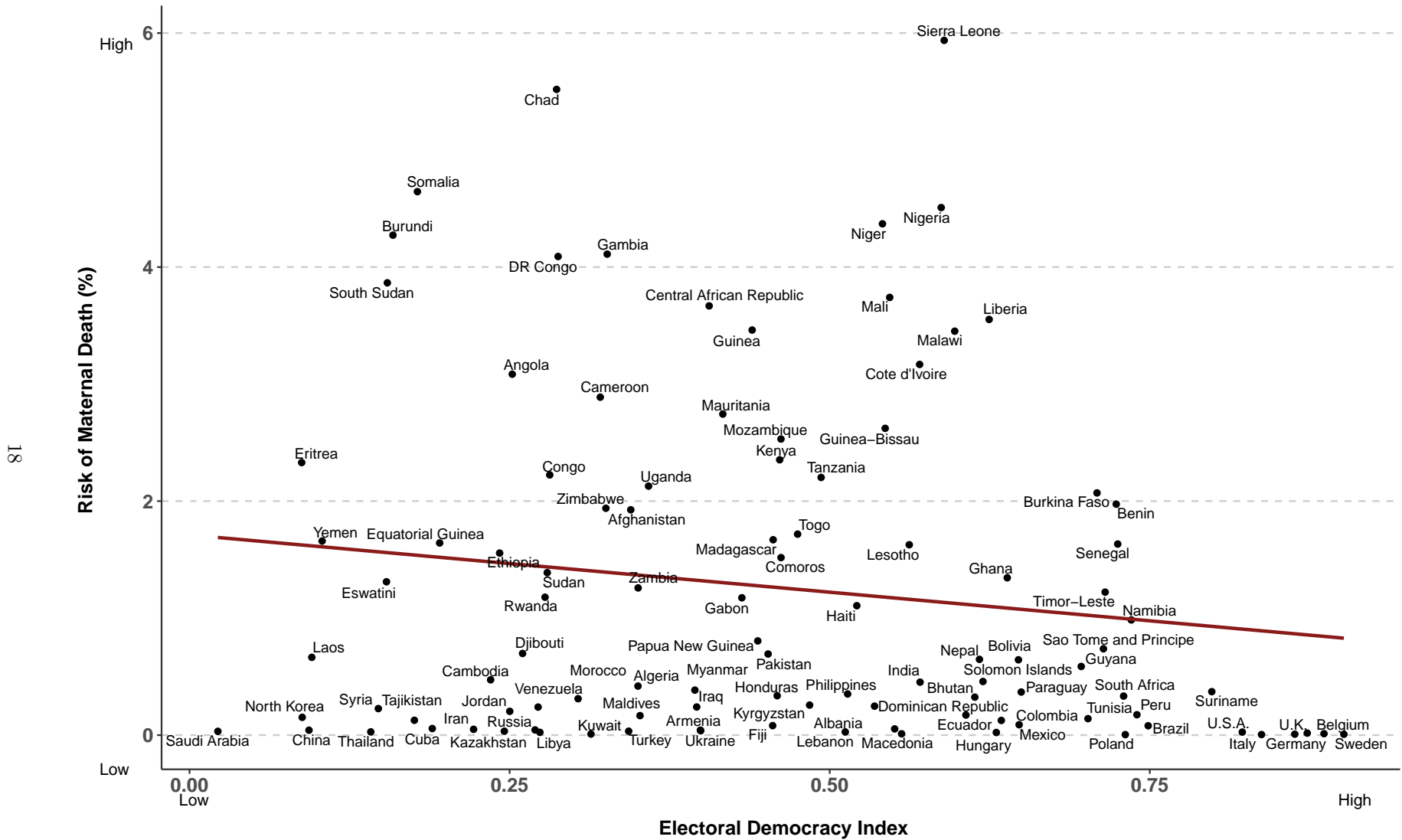
Number of observations: 170
R-Squared: 0.21
Sources: World Health Organization (2016) & Varieties of Democracy (V-Dem) Project (2017)

Mortality Rate, Infant (per 1,000 Live Births) vs. Electoral Democracy Index



Number of observations: 170
 R-Squared: 0.14
 Sources: The World Bank Group (2017) & Varieties of Democracy (V-Dem) Project (2017)

Risk of Maternal Death (%) vs. Electoral Democracy Index

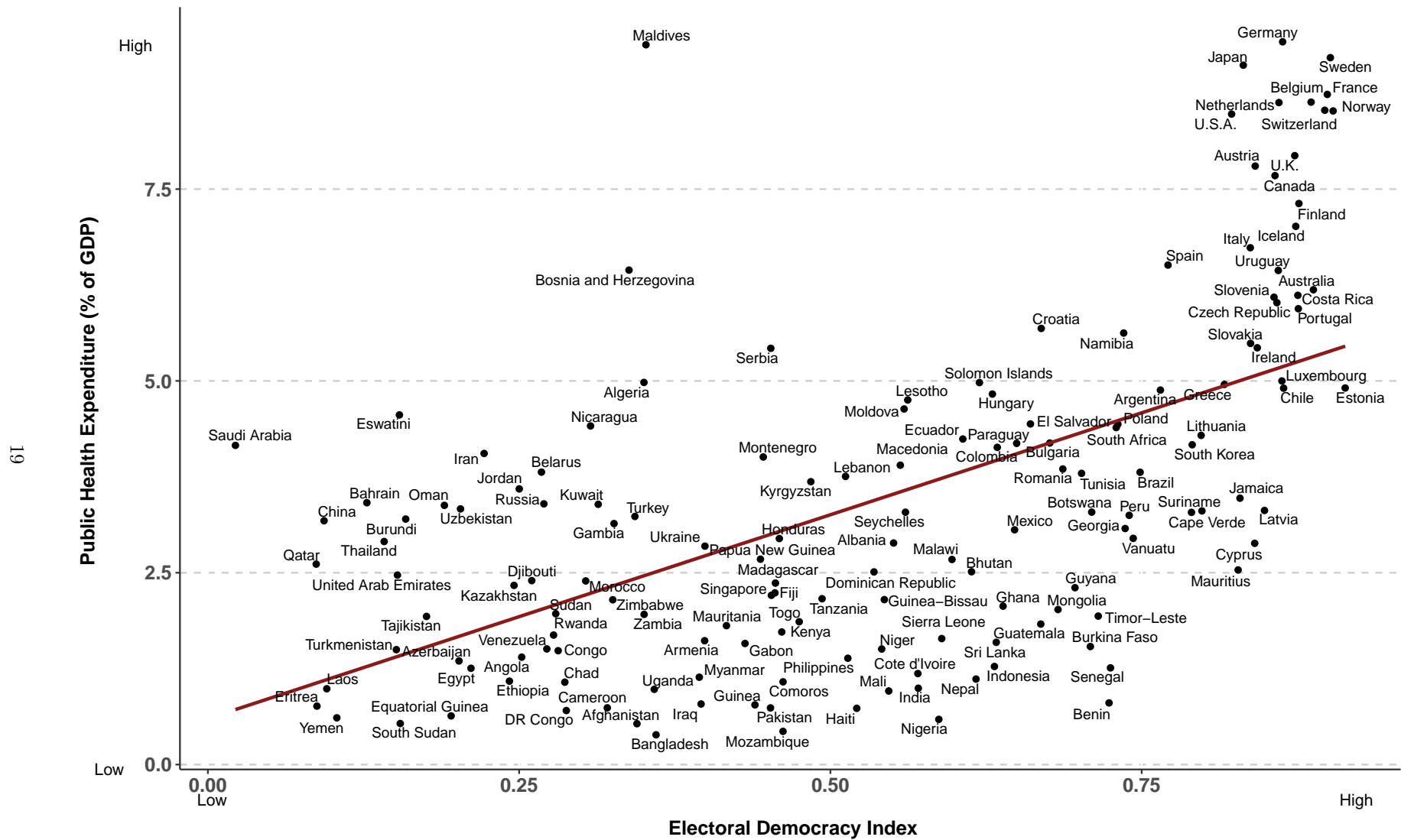


Number of observations: 169

R-Squared: 0.08

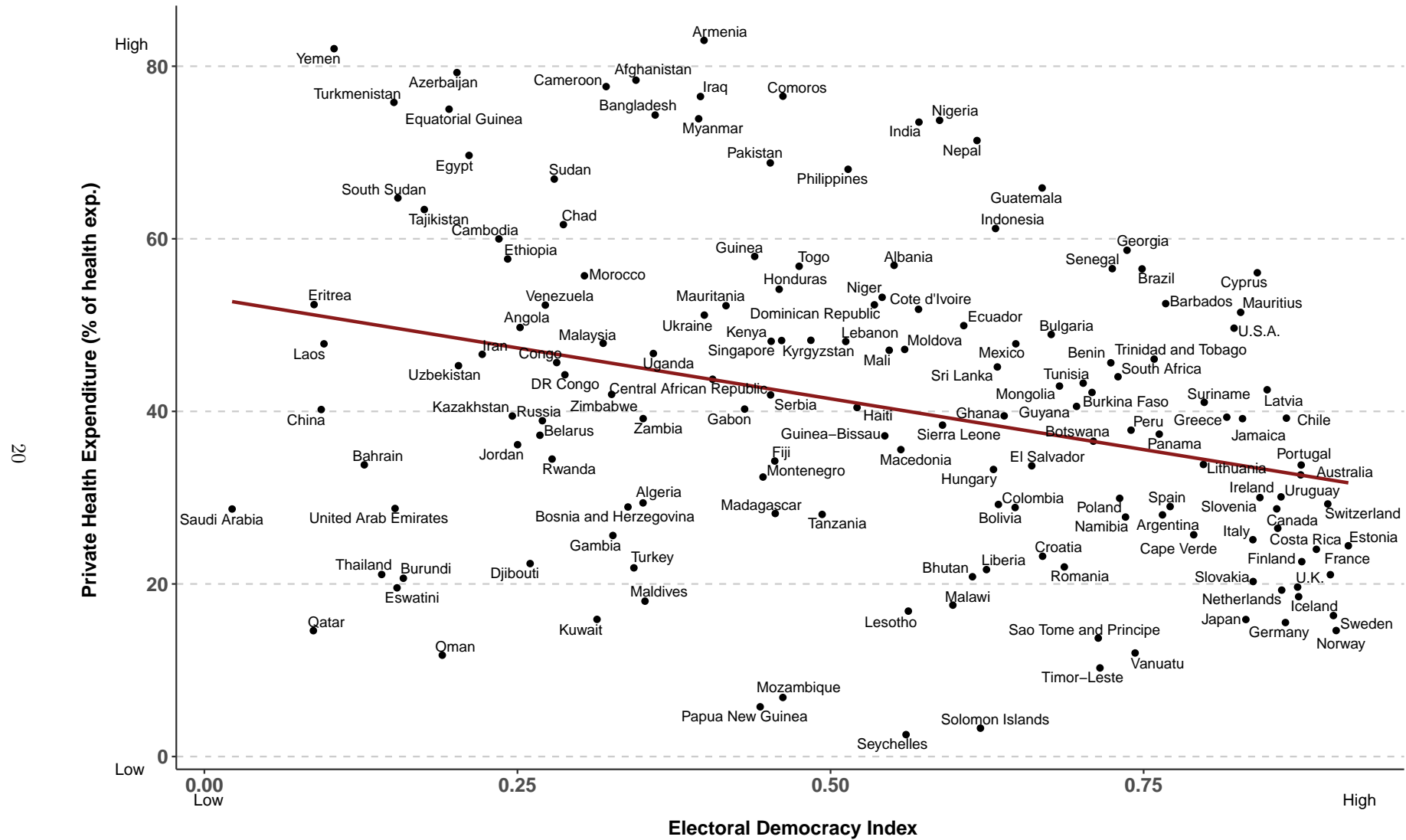
Sources: The World Bank Group (2015) & Varieties of Democracy (V-Dem) Project (2017)

Public Health Expenditure (% of GDP) vs. Electoral Democracy Index



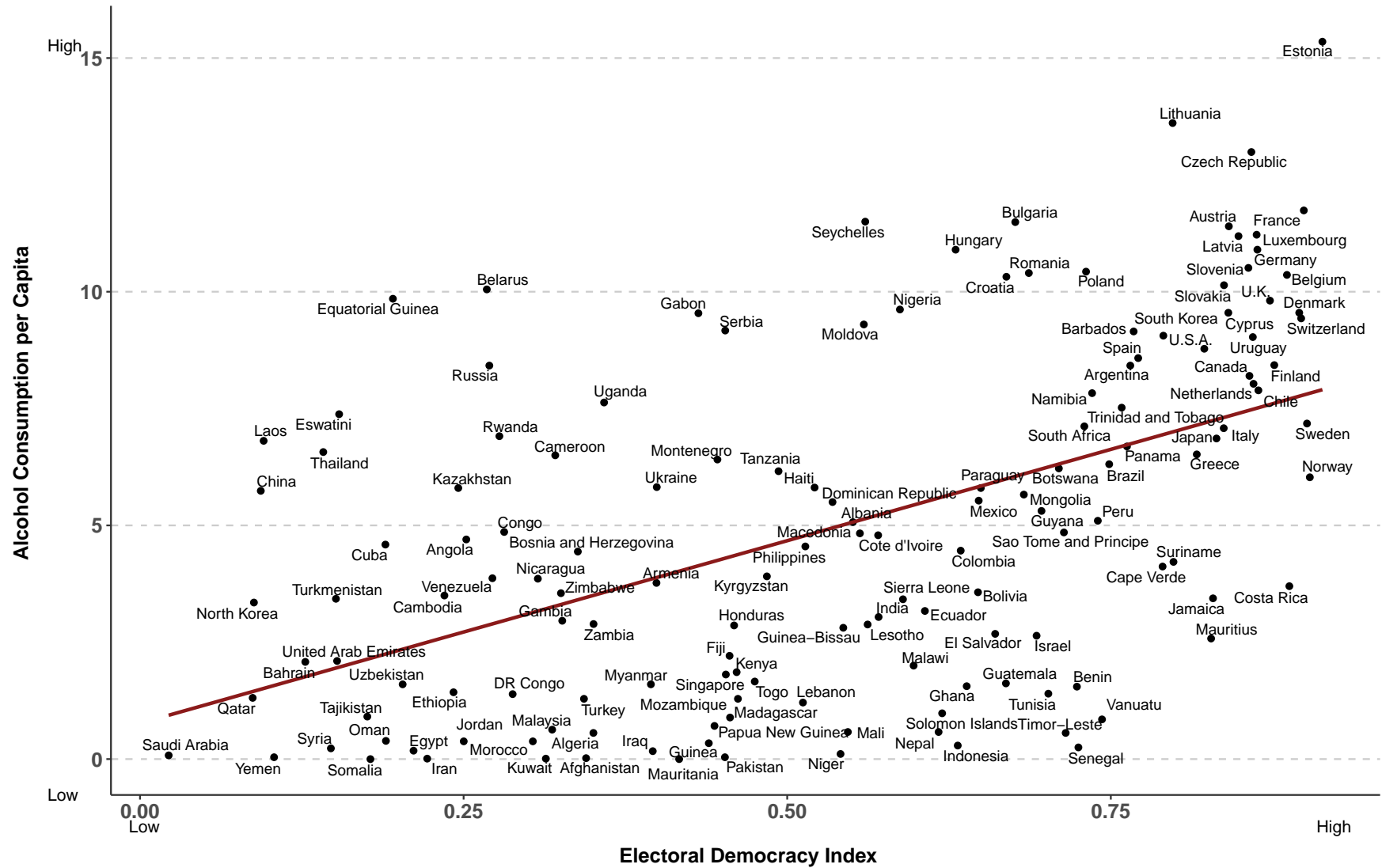
Number of observations: 163
 R-Squared: 0.34
 Sources: The World Bank Group (2014 – 2015) & Varieties of Democracy (V-Dem) Project (2017)

Private Health Expenditure (% of health exp.) vs. Electoral Democracy Index



Number of observations: 163
 R-Squared: 0.11
 Sources: The World Bank Group (2014 – 2015) & Varieties of Democracy (V-Dem) Project (2017)

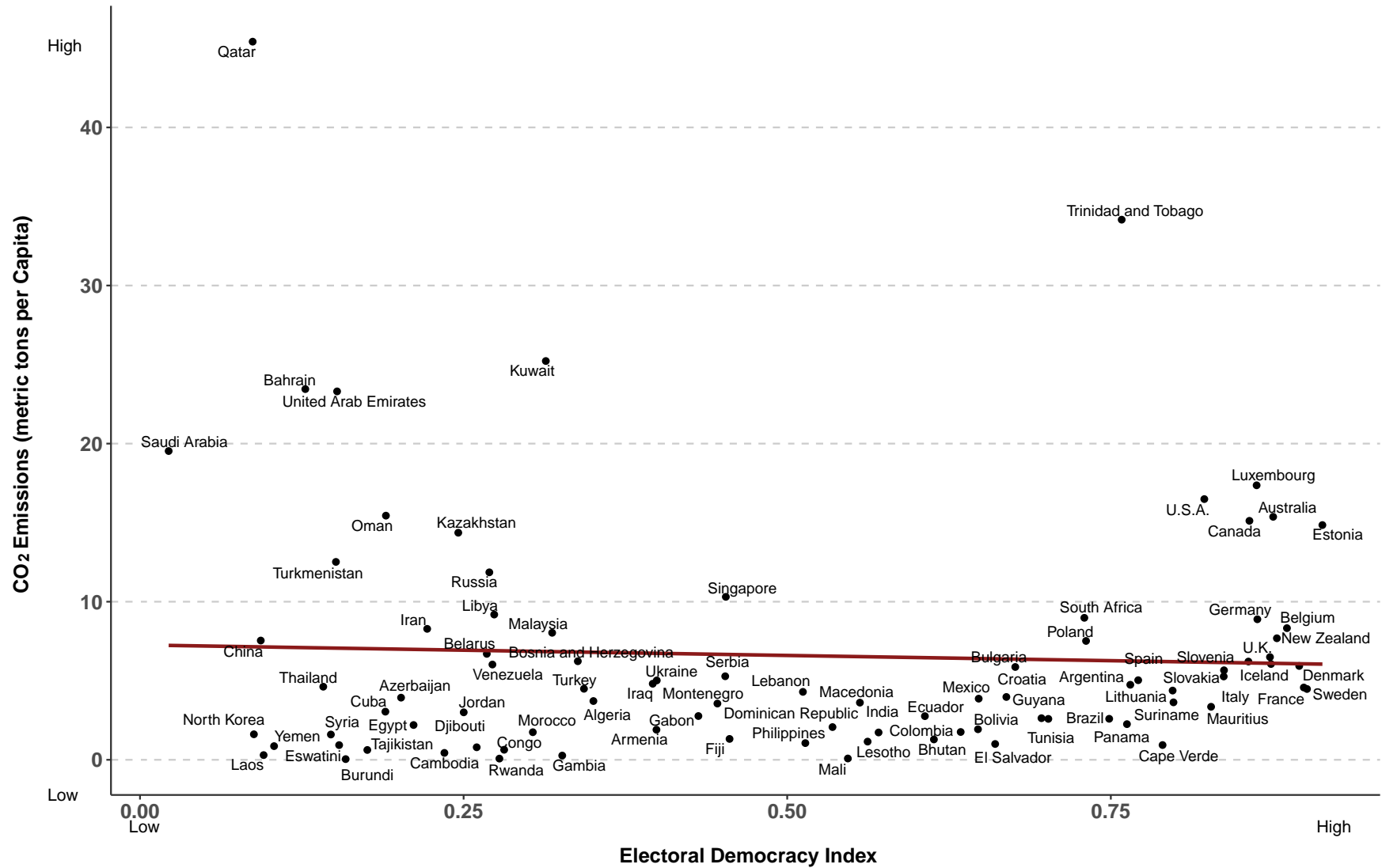
Alcohol Consumption per Capita vs. Electoral Democracy Index



21

Number of observations: 163
 R-Squared: 0.31
 Sources: World Health Organization (2015 – 2016) & Varieties of Democracy (V-Dem) Project (2017)

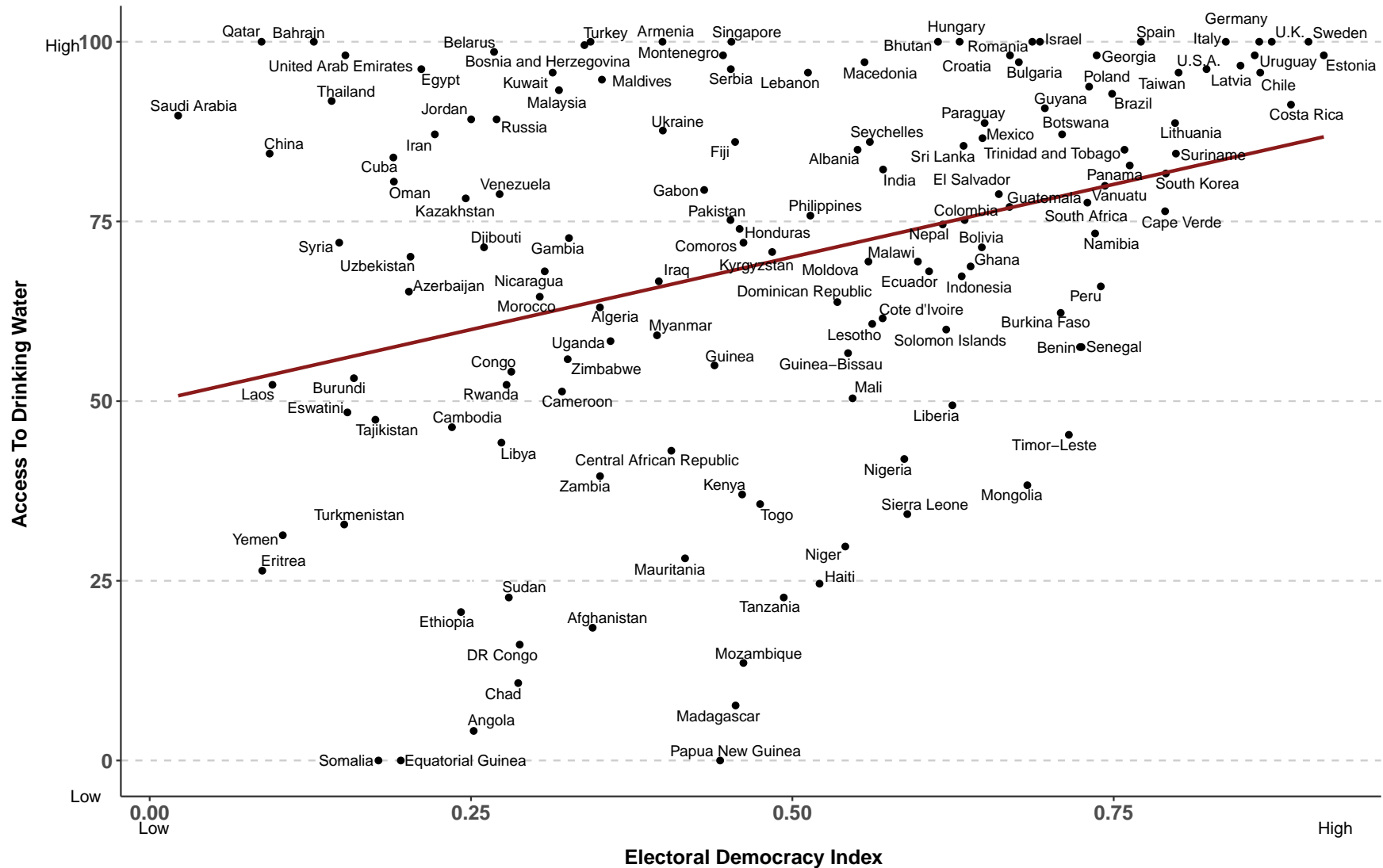
CO₂ Emissions (metric tons per Capita) vs. Electoral Democracy Index



22

Number of observations: 169
R-Squared: 0.00
Sources: The World Bank Group (2014) & Varieties of Democracy (V-Dem) Project (2017)

Access To Drinking Water vs. Electoral Democracy Index



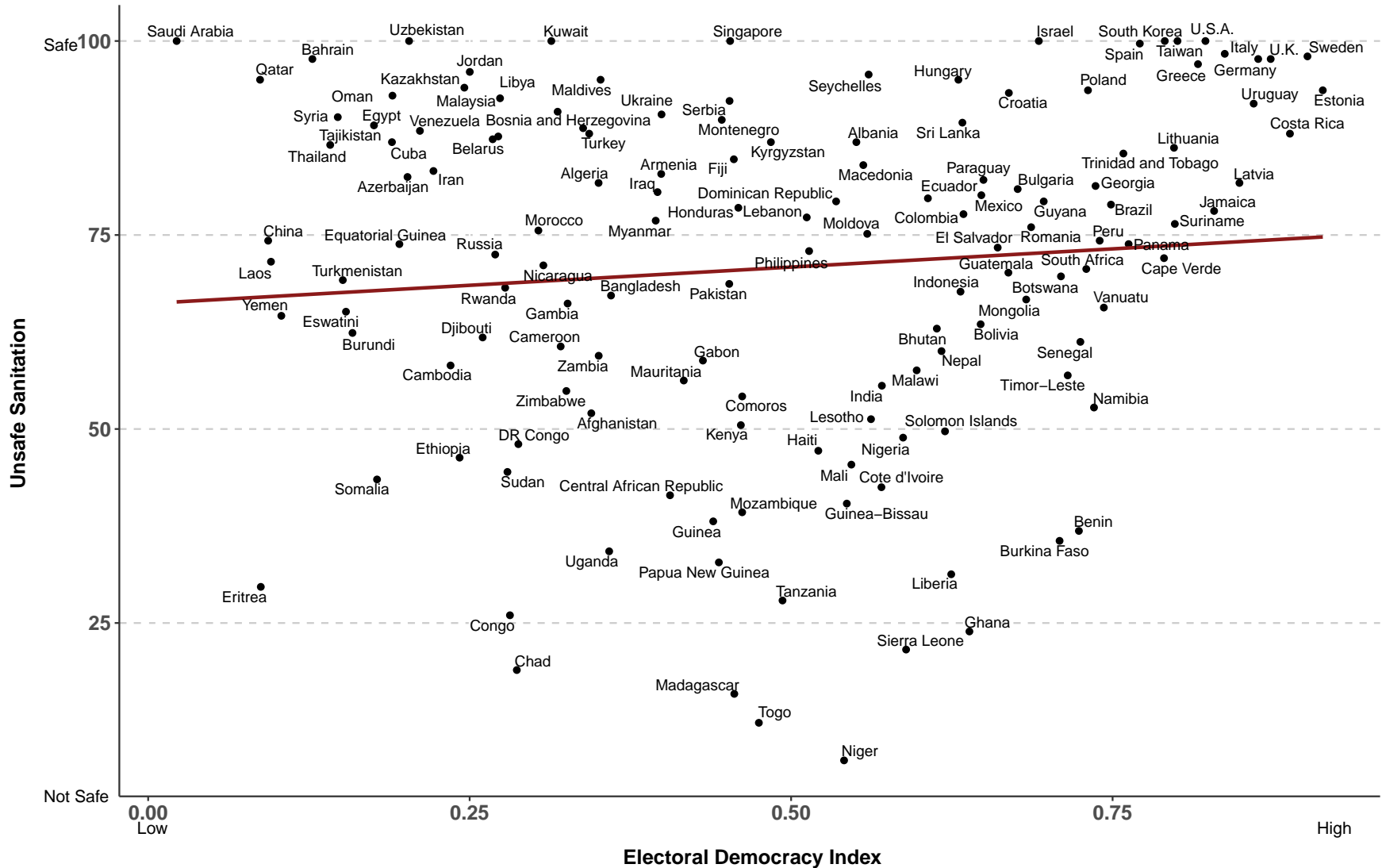
23

Number of observations: 169

R-Squared: 0.23

Sources: Environmental Performance Index (2015) & Varieties of Democracy (V-Dem) Project (2017)

Unsafe Sanitation vs. Electoral Democracy Index



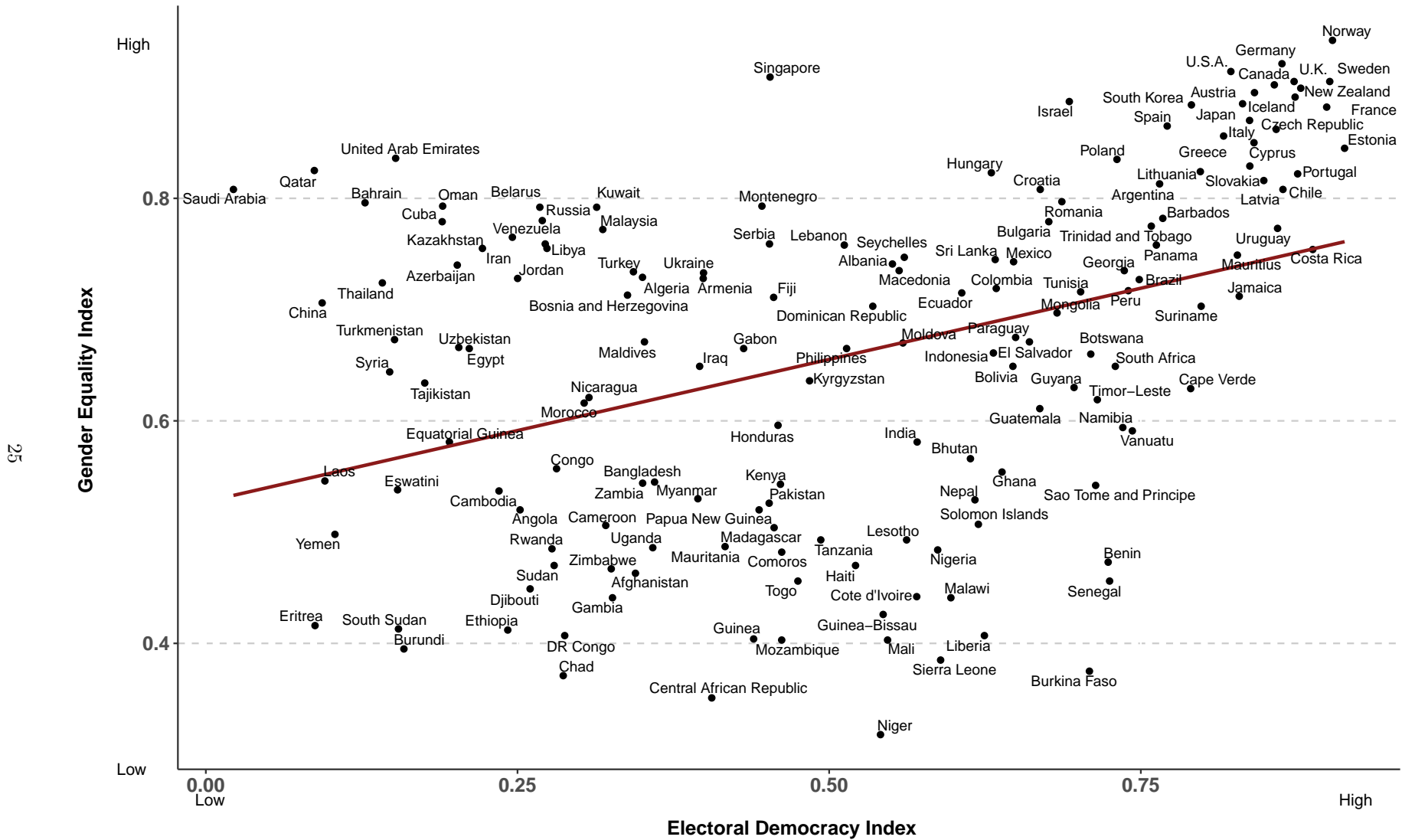
24

Number of observations: 169

R-Squared: 0.07

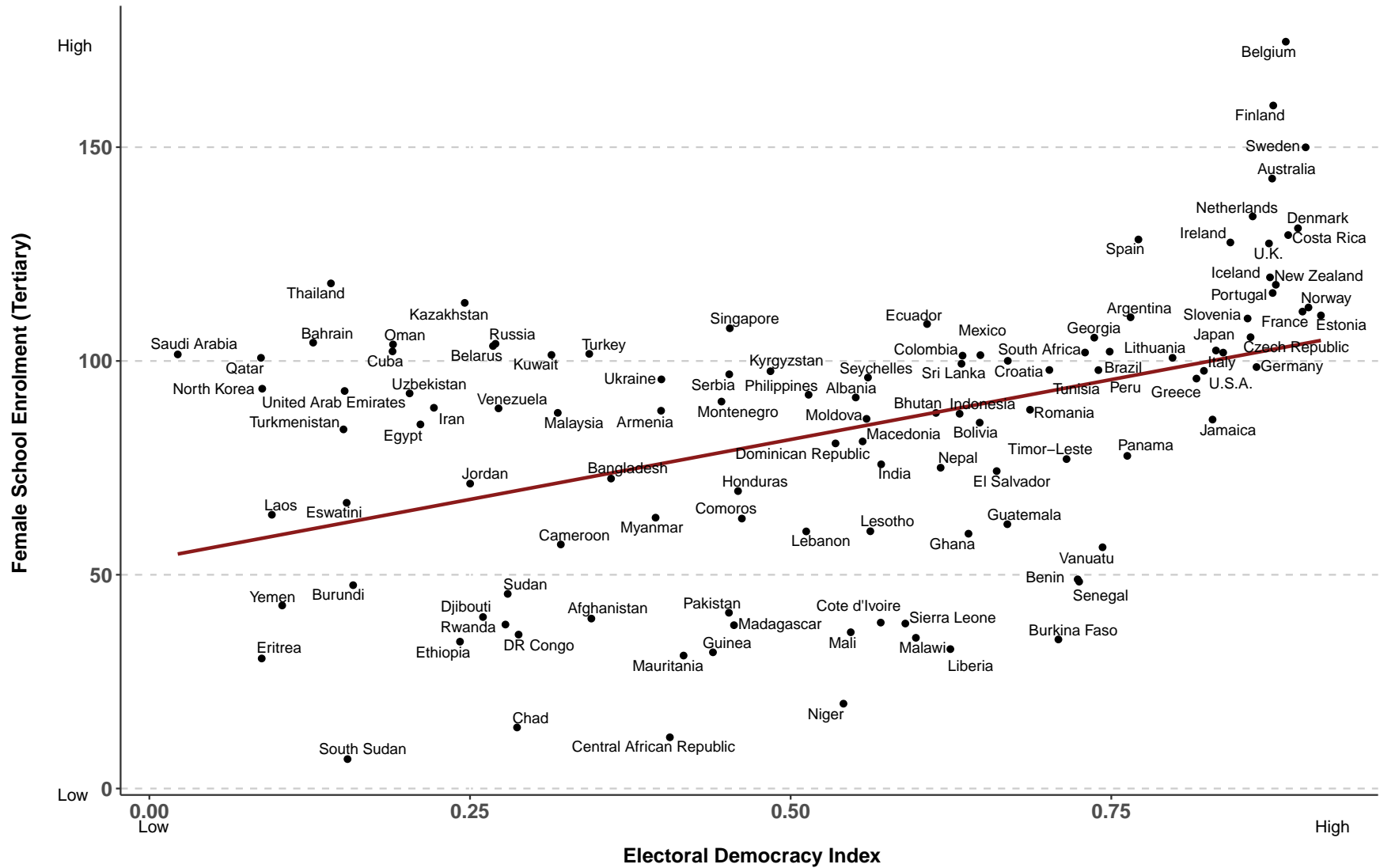
Sources: Environmental Performance Index (2015) & Varieties of Democracy (V-Dem) Project (2017)

Gender Equality Index vs. Electoral Democracy Index



Number of observations: 168
 R-Squared: 0.21
 Sources: United Nations Development Programme (2017) & Varieties of Democracy (V-Dem) Project (2017)

Female School Enrolment (Tertiary) vs. Electoral Democracy Index



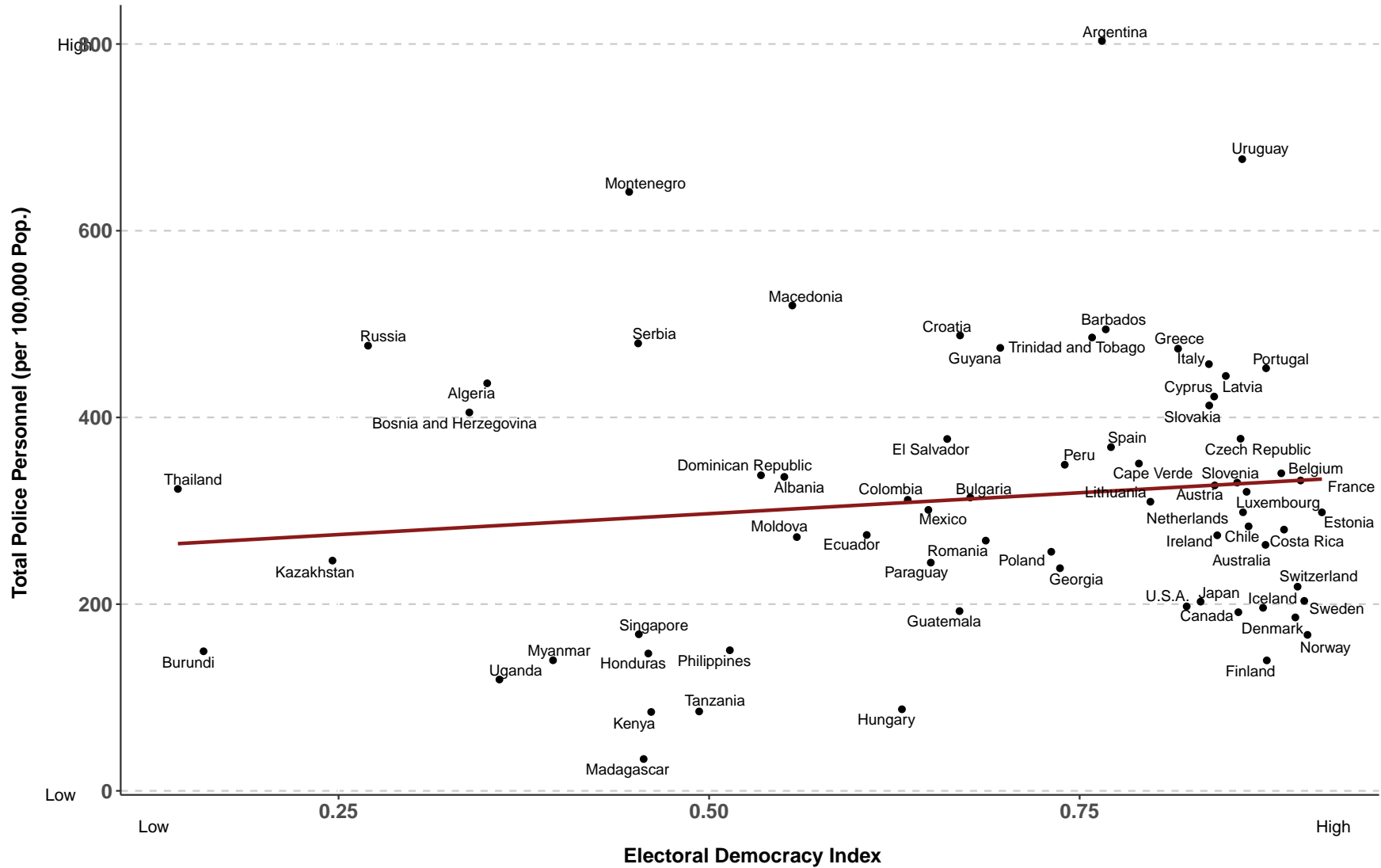
26

Number of observations: 134

R-Squared: 0.21

Sources: The World Bank Group (Ratio of total enrolment) (2014 – 2017) & Varieties of Democracy (V-Dem) Project (2017)

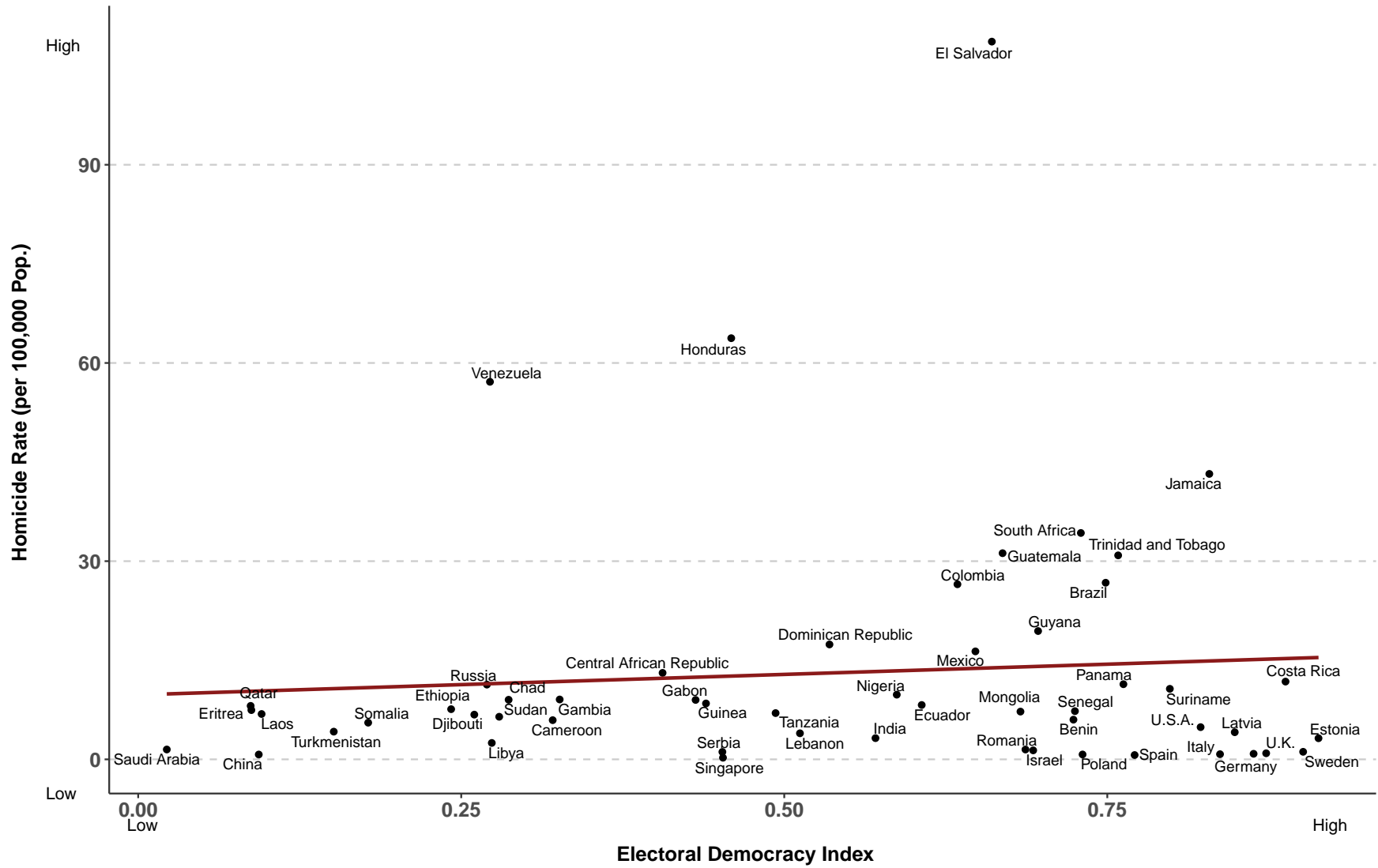
Total Police Personnel (per 100,000 Pop.) vs. Electoral Democracy Index



Number of observations: 69
 R-Squared: 0.02
 Sources: United Nations Office on Drugs and Crime (2014 – 2015) & Varieties of Democracy (V-Dem) Project (2017)

Homicide Rate (per 100,000 Pop.) vs. Electoral Democracy Index

28

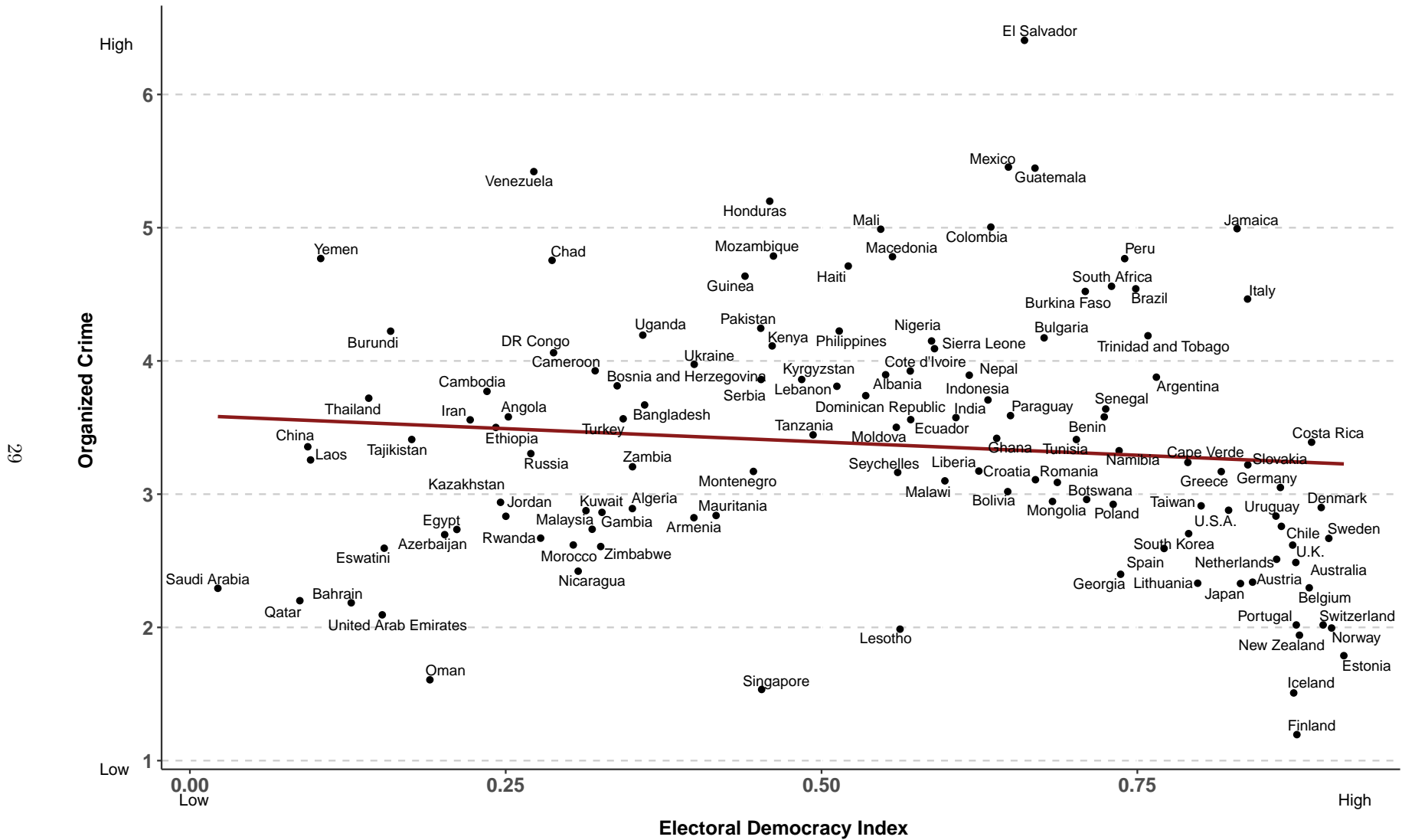


Number of observations: 127

R-Squared: 0.00

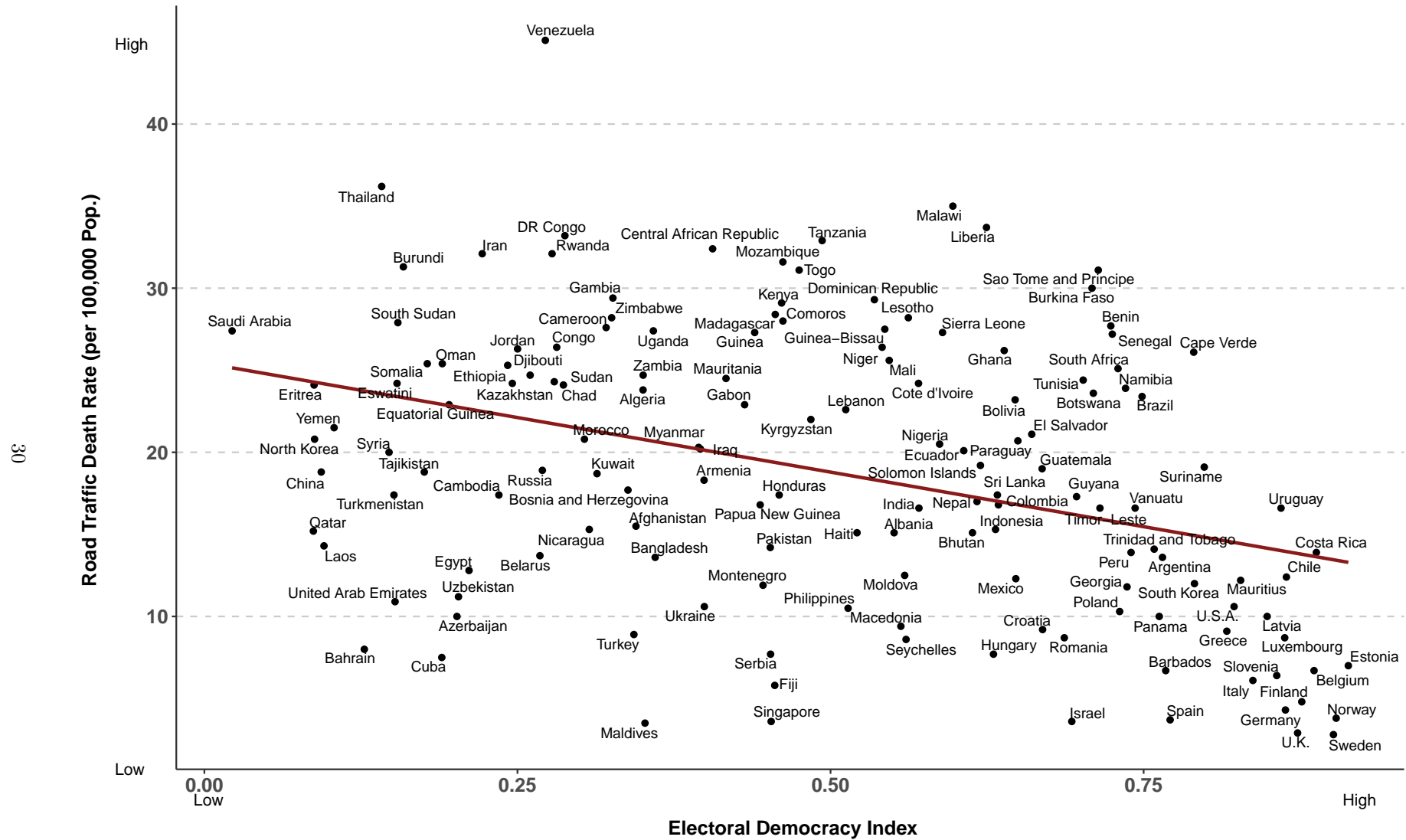
Sources: United Nations Office on Drugs and Crime (2014 – 2015) & Varieties of Democracy (V-Dem) Project (2017)

Organized Crime vs. Electoral Democracy Index



Number of observations: 136
 R-Squared: 0.03
 Sources: World Economic Forum (2017) & Varieties of Democracy (V-Dem) Project (2017)

Road Traffic Death Rate (per 100,000 Pop.) vs. Electoral Democracy Index

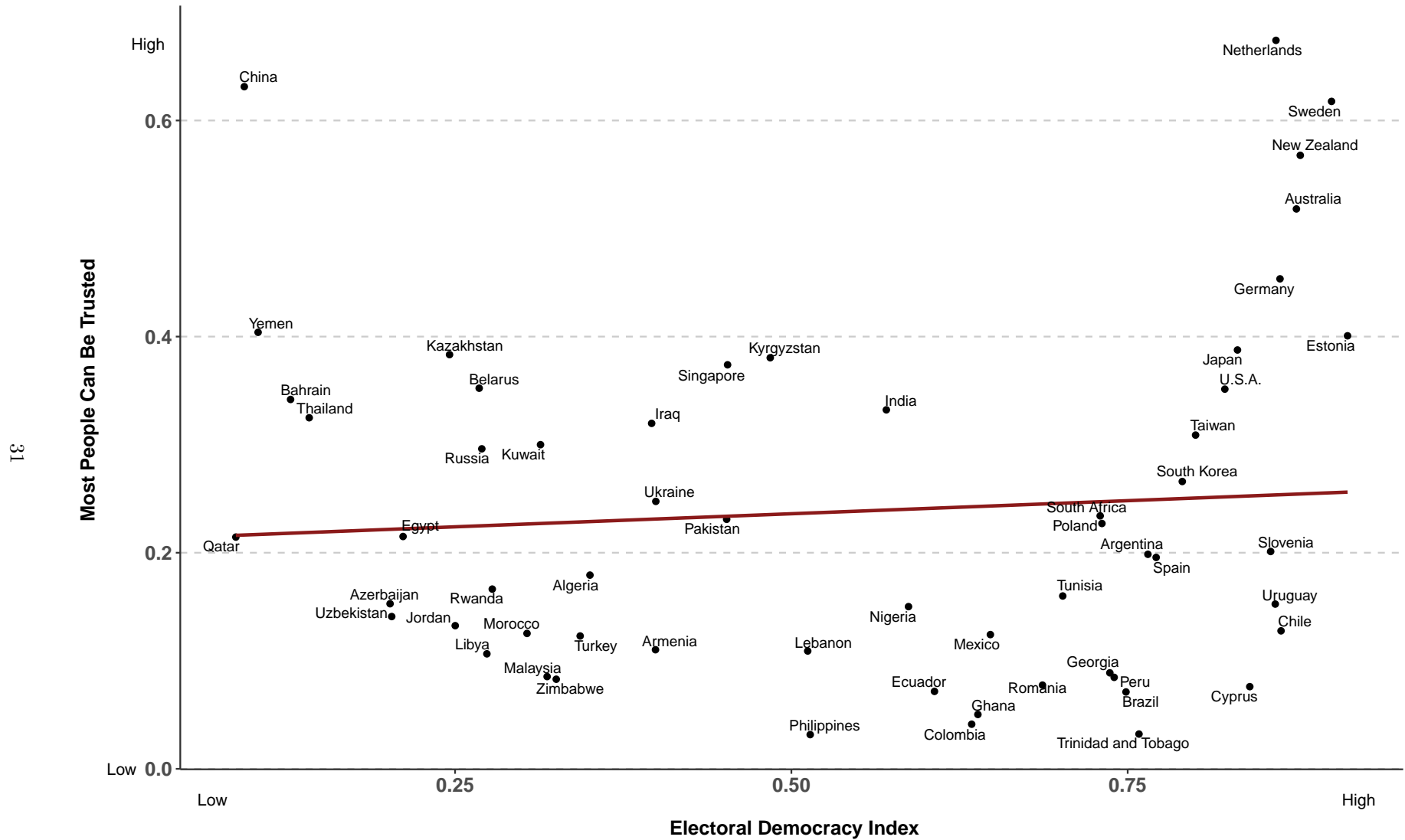


Number of observations: 170

R-Squared: 0.24

Sources: World Health Organization (2013) & Varieties of Democracy (V-Dem) Project (2017)

Most People Can Be Trusted vs. Electoral Democracy Index



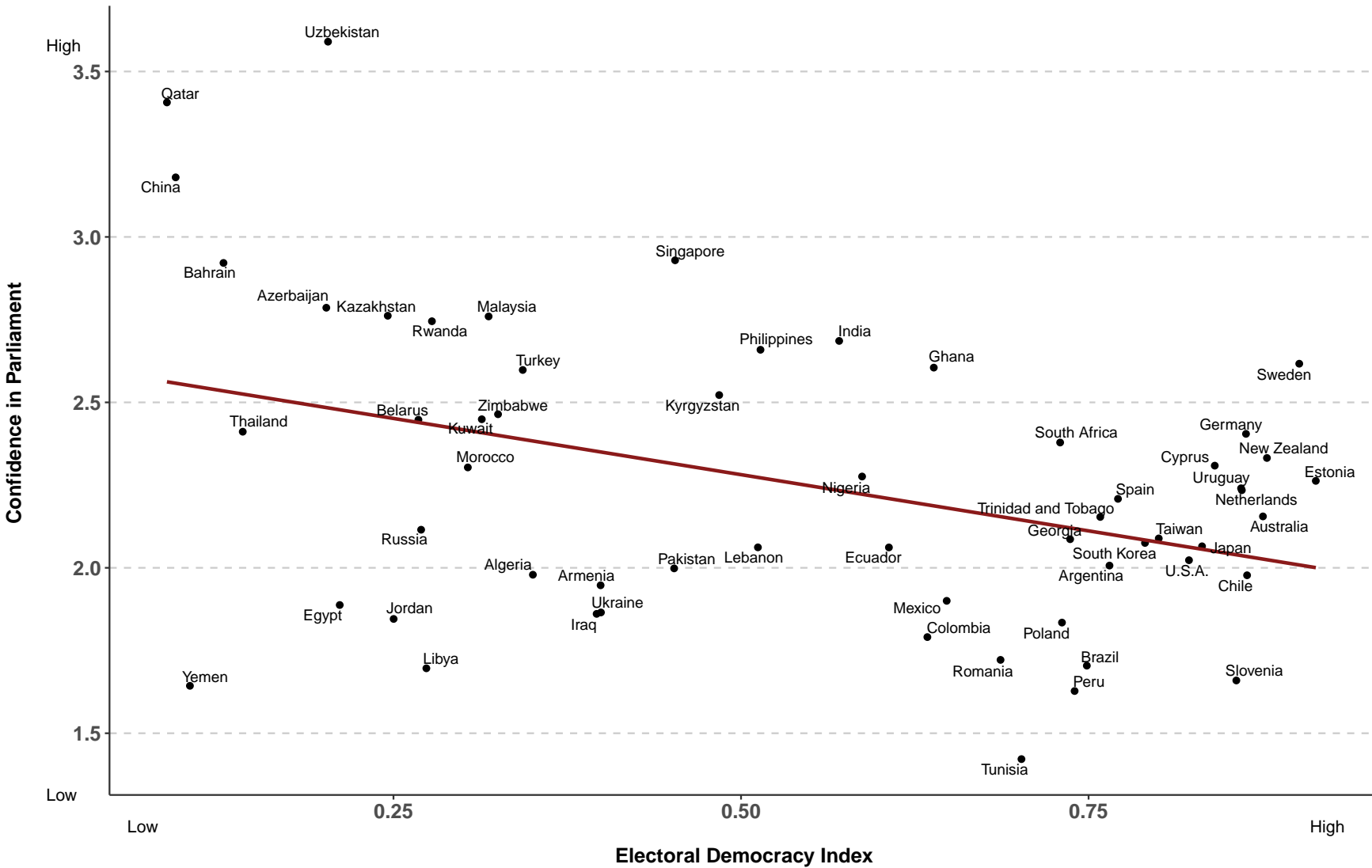
Number of observations: 58

R-Squared: 0.01

Sources: World Values Survey (2010 – 2014) & Varieties of Democracy (V-Dem) Project (2017)

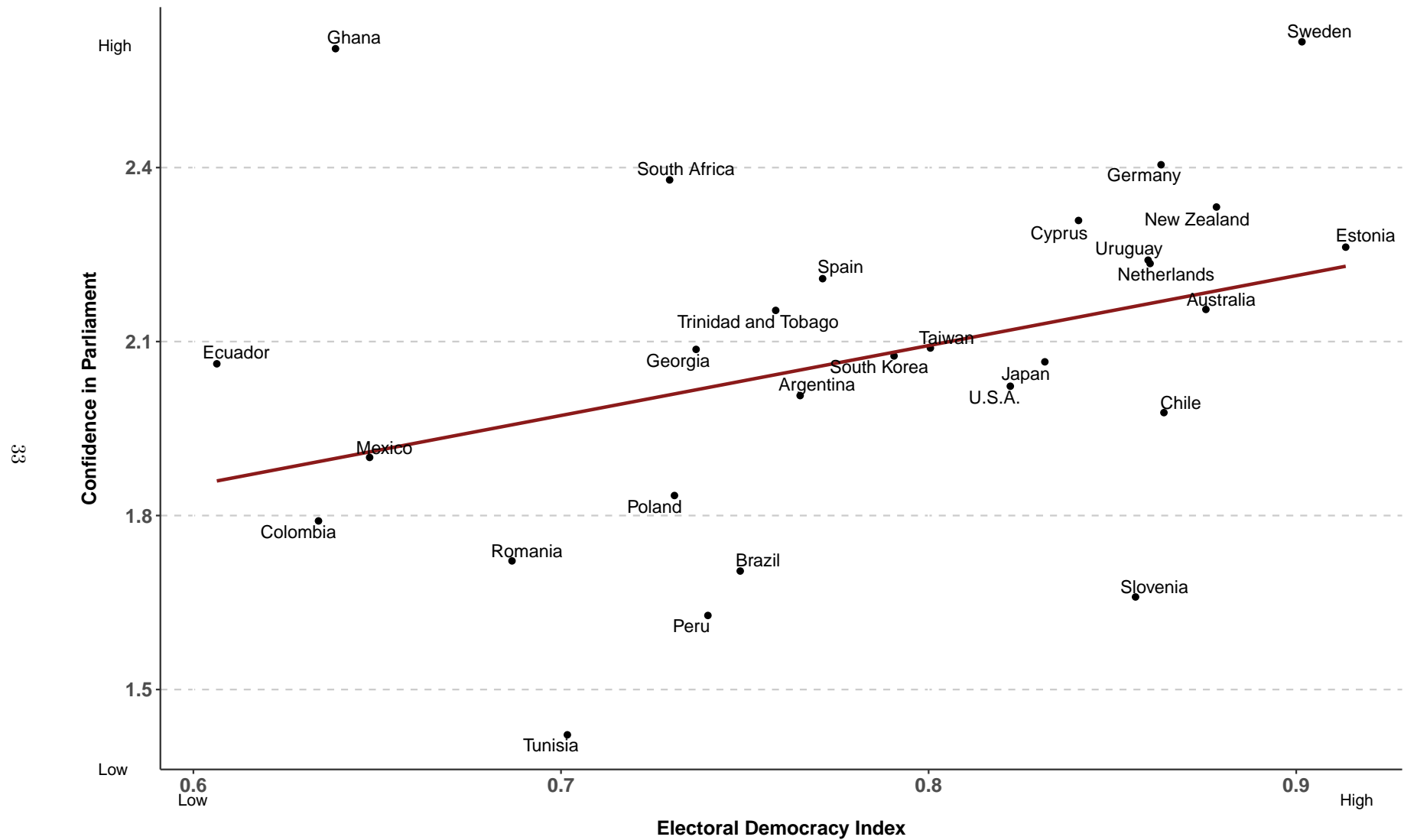
Confidence in Parliament vs. Electoral Democracy Index

32



Number of observations: 58
 R-Squared: 0.16
 Sources: World Values Survey (2010 – 2014) & Varieties of Democracy (V-Dem) Project (2017)

Confidence in Parliament vs. Electoral Democracy Index in Democracies

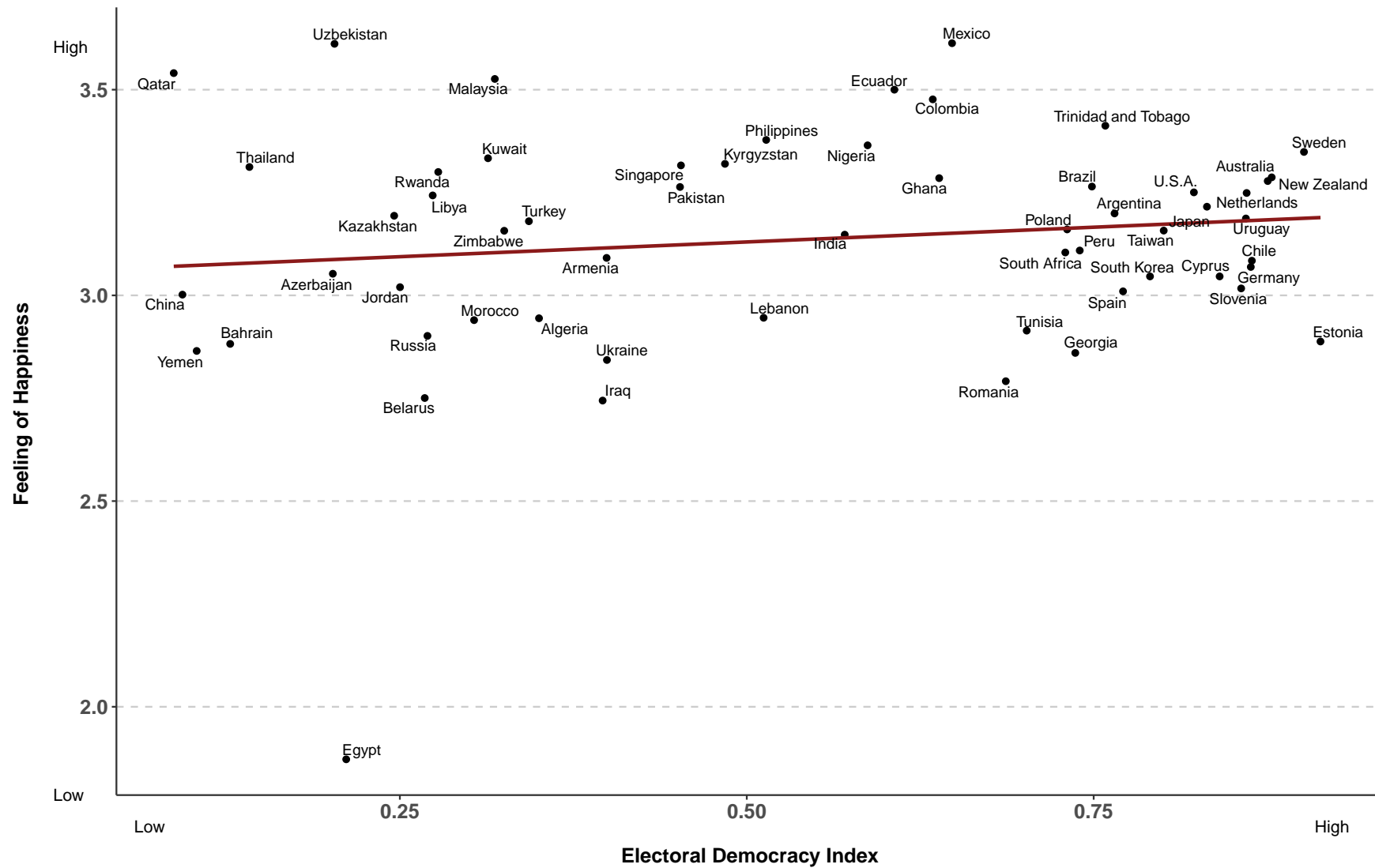


Number of observations: 28

Adjusted R-Squared: 0.1

Sources: World Values Survey (2010 – 2014) & Varieties of Democracy (V-Dem) Project (2017)

Feeling of Happiness vs. Electoral Democracy Index

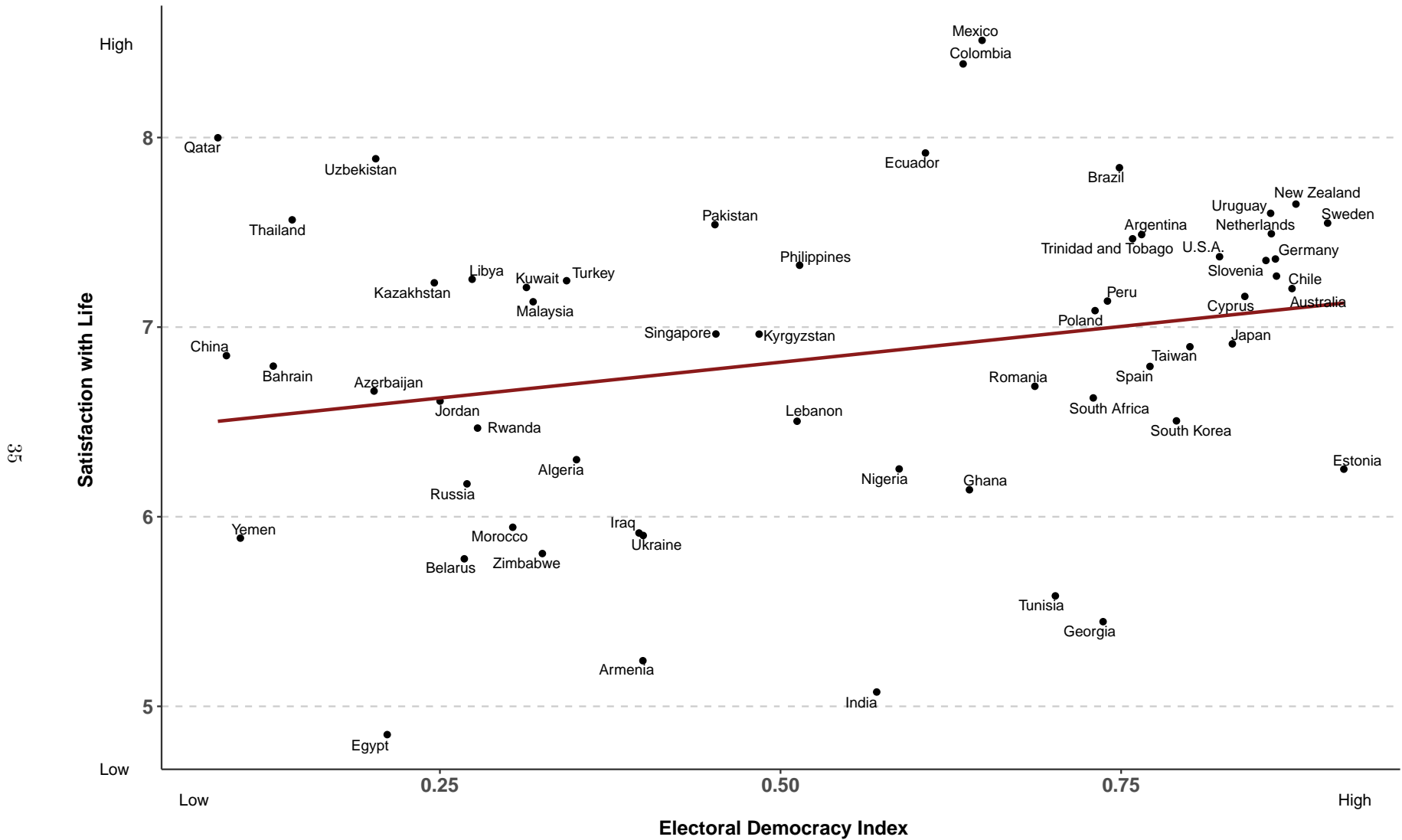


Number of observations: 58

R-Squared: 0.02

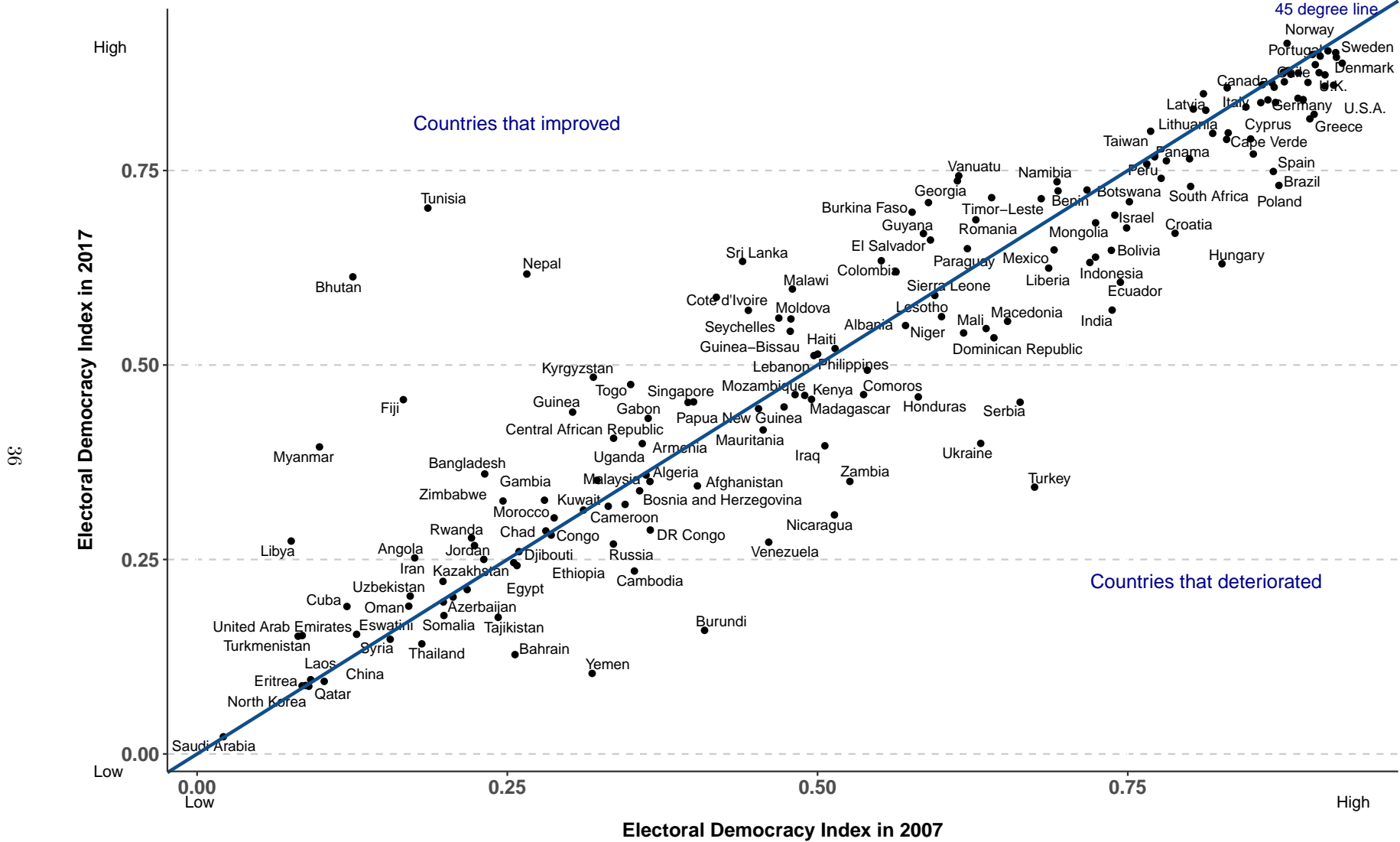
Sources: World Values Survey (2010 – 2014) & Varieties of Democracy (V-Dem) Project (2017)

Satisfaction with Life vs. Electoral Democracy Index



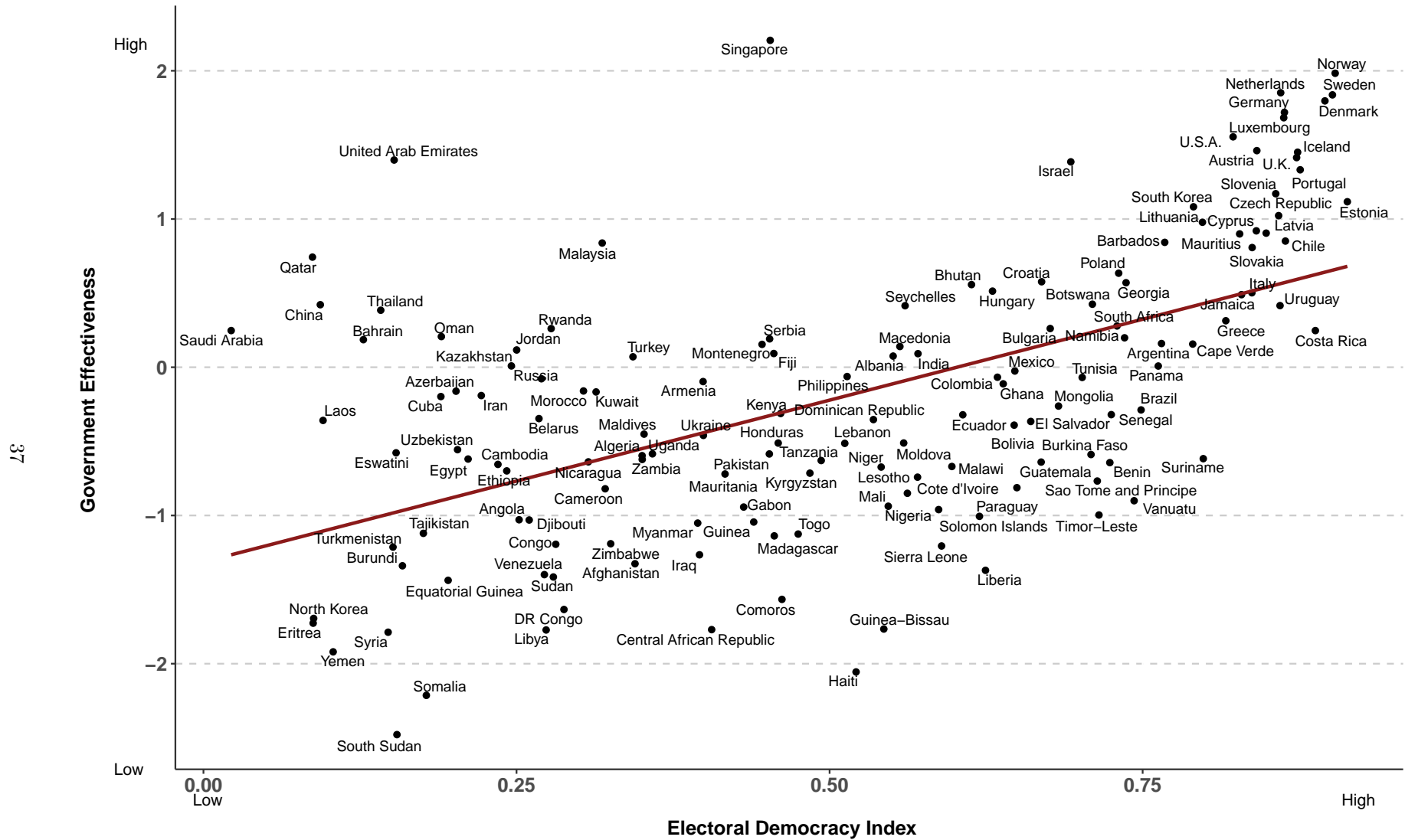
Number of observations: 58
 R-Squared: 0.06
 Sources: World Values Survey (2010 – 2014) & Varieties of Democracy (V-Dem) Project (2017)

Electoral Democracy (10 year change)



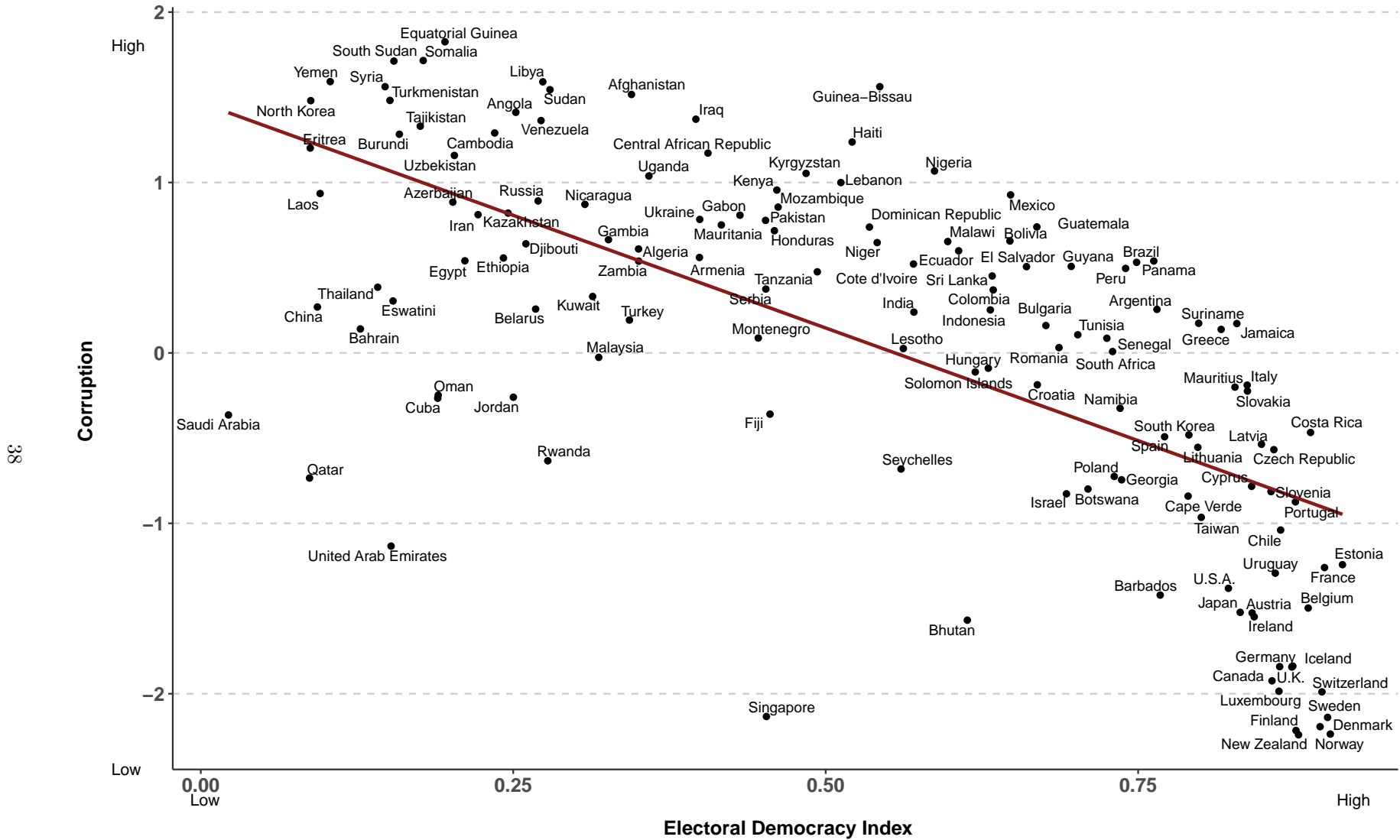
Number of observations: 169
 Adjusted R-Squared: 0.83
 Sources: Varieties of Democracy (V-Dem) Project

Government Effectiveness vs. Electoral Democracy Index

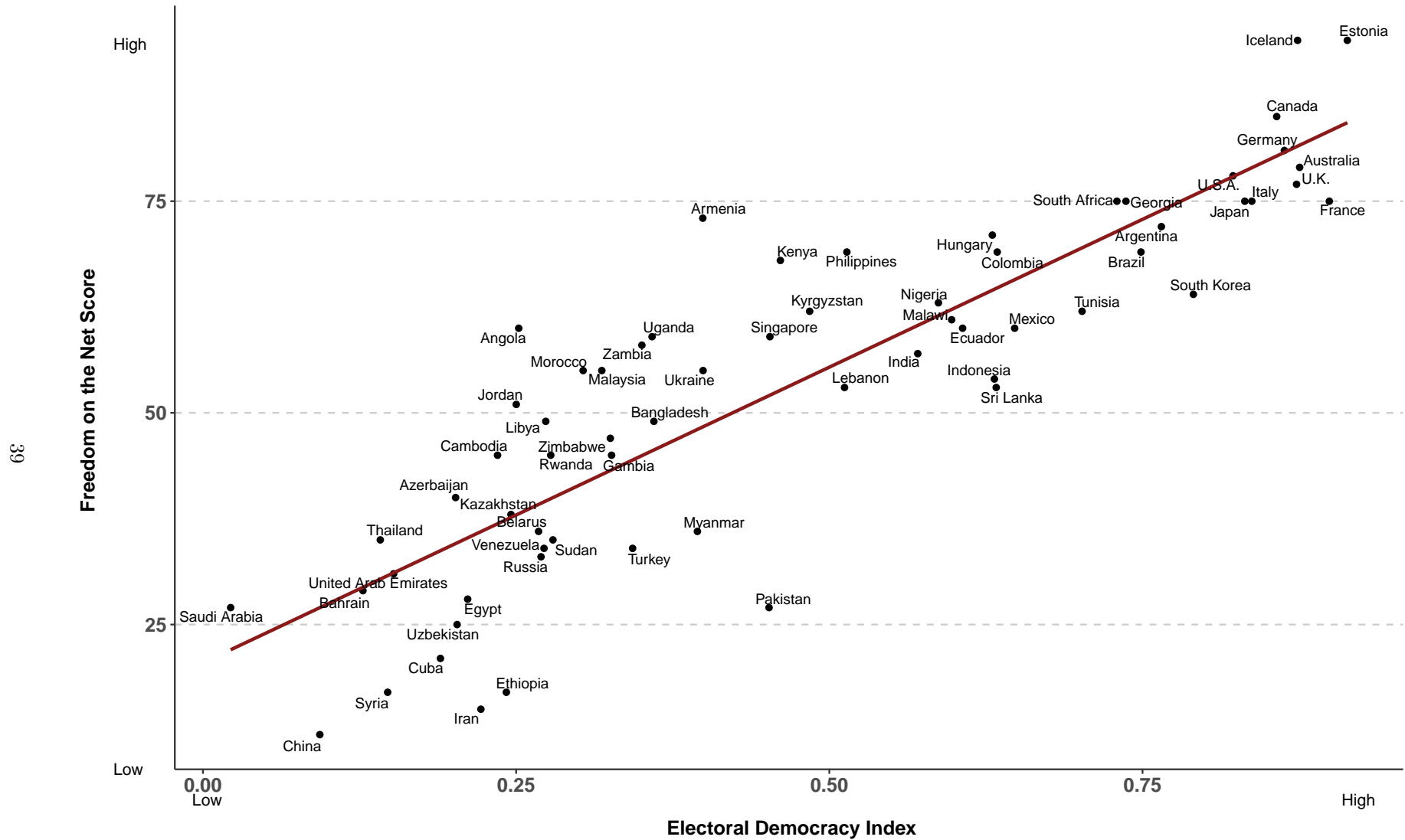


Number of observations: 171
 R-Squared: 0.38
 Sources: The World Bank Group (2017) & Varieties of Democracy (V-Dem) Project (2017)

Corruption vs. Electoral Democracy Index



Freedom on the Net Score vs. Electoral Democracy Index



Description of Variables by Source

Barro & Lee

<http://www.barrolee.com/>
(Downloaded on 2018-07-13)

Dataset: Educational Attainment Dataset The Barro-Lee Data set provide data disaggregated by sex and by 5-year age intervals. It provides educational attainment data for 146 countries in 5-year intervals from 1950 to 2010. It also provides information about the distribution of educational attainment of the adult population over age 15 and over age 25 by sex at seven levels of schooling - no formal education, incomplete primary, complete primary, lower secondary, upper secondary, incomplete tertiary, and complete tertiary. Average years of schooling at all levels - primary, secondary, and tertiary - are also measured for each country and for regions in the world. Aside from updating and expanding our previous estimates (1993, 1996, and 2001), we improve the accuracy of estimation in the current version by using more information and better methodology. To reduce measurement error, the new estimates are constructed using recently available census/survey observations from consistent census data, disaggregated by age group, and new estimates of mortality rate and completion rate by age and by education.

Average Schooling Years, Female and Male (25+) Average Schooling Years, Female and Male (25+).

United Nations Office on Drugs and Crime

<https://data.unodc.org/>

(Downloaded on 2018-12-04)

Dataset: Crime and Criminal Justice The UN-CTS deals with information, primarily administrative statistics, on the main components of the criminal justice system (police, prosecution, courts and prisons). In addition, the UN-CTS collects available data from crime victimization surveys.

Intentional homicide rate (per 100,000 pop.) Intentional homicide, counts and rates per 100,000 population. Unlawful death purposefully inflicted on a person by another person. Data on intentional homicide should also include serious assault leading to death and death as a result of a terrorist attack. It should exclude attempted homicide, manslaughter, death due to legal intervention, justifiable homicide in self-defence and death due to armed conflict.

For Belgium and Romania, the refer to offences, not victims, of intentional homicide. For New Zealand, the data for 2000-2006 refer to offences, data for 2007 onwards refer to victims of intentional homicide. The data for Kazakhstan, the Philippines and Sri Lanka reports a change in the definition and(or) counting rules and it entails a break in the time series.

Total police personnel at national level (per 100,000 pop.) Total police personnel at national level per 100,000 population. 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. Data supplied by countries may not exactly reflect the definition provided.

Argentina, Burundi, Colombia, Estonia, Latvia, Mexico, Netherlands, Paraguay, Russia, Serbia and Thailand reported changes in definitions and/or counting rules are reported by the Member State to indicate a break in the time series.

Ease of Doing Business Report

<http://www.doingbusiness.org/en/doingbusiness>
(Downloaded on 2018-11-01)

Dataset: Ease of Doing Business - Historical Data The Doing Business project provides objective measures of business regulations and their enforcement across 190 economies. This EOB 2019 report covers 11 indicator sets and 190 economies. Most indicator sets refer to a case scenario in the largest business city of each economy, except for 11 economies that have a population of more than 100 million as of 2013 (Bangladesh, Brazil, China, India, Indonesia, Japan, Mexico, Nigeria, Pakistan, the Russian Federation and the United States) where Doing Business, also collected data for the second largest business city.

The ease of doing business score captures the gap between an economy's performance and a measure of best practice across the entire sample of 41 indicators for 10 Doing Business topics (the labor market regulation indicators are excluded). For starting a business, for example, New Zealand and Georgia have the lowest number of procedures required (1). New Zealand also holds the shortest time to start a business (0.5 days), while Slovenia has the lowest cost (0.0).

Calculating the ease of doing business score for each economy involves two main steps. In the first step individual component indicators are normalized to a common unit where each of the 41 component indicators y (except for the total tax and contribution rate) is rescaled using the linear transformation $(\text{worst} - y)/(\text{worst} - \text{best})$. In this formulation, the highest score represents the best regulatory performance on the indicator across all economies since 2005 or the third year in which data for the indicator were collected.

Both the best regulatory performance and the worst regulatory performance are established every five years based on the Doing Business data for the year in which they are established and remain at that level for the five years regardless of any changes in data in interim years. Thus, an economy may establish the best regulatory performance for an indicator even though it may not have the highest score in a subsequent year. Conversely, an economy may score higher than the best regulatory performance if the economy reforms after the best regulatory performance is set. For example, the best regulatory performance for the time to get electricity is set at 18 days. In the Republic of Korea it now takes 13 days to get electricity while in the United Arab Emirates it takes just 10 days. Although the two economies have different times, both economies score 100 on the time to get electricity because they have exceeded the threshold of 18 days.

For scores such as those on the strength of legal rights index or the quality of land administration index, the best regulatory performance is set at the highest possible value (although no economy has yet reached that value in the case of the latter).

Due to the changes in methodologies, some variables are presented separately, given that they are not comparable given these said changes.

Ease of doing business score global (DB17-19 methodology) Ease of doing business score global (DB17-19 methodology)

Environmental Performance Index

<http://epi.yale.edu/downloads>

(Downloaded on 2018-11-20)

Dataset: Environmental Performance Index Data The Environmental Performance Index provides a ranking that shines light on how each country manages environmental issues. The Environmental Performance Index (EPI) ranks how well countries perform on high-priority environmental issues in two broad policy areas: protection of human health from environmental harm and protection of ecosystems. Within these two policy objectives the EPI scores country performance in nine issue areas comprised of 20 indicators. Indicators in the EPI measure how close countries are to meeting internationally established targets or, in the absence of agreed-upon targets, how they compare to the range of observed countries.

Note: In many cases the EPI variables lack actual observations and rely on imputation. Please refer to the original documentation on more information about this. Also, some values (usually the value 0) are very unlikely, please use your judgement whether to treat these as the value 0 or as "Data missing".

Unsafe Sanitation Exposure to unsafe sanitation and population lacking access to sanitation.

Access to Drinking Water Population lacking access to drinking water

Freedom House

<https://freedomhouse.org/report/freedom-net/freedom-net-2017>

(Downloaded on 2018-11-13)

Dataset: Freedom on the Net Freedom on the Net is a Freedom House project consisting of cutting-edge analysis, fact-based advocacy, and on-the-ground capacity building. It features a ranked, country-by-country assessment of online freedom, a global overview of the latest developments, as well as in depth country reports. Freedom on the Net measures the subtle and not-so-subtle ways that governments and non-state actors around the world restrict our intrinsic rights online. Each country assessment includes a detailed narrative report and numerical score, based on methodology developed in consultation with international experts. This methodology includes three categories:

1. **Obstacles to Access** details infrastructural and economic barriers to access, legal and ownership control over internet service providers , and independence of regulatory bodies;
2. **Limits on Content** analyzes legal regulations on content, technical filtering and blocking of websites, self-censorship, the vibrancy/diversity of online news media, and the use of digital tools for civic mobilization;
3. **Violations of User Rights** tackles surveillance, privacy, and repercussions for online speech and activities, such as imprisonment, extralegal harassment, or cyberattacks.

Freedom on the Net is a collaborative effort between a small team of Freedom House staff and an extensive network of local researchers and advisors in 65 countries.

Freedom on the Net: Score Freedom on the Net, Score: Measures the subtle and not-so-subtle ways that governments and non-state actors around the world restrict our intrinsic rights online by looking at Obstacles to Access, Limits on Content and Violations of User Rights. The scores are usually based on a scale of 0 to 100 with 0 representing the best level of freedom on the net progress and 100 the worst. For this publication, 0 represent the lowest freedom and 100 the highest.

United Nations Development Programme

<http://hdr.undp.org/en/data>

(Downloaded on 2018-12-04)

Dataset: Human Development Report The Gender Inequality Index (GII) reflects gender-based disadvantage in three dimensions—reproductive health, empowerment and the labour market—for as many countries as data of reasonable quality allow. It shows the loss in potential human development due to inequality between female and male achievements in these dimensions. It ranges from 0, where women and men fare equally, to 1, where one gender fares as poorly as possible in all measured dimensions.

Gender Inequality Index The GII is an inequality index. It measures gender inequalities in three important aspects of human development—reproductive health, measured by maternal mortality ratio and adolescent birth rates; empowerment, measured by proportion of parliamentary seats occupied by females and proportion of adult females and males aged 25 years and older with at least some secondary education; and economic status, expressed as labour market participation and measured by labour force participation rate of female and male populations aged 15 years and older. The GII is built on the same framework as the IHDI—to better expose differences in the distribution of achievements between women and men. It measures the human development costs of gender inequality. Thus the higher the GII value the more disparities between females and males and the more loss to human development.

Heritage Foundation

<http://www.heritage.org/index/explore>
(Downloaded on 2018-07-17)

Dataset: Index of Economic Freedom The Index of Economic Freedom covers 10 freedoms - from property rights to entrepreneurship - in 186 countries.

Note: For the 2015, most data covers the second half of 2013 through the first half of 2014. To the extent possible, the information considered for each factor was current as of June 30, 2014. It is important to understand that some factors are based on historical information. For example, the monetary policy factor is a 3-year weighted average rate of inflation from January 1, 2011, to December 31, 2013.

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

- Business freedom
- Trade freedom
- Fiscal freedom
- Freedom from government
- Monetary freedom
- Investment freedom
- Financial freedom
- Property rights
- Freedom from corruption
- Labor freedom.

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.

International Monetary Fund

<https://www.imf.org/external/pubs/ft/weo/2017/01/weodata/index.aspx>
(Downloaded on 2018-12-04)

Dataset: World Economic Outlook Database The World Economic Outlook (WEO) database contains selected macroeconomic data series from the statistical appendix of the World Economic Outlook report, which presents the IMF staff's analysis and projections of economic developments at the global level, in major country groups and in many individual countries. The WEO is released in April and September/October each year. Use this database to find data on national accounts, inflation, unemployment rates, balance of payments, fiscal indicators, trade for countries and country groups (aggregates), and commodity prices whose data are reported by the IMF. Data are available from 1980 to the present, and projections are given for the next two years. Additionally, medium-term projections are available for selected indicators. For some countries, data are incomplete or unavailable for certain years.

Government revenue (Percent of GDP) Government revenue (% of GDP). Revenue consists of taxes, social contributions, grants receivable, and other revenue. Revenue increases government's net worth, which is the difference between its assets and liabilities (GFSM 2001, paragraph 4.20).

Note: Transactions that merely change the composition of the balance sheet do not change the net worth position, for example, proceeds from sales of nonfinancial and financial assets or incurrence of liabilities.

Sören Holmberg

https://qog.pol.gu.se/digitalAssets/1551/1551579_2014_13_holmberg_rothstein.pdf

Dataset: Good Society Index The Good Society Index builds on three basic premises. First, the index consists of birth and deaths of human beings as well as the quality of life of people. The second premise is that the Good Society Index should adhere to *lex parsimoniae*, that is to the principle of Ockham's razor, meaning that a model should use a minimum number of explanatory variables. Third, the index measures subjective as well as objective characteristics. Subjective and objective indicators need to be combined, neither is sufficient as of its own. Given these three premises the Good Society Index is operationally constructed using:

- Infant mortality data from the World Bank (World Development Indicators) (2017)
- Life expectancy data from the World Bank (World Development Indicators) (2016)
- Feeling of Happiness (World Values Survey) (2010-2014)

The three indicators all carry the same weight. Furthermore, the index is based on ranks, not on rates, which means that the countries' rank orders are utilized to build the composite index. The rank orders of each country have been summed and divided by three to yield an index value that in theory can vary between 1 (top nation on the Good Society Index) and 149 (bottom country). A top index value of 1 and a bottom value of 149 thus tell us that these specific countries are closest and furthest away respectively from the good society among the investigated nations. But the figures do not tell how close or how far away from the maximum good society the countries are. The index is not continuous; it is a rank order scale. (Holmberg, 2007)

United Nations Development Program

<http://hdr.undp.org/en/data>
(Downloaded on 2018-11-14)

Dataset: Human Development Report The Human Development Report (HDR) is an annual report published by the Human Development Report Office of the United Nations Development Programme (UNDP).

The entire series of Human Development Index (HDI) values and rankings are recalculated every year using the same the most recent (revised) data and functional forms. The HDI rankings and values in the 2014 Human Development Report cannot therefore be compared directly to indices published in previous Reports. Please see hdr.undp.org for more information.

The HDI was created to emphasize that people and their capabilities should be the ultimate criteria for assessing the development of a country, not economic growth alone. The HDI can also be used to question national policy choices, asking how two countries with the same level of GNI per capita can end up with different human development outcomes.

Human Development Index The HDI was created to emphasize that people and their capabilities should be the ultimate criteria for assessing the development of a country, not economic growth alone. The HDI can also be used to question national policy choices, asking how two countries with the same level of GNI per capita can end up with different human development outcomes. These contrasts can stimulate debate about government policy priorities. The Human Development Index (HDI) is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of living. The HDI is the geometric mean of normalized indices for each of the three dimensions.

The health dimension is assessed by life expectancy at birth, the education dimension is measured by mean of years of schooling for adults aged 25 years and more and expected years of schooling for children of school entering age. The standard of living dimension is measured by gross national income per capita. The HDI uses the logarithm of income, to reflect the diminishing importance of income with increasing GNI. The scores for the three HDI dimension indices are then aggregated into a composite index using geometric mean. Refer to Technical notes for more details.

The HDI simplifies and captures only part of what human development entails. It does not reflect on inequalities, poverty, human security, empowerment, etc. The HDRO offers the other composite indices as broader proxy on some of the key issues of human development, inequality, gender disparity and human poverty.

The World Bank Group

<http://info.worldbank.org/governance/wgi/>
(Downloaded on 2018-09-24)

Dataset: The Worldwide Governance Indicators These indicators are based on several hundred individual variables measuring perceptions of governance, drawn from 31 separate data sources constructed by 25 different organizations. These individual measures of governance are assigned to categories capturing key dimensions of governance. An unobserved component model is used to construct six aggregate governance indicators. Point estimates of the dimensions of governance, the margins of error as well as the number of sources are presented for each country. The governance estimates are normally distributed with a mean of zero and a standard deviation of one each year of measurement. This implies that virtually all scores lie between -2.5 and 2.5, with higher scores corresponding to better outcomes.

WARNING: Since the estimates are standardized (with a mean of zero and a standard deviation of one) each year of measurement, they are not directly suitable for over-time comparisons within countries. Kaufmann et al. (2006) however find no systematic time-trends in a selection of indicators that do allow for comparisons over time, which suggests that time-series information in the WBGI scores can be used if interpreted with caution.

Control of Corruption, Estimate Control of Corruption - Estimate: "Control of Corruption" measures perceptions of corruption, conventionally defined as the exercise of public power for private gain. The particular aspect of corruption measured by the various sources differs somewhat, ranging from the frequency of "additional payments to get things done", to the effects of corruption on the business environment, to measuring "grand corruption" in the political arena or in the tendency of elite forms to engage in "state capture".

Government Effectiveness, Estimate Government Effectiveness - Estimate: "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.

The World Bank Group

<http://data.worldbank.org/data-catalog/world-development-indicators>
(Downloaded on 2018-10-05)

Dataset: World Development Indicators The primary World Bank collection of development indicators, compiled from officially-recognized international sources. // This is an adaptation of an original work by The World Bank. Views and opinions expressed in the adaptation are the sole responsibility of the author or authors of the adaptation and are not endorsed by The World Bank.

CO2 emissions (metric tons per capita) Carbon dioxide emissions are those stemming from the burning of fossil fuels and the manufacture of cement. They include carbon dioxide produced during consumption of solid, liquid, and gas fuels and gas flaring.

Domestic general government health expenditure (% of GDP) Domestic general government health expenditure (% of GDP). Public expenditure on health from domestic sources as a share of the economy as measured by GDP.

Domestic private health expenditure (% of current health expenditure) Domestic private health expenditure (% of current health expenditure). Share of current health expenditures funded from domestic private sources. Domestic private sources include funds from households, corporations and non-profit organizations. Such expenditures can be either prepaid to voluntary health insurance or paid directly to healthcare providers.

GDP per capita (constant 2010 US dollar) GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant 2010 U.S. dollars.

GDP per capita growth (annual %) Annual percentage growth rate of GDP per capita based on constant local currency. Aggregates are based on constant 2010 U.S. dollars. GDP per capita is gross domestic product divided by midyear population. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.

School enrollment, secondary, female (% gross) Total female enrollment in secondary education, regardless of age, expressed as a percentage of the female population of official secondary education age. GER can exceed 100% due to the inclusion of over-aged and under-aged students because of early or late school entrance and grade repetition.

School enrollment, tertiary (% gross) Total enrollment in tertiary education (ISCED 5 to 8), regardless of age, expressed as a percentage of the total population of the five-year age group following on from secondary school leaving.

GINI index (World Bank estimate) Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve

and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus a Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality.

Life expectancy at birth, total (years) 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.

Lifetime risk of maternal death (%) Life time risk of maternal death is the probability that a 15-year-old female will die eventually from a maternal cause assuming that current levels of fertility and mortality (including maternal mortality) do not change in the future, taking into account competing causes of death.

Mortality rate, infant (per 1,000 live births) Infant mortality rate is the number of infants dying before reaching one year of age, per 1,000 live births in a given year.

Tax revenue (% of GDP) 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. Refunds and corrections of erroneously collected tax revenue are treated as negative revenue.

Note: The value for San Marino for 1995 was extremely high (44326) and has been recoded to missing.

World Economic Forum

<http://reports.weforum.org/global-competitiveness-index-2017-2018/downloads/>
(Downloaded on 2018-11-27)

Dataset: Global Competitiveness Report 2017-2018 The Global Competitiveness Index 4.0 assesses the competitiveness landscape of 140 economies, measuring national competitiveness—defined as the set of institutions, policies and factors that determine the level of productivity. The Report presents information and data that were compiled and/or collected by the World Economic Forum organized into 12 pillars: Institutions, Infrastructure, ICT adoption, Macroeconomic Stability, Health, Skills, Product Market, Labor Market, Financial System, Market Size, Business Dynamism, and Innovation Capabilities.

The new methodology is presented in the report of 2018, while also back casting the scores for 2017.

Organized crime. 1-7 (best) Organized crime. 1-7 (best). In your country, to what extent does organized crime (mafia-oriented racketeering, extortion) impose costs on businesses? [1 = to a great extent—imposes huge costs; 7 = not at all—imposes no costs] Original sources: World Economic Forum, Executive Opinion Survey

World Health Organization

<http://www.who.int/gho/database/en/>
(Downloaded on 2018-11-28)

Dataset: Global Health Observatory data repository The GHO data repository is WHO's gateway to health-related statistics for its 194 Member States. It provides access to over 1000 indicators on priority health topics including mortality and burden of diseases, the Millennium Development Goals (child nutrition, child health, maternal and reproductive health, immunization, HIV/AIDS, tuberculosis, malaria, neglected diseases, water and sanitation), non communicable diseases and risk factors, epidemic-prone diseases, health systems, environmental health, violence and injuries, equity among others.

Alcohol consumption per capita (2010-) Alcohol consumption per capita (2010-)

Healthy Life Expectancy, Total Healthy Life Expectancy, Total

Infant mortality rate (probability of dying between birth and age 1 per 1000 liv Infant mortality rate (probability of dying between birth and age 1 per 1000 liv

Estimated road traffic death rate (per 100 000 population) Estimated road traffic death rate (per 100 000 population)

World Values Survey / European Values Survey

<http://www.worldvaluessurvey.org/>
(Downloaded on 2018-09-12)

Dataset: World Values Survey dataset and European Values Studies dataset The World Values Survey is a global network of social scientists studying changing values and their impact on social and political life, led by an international team of scholars, with the WVS association and secretariat headquartered in Stockholm, Sweden.

The variables are country averages calculated using the population weight provided by WVS/EVS.

Confidence: Parliament I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them: Parliament

1. None at all
2. Not very much
3. Quite a lot
4. A great deal

Feeling of happiness Taking all things together, would you say you are:

1. Not at all happy
2. Not very happy
3. Rather happy
4. Very happy

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

1. Completely dissatisfied
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
10. Completely satisfied

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

0. Need to be very careful
1. Most people can be trusted

References

- Barro, R. J., & Lee, J. W. (2013). *A new data set of educational attainment in the world, 1950–2010* (Vol. 104). Elsevier.
- Coppedge, M., Gerring, J., Knutsen, C. H., Lindberg, S. I., Skaaning, S.-E., Teorell, J., . . . Ziblatt, D. (2017). *V-dem [country-year/country-date] dataset v8*. Varieties of Democracy (V-Dem) Project. doi: 10.23696/vdemcy18
- Freedom House. (2017). *Freedom on the net 2017*. Retrieved from <https://freedomhouse.org/report/freedom-net/freedom-net-2017>
- Holmberg, S. (2007). *The good society index* (Vol. 6). QoG Working Paper Series.
- International Monetary Fund. (2018). *World economic outlook database*. Retrieved from <https://www.imf.org/external/pubs/ft/weo/2017/01/weodata/index.aspx>
- Miller, T., Kim, A. B., & Roberts, J. M. (2018). *2018 index of economic freedom*. The Heritage Foundation. Retrieved from <http://www.heritage.org/index/>
- Pemstein, D., Marquardt, K. L., Tzelgov, E., Wang, Y., Krusell, J., & Miri, F. (2018). *The v-dem measurement model: Latent variable analysis for cross-national and cross-temporal expert-coded data*. University of Gothenburg, Varieties of Democracy Institute: Working Paper No. 21, 3rd edition.
- Teorell, J., Dahlberg, S., Holmberg, S., Rothstein, B., Alvarado Pachon, N., & Svensson, R. (2018). *The Quality of Government Standard Dataset, version jan18*. University of Gothenburg. The Quality of Government Institute. Retrieved from <http://www.qog.pol.gu.se> doi: 10.18157/QoGStdJan18
- The World Bank Group. (2018). *Doing business data 2018*. Retrieved from <http://www.doingbusiness.org/en/data> (Accessed on 02-11-2018)
- United Nations Development Program. (2018a). *Gender inequality index*. Retrieved from <http://hdr.undp.org/en/content/gender-inequality-index-gii>
- United Nations Development Program. (2018b). *Human development report 2018*. Retrieved from <http://hdr.undp.org/en/2018-update>
- United Nations Office on Drugs and Crime. (2018). *UNODC crime and criminal justice statistics*. Retrieved from <https://data.unodc.org/>
- Wendling, Z., Emerson, J., Esty, D., Levy, M., & de Sherbinin, A. (2018). *2018 environmental performance index*. Retrieved from <https://epi.envirocenter.yale.edu/>
- World Bank. (2018). *World development indicators*. The World Bank Washington DC.
- World Economic Forum. (2017, 12 07). *The global competitiveness report 2017-2018*. World Economic Forum. Retrieved from <http://reports.weforum.org/global-competitiveness-index-2017-2018/downloads/> (Commercial use of data produced by the World Economic Forum is forbidden)
- World Health Organization. (2018). *Global health observatory data repository*. Retrieved from <http://www.who.int/gho/en/> (Accessed on 2018-11-28)
- World Values Survey Association. (2015). *World values survey data*. Aggregate File Producer: Asep/JDS, Madrid SPAIN.