CORRELATES OF CORRUPTION

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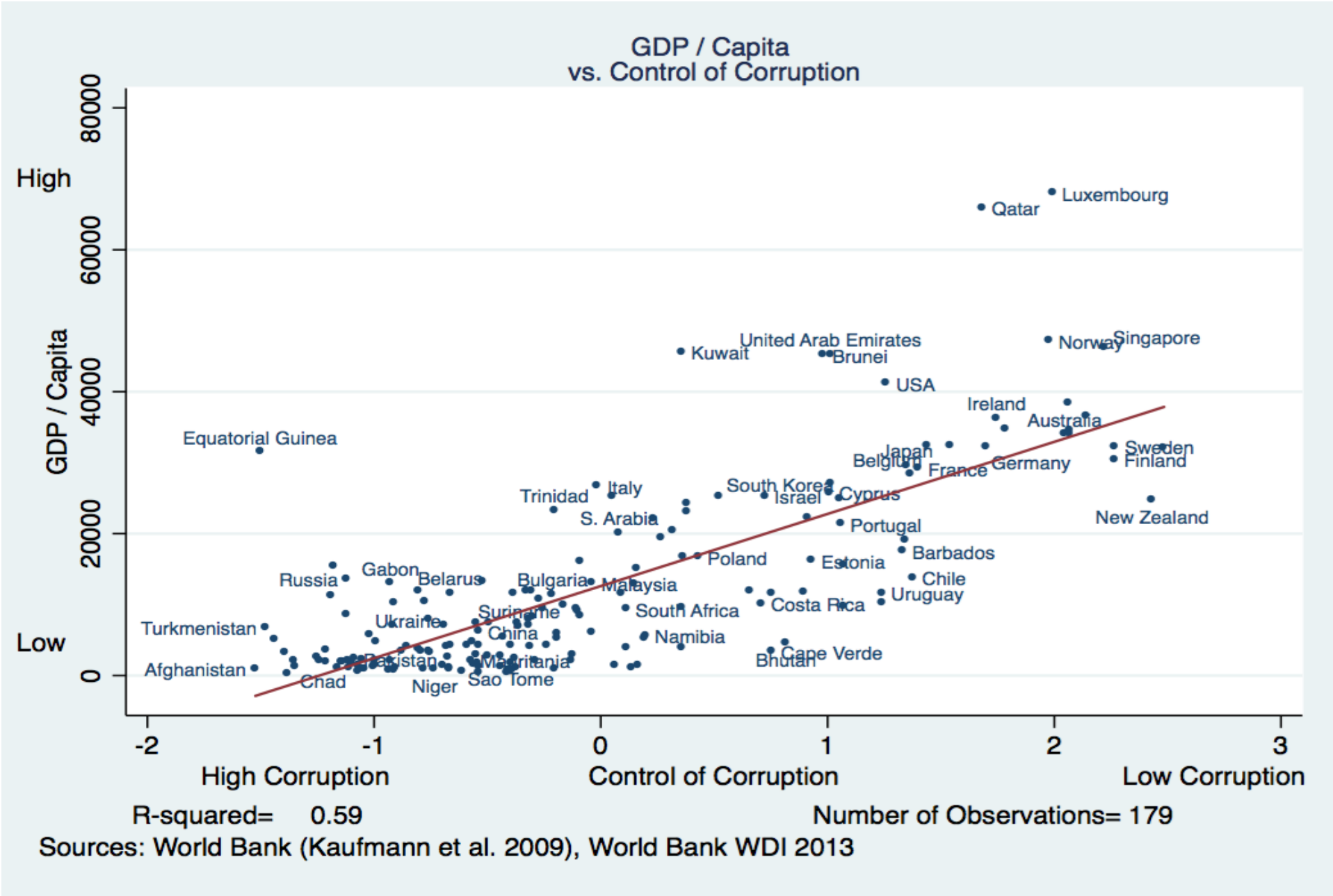
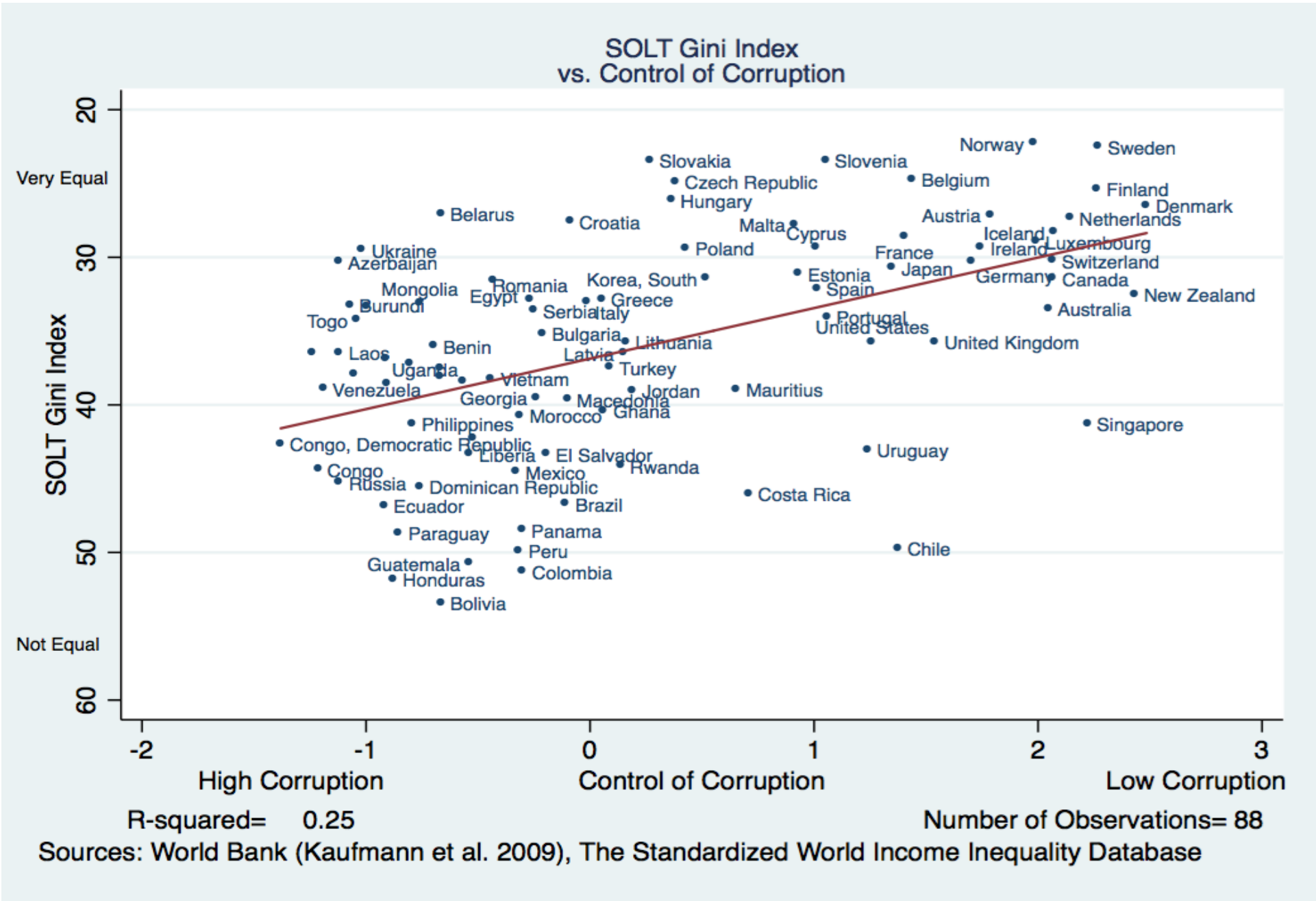
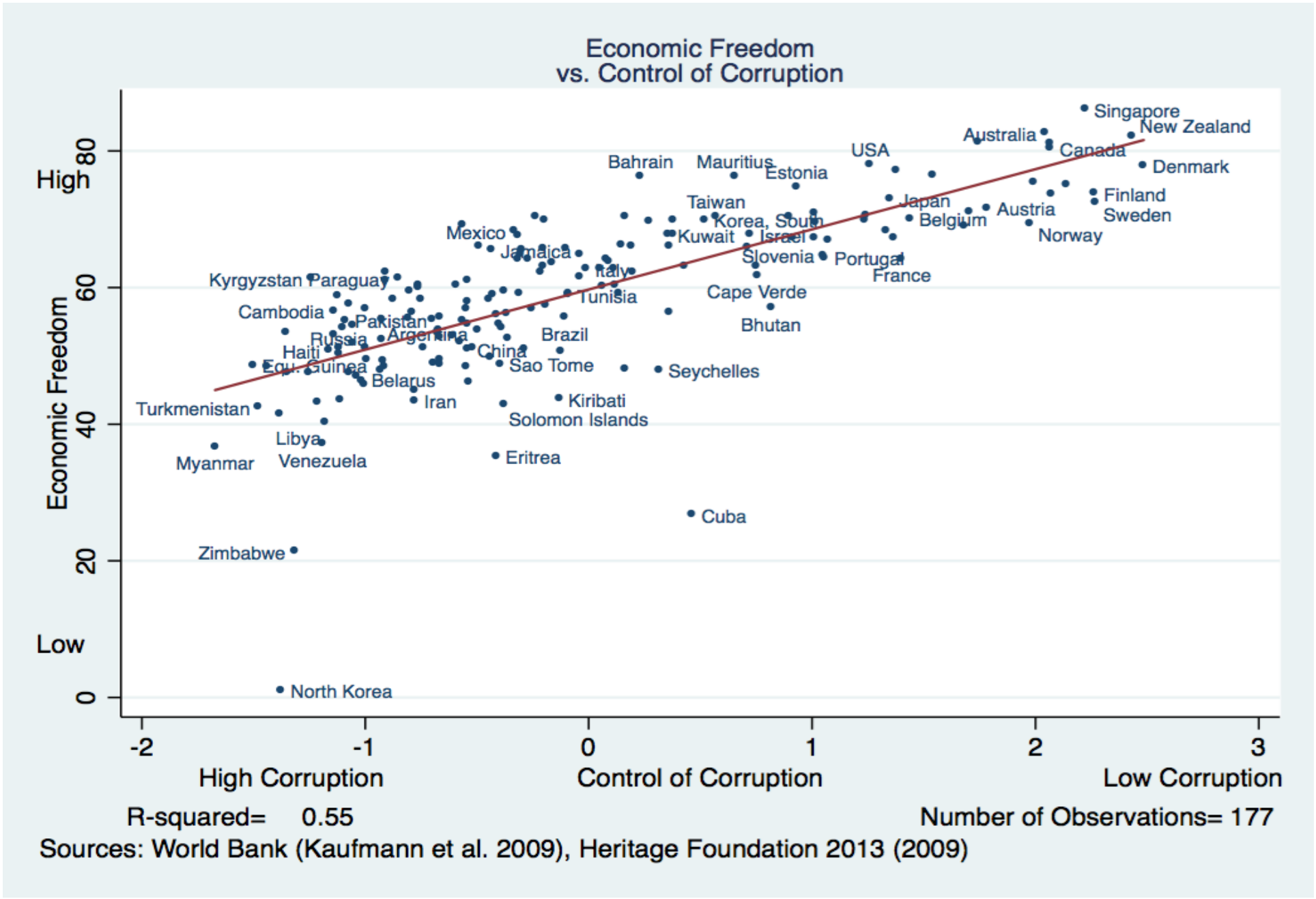
Control of Corruption- World Bank Governance Indicators

Part of the Worldwide Governance Indicators, "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".


GDP / Capita
vs. Control of Corruption
GDP / Capita
High
Low
0
20000
40000
60000
80000
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
Luxembourg
Qatar
Norway
Singapore
United Arab Emirates
Kuwait
Brunei
USA
Ireland
Australia
Equatorial Guinea
Japan
Sweden
Belgium
France
Germany
Finland
Trinidad
Italy
South Korea
Israel
Cyprus
S. Arabia
New Zealand
Portugal
Barbados
Poland
Estonia
Gabon
Russia
Belarus
Bulgaria
Malaysia
Chile
Uruguay
Costa Rica
Suriname
South Africa
Ukraine
Turkmenistan
China
Namibia
Cape Verde
Bhutan
Afghanistan
Chad
Niger
Sao Tome
R-squared= 0.59
Number of Observations= 179
Sources: World Bank (Kaufmann et al. 2009), World Bank WDI 2013


SOLT Gini Index
vs. Control of Corruption
SOLT Gini Index
Very Equal
Not Equal
20
30
40
50
60
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
Norway
Sweden
Slovakia
Slovenia
Czech Republic
Belgium
Finland
Hungary
Denmark
Belarus
Croatia
Malta
Cyprus
Austria
Netherlands
Iceland
Luxembourg
Ukraine
Poland
France
Ireland
Azerbaijan
Switzerland
Japan
Estonia
Germany
Canada
Mongolia
Romania
Korea, South
Spain
New Zealand
Egypt
Greece
Burundi
Serbia
Italy
Australia
Togo
Portugal
United States
Bulgaria
Lithuania
United Kingdom
Benin
Laos
Latvia
Uganda
Turkey
Vietnam
Venezuela
Jordan
Mauritius
Georgia
Macedonia
Ghana
Morocco
Singapore
Philippines
Congo, Democratic Republic
Uruguay
Liberia
El Salvador
Congo
Rwanda
Mexico
Russia
Dominican Republic
Costa Rica
Ecuador
Brazil
Paraguay
Panama
Chile
Peru
Guatemala
Colombia
Honduras
Bolivia
R-squared= 0.25
Number of Observations= 88
Sources: World Bank (Kaufmann et al. 2009), The Standardized World Income Inequality Database

7


Economic Freedom
vs. Control of Corruption
Economic Freedom
High
Low
80
60
40
20
0
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
Singapore
New Zealand
Australia
Canada
USA
Denmark
Bahrain
Mauritius
Estonia
Finland
Sweden
Taiwan
Japan
Belgium
Austria
Korea, South
Kuwait
Israel
Norway
Mexico
Jamaica
Slovenia
Portugal
France
Italy
Kyrgyzstan
Paraguay
Tunisia
Cape Verde
Cambodia
Pakistan
Bhutan
Russia
Argentina
Brazil
Haiti
China
Equ. Guinea
Sao Tome
Seychelles
Belarus
Iran
Kiribati
Turkmenistan
Solomon Islands
Libya
Myanmar
Venezuela
Eritrea
Cuba
Zimbabwe
North Korea
R-squared= 0.55
Number of Observations= 177
Sources: World Bank (Kaufmann et al. 2009), Heritage Foundation 2013 (2009)

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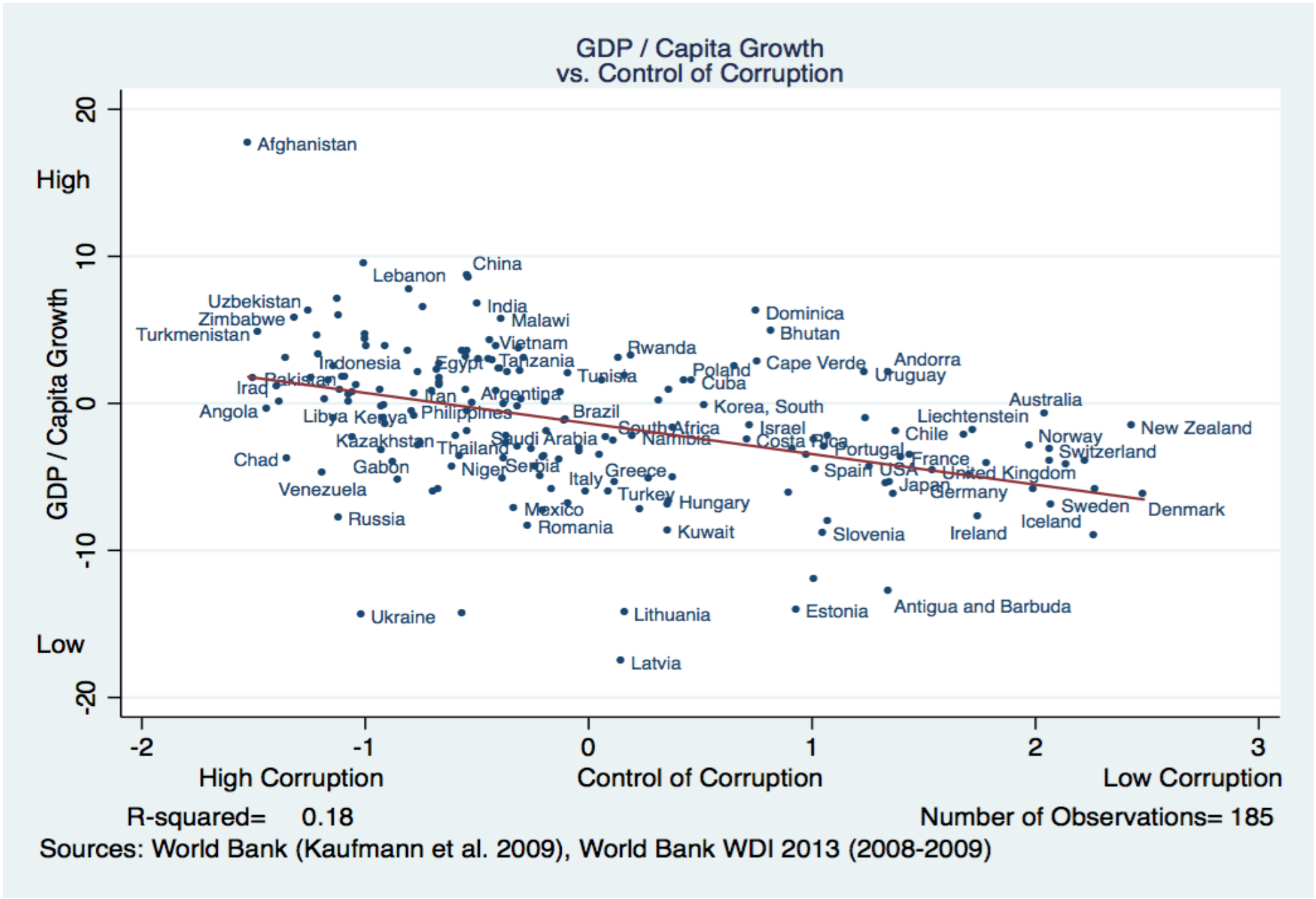
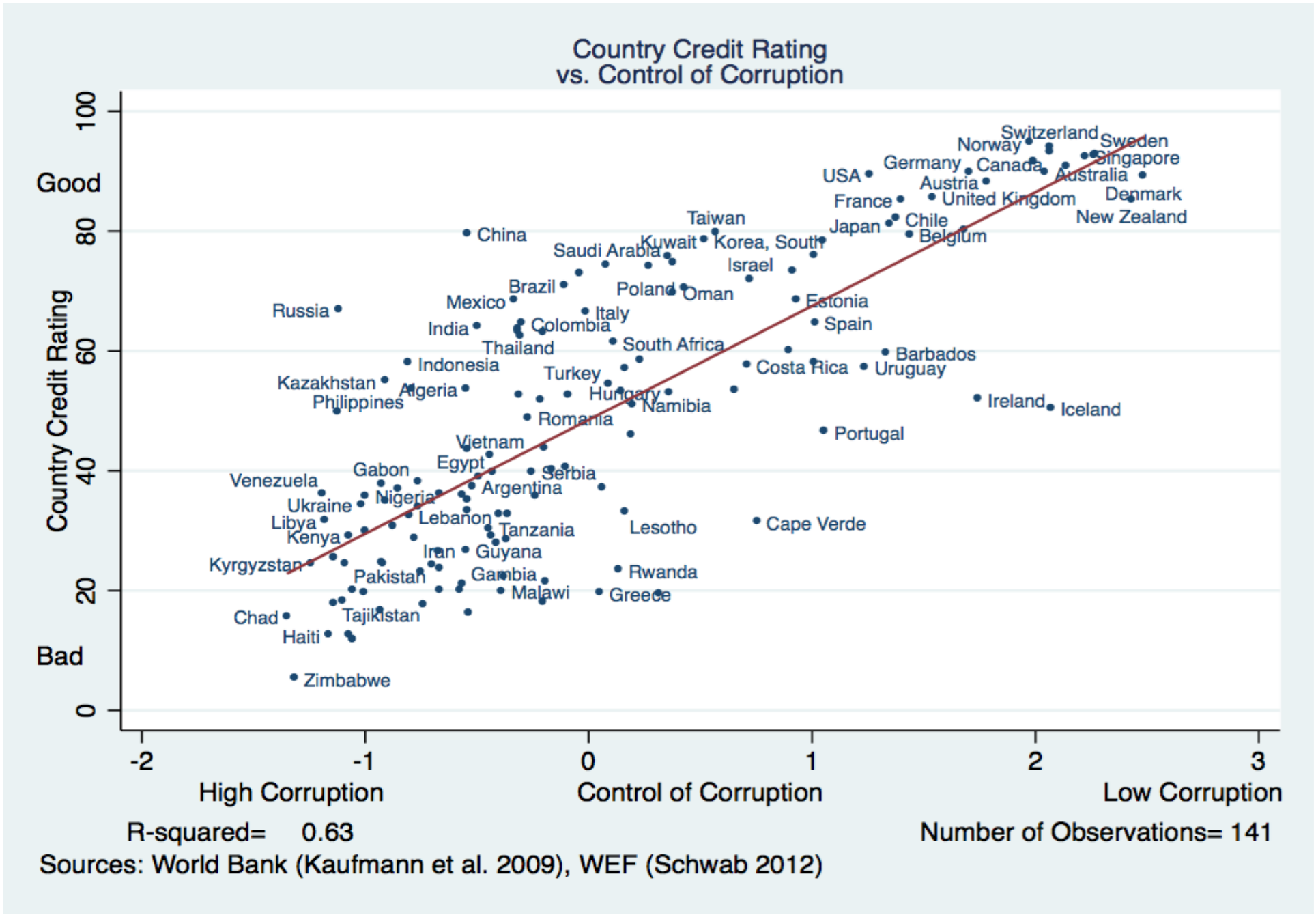
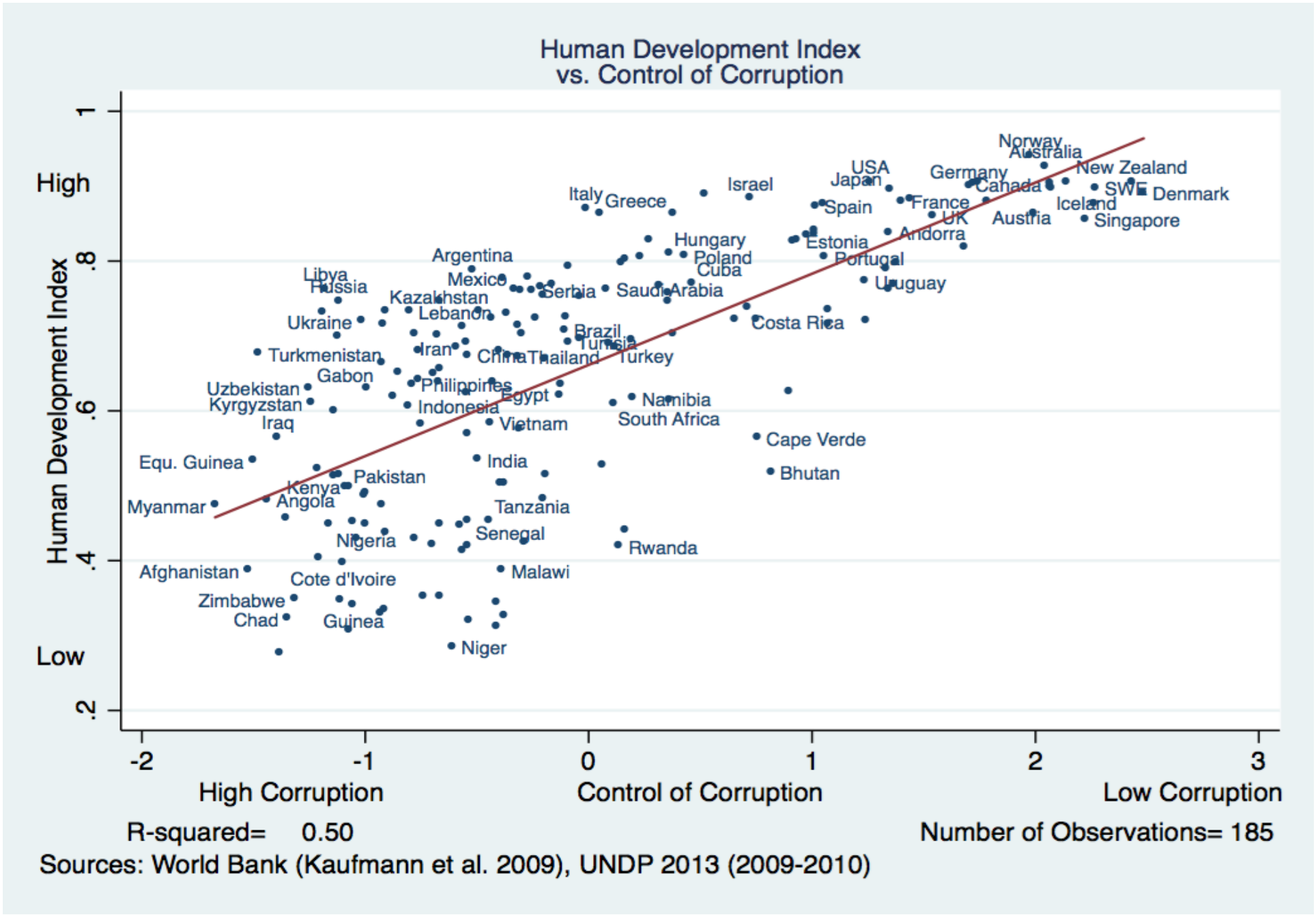

GDP / Capita Growth
vs. Control of Corruption
GDP / Capita Growth
High
Low
20
10
0
-10
-20
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
Afghanistan
China
Lebanon
Uzbekistan
Zimbabwe
Turkmenistan
India
Malawi
Vietnam
Indonesia
Egypt
Tanzania
Rwanda
Tunisia
Dominica
Bhutan
Cape Verde
Poland
Cuba
Andorra
Uruguay
Iraq
Pakistan
Iran
Argentina
Angola
Libya
Kenya
Philippines
Brazil
Korea, South
Australia
Liechtenstein
New Zealand
Chile
Norway
Switzerland
Kazakhstan
Thailand
Saudi Arabia
South Africa
Namibia
Israel
Costa Rica
Portugal
France
Spain
USA
United Kingdom
Japan
Germany
Chad
Gabon
Niger
Serbia
Italy
Greece
Turkey
Hungary
Venezuela
Mexico
Sweden
Denmark
Iceland
Russia
Romania
Kuwait
Slovenia
Ireland
Ukraine
Lithuania
Estonia
Antigua and Barbuda
Latvia
R-squared= 0.18
Number of Observations= 185
Sources: World Bank (Kaufmann et al. 2009), World Bank WDI 2013 (2008-2009)


Country Credit Rating
vs. Control of Corruption
Country Credit Rating
Good
Bad
0
20
40
60
80
100
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
R-squared= 0.63
Number of Observations= 141
Sources: World Bank (Kaufmann et al. 2009), WEF (Schwab 2012)
Switzerland
Norway
Sweden
Singapore
Germany
Canada
Australia
USA
Austria
Denmark
France
United Kingdom
New Zealand
Taiwan
Japan
Chile
China
Kuwait
Korea, South
Belgium
Saudi Arabia
Israel
Brazil
Poland
Oman
Estonia
Russia
Mexico
Italy
Spain
India
Colombia
Thailand
South Africa
Barbados
Indonesia
Costa Rica
Uruguay
Turkey
Kazakhstan
Algeria
Hungary
Ireland
Iceland
Philippines
Namibia
Romania
Portugal
Vietnam
Egypt
Gabon
Serbia
Venezuela
Argentina
Nigeria
Ukraine
Lebanon
Libya
Tanzania
Lesotho
Cape Verde
Kenya
Iran
Guyana
Kyrgyzstan
Pakistan
Gambia
Rwanda
Malawi
Greece
Chad
Tajikistan
Haiti
Zimbabwe

10


Human Development Index
vs. Control of Corruption
Human Development Index
High
Low
1
.8
.6
.4
.2
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
Norway
Australia
New Zealand
USA
Japan
Germany
Canada
SWE
Denmark
Iceland
Singapore
Austria
UK
France
Spain
Italy
Greece
Israel
Andorra
Estonia
Portugal
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Cuba
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Libya
Russia
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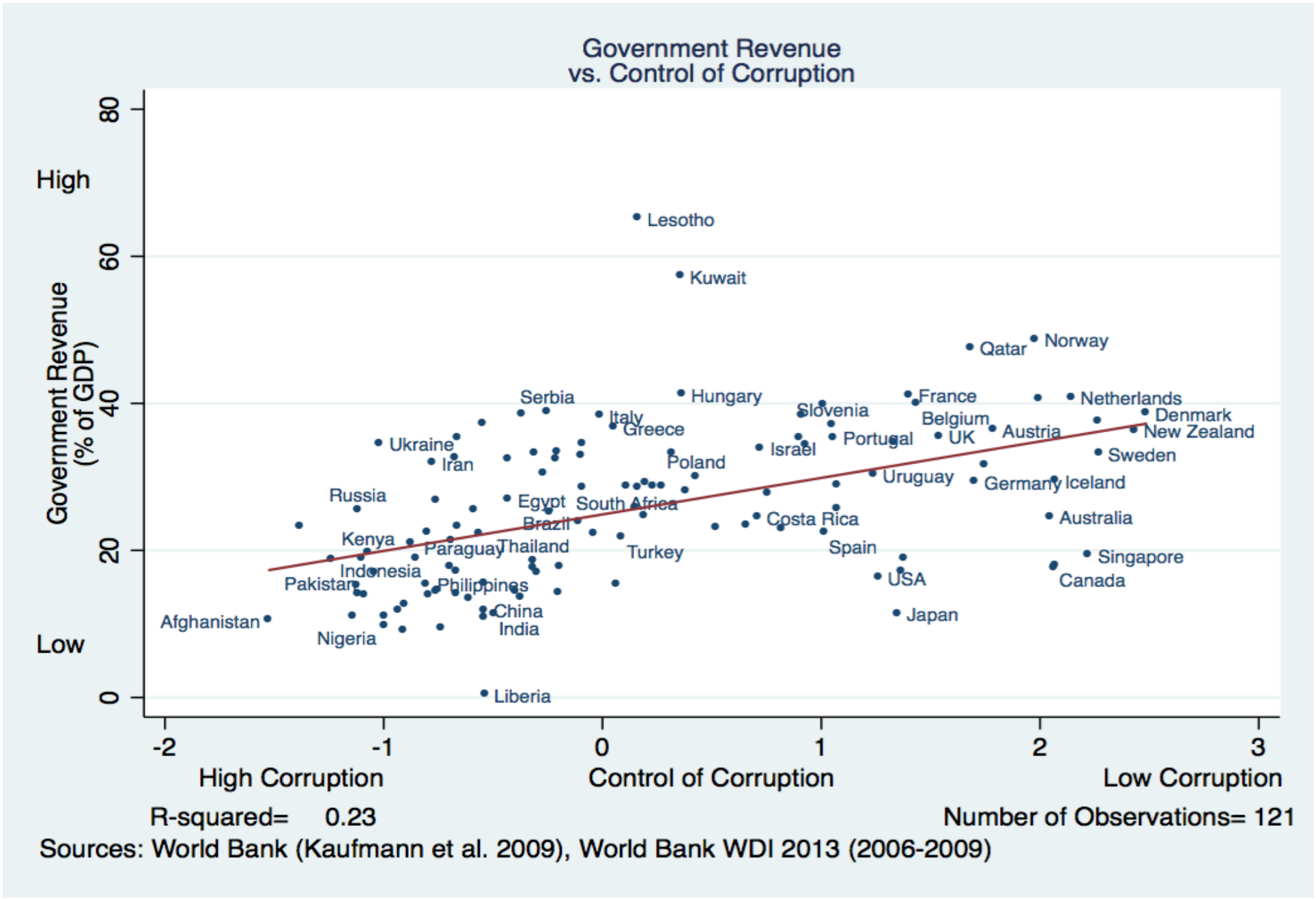
China
Thailand
Turkey
Gabon
Philippines
Uzbekistan
Kyrgyzstan
Egypt
Indonesia
Namibia
South Africa
Iraq
Vietnam
Cape Verde
Equ. Guinea
India
Bhutan
Pakistan
Kenya
Angola
Myanmar
Tanzania
Senegal
Nigeria
Rwanda
Afghanistan
Malawi
Cote d'Ivoire
Zimbabwe
Chad
Guinea
Niger
R-squared= 0.50
Number of Observations= 185
Sources: World Bank (Kaufmann et al. 2009), UNDP 2013 (2009-2010)

11


Government Revenue
vs. Control of Corruption
Government Revenue
(% of GDP)
High
Low
0
20
40
60
80
Lesotho
Kuwait
Qatar
Norway
Serbia
Hungary
France
Netherlands
Italy
Slovenia
Belgium
Denmark
Greece
Portugal
UK
Austria
New Zealand
Ukraine
Israel
Sweden
Iran
Poland
Uruguay
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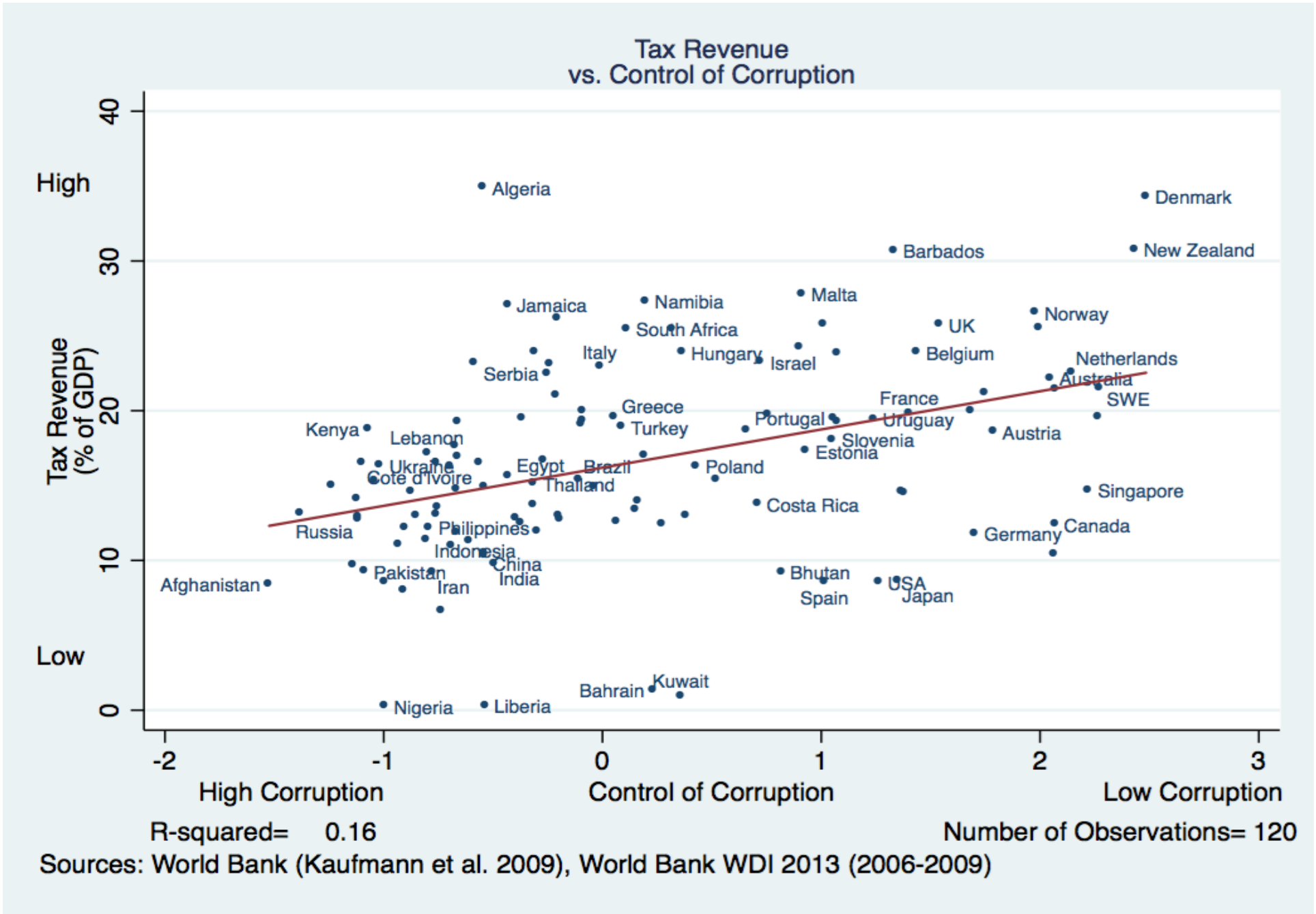
Iceland
Russia
Egypt
South Africa
Costa Rica
Australia
Brazil
Kenya
Thailand
Spain
Paraguay
Turkey
Singapore
Indonesia
USA
Canada
Pakistan
Philippines
China
Japan
Afghanistan
India
Nigeria
Liberia
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
R-squared= 0.23
Number of Observations= 121
Sources: World Bank (Kaufmann et al. 2009), World Bank WDI 2013 (2006-2009)


Tax Revenue
vs. Control of Corruption
Tax Revenue (% of GDP)
High
Low
0
10
20
30
40
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
Algeria
Denmark
Barbados
New Zealand
Malta
Jamaica
Namibia
Norway
South Africa
UK
Italy
Hungary
Israel
Belgium
Netherlands
Serbia
Australia
SWE
France
Greece
Portugal
Uruguay
Kenya
Turkey
Austria
Lebanon
Slovenia
Estonia
Ukraine
Egypt
Brazil
Poland
Cote d'Ivoire
Thailand
Singapore
Costa Rica
Russia
Philippines
Germany
Canada
Indonesia
China
Pakistan
India
Bhutan
USA
Afghanistan
Iran
Spain
Japan
Bahrain
Kuwait
Nigeria
Liberia
R-squared= 0.16
Number of Observations= 120
Sources: World Bank (Kaufmann et al. 2009), World Bank WDI 2013 (2006-2009)

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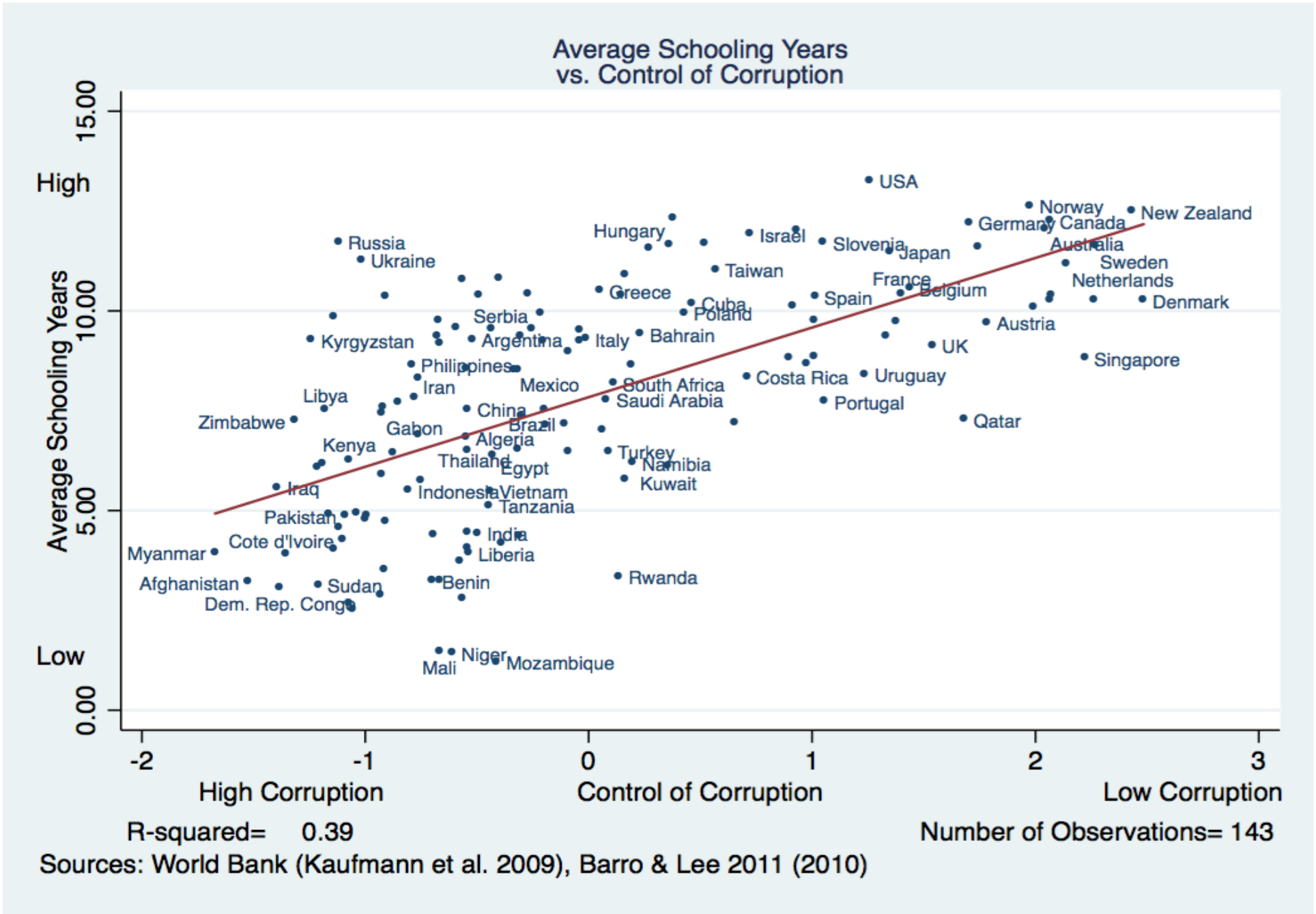
Average Schooling Years
vs. Control of Corruption
Average Schooling Years
15.00
10.00
5.00
0.00
High
Low
USA
Norway
New Zealand
Germany
Canada
Australia
Sweden
Netherlands
Denmark
Hungary
Israel
Slovenia
Japan
Russia
Ukraine
Taiwan
France
Belgium
Greece
Cuba
Spain
Poland
Serbia
Austria
Kyrgyzstan
Argentina
Italy
Bahrain
UK
Singapore
Philippines
Iran
Mexico
South Africa
Costa Rica
Uruguay
Libya
Saudi Arabia
Portugal
China
Zimbabwe
Brazil
Qatar
Gabon
Kenya
Algeria
Turkey
Thailand
Egypt
Namibia
Kuwait
Iraq
Indonesia
Vietnam
Tanzania
Pakistan
India
Cote d'Ivoire
Myanmar
Liberia
Afghanistan
Sudan
Benin
Rwanda
Dem. Rep. Congo
Niger
Mali
Mozambique
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
R-squared= 0.39
Number of Observations= 143
Sources: World Bank (Kaufmann et al. 2009), Barro & Lee 2011 (2010)

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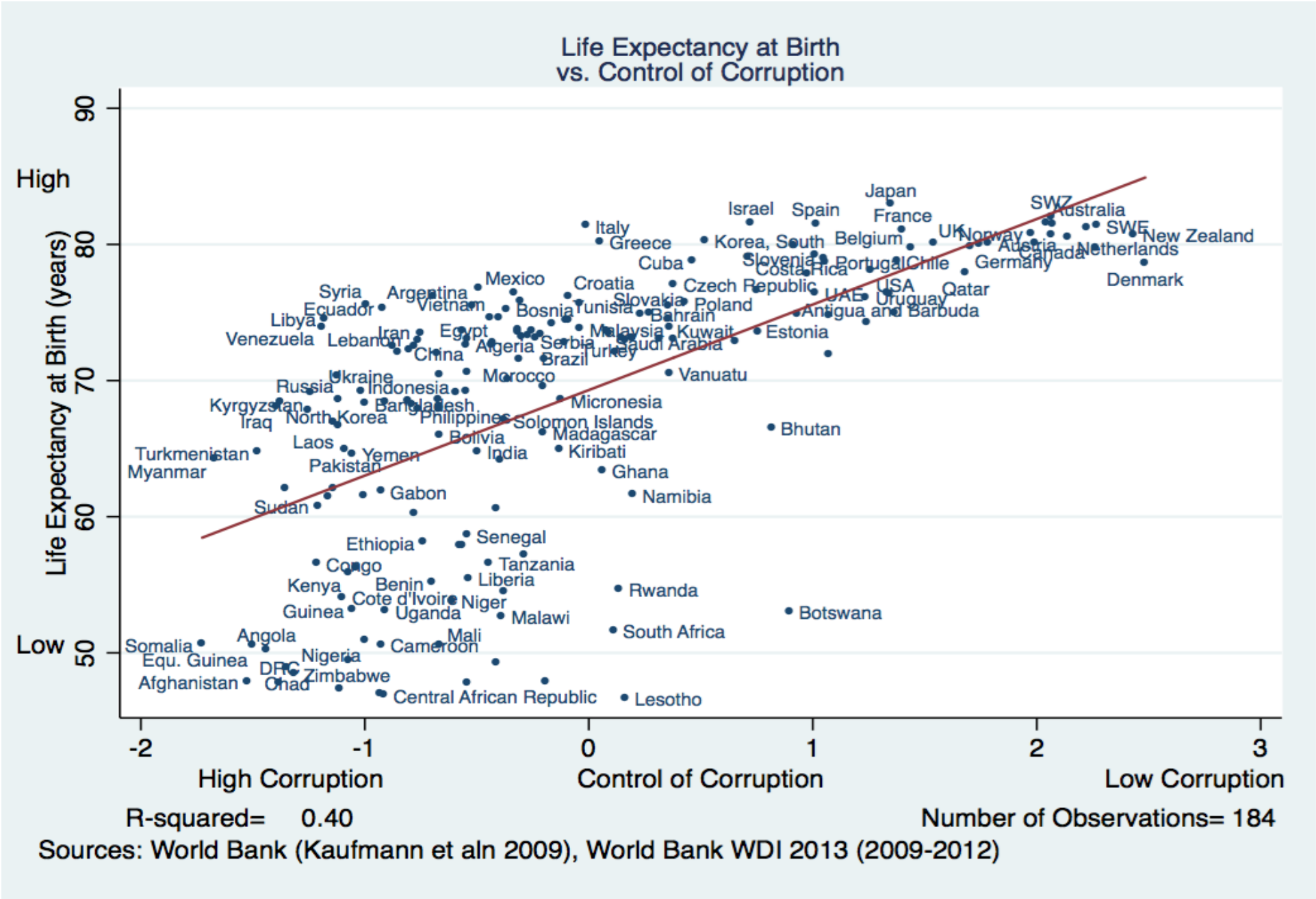
Life Expectancy at Birth
vs. Control of Corruption
Life Expectancy at Birth (years)
High
Low
90
80
70
60
50
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
Japan
Israel
Spain
France
SWZ
Australia
Italy
Greece
Korea, South
Belgium
UK
Norway
SWE
New Zealand
Austria
Canada
Netherlands
Cuba
Slovenia
Portugal
Chile
Germany
Costa Rica
Denmark
Mexico
Croatia
Czech Republic
USA
Qatar
Syria
Argentina
Vietnam
Slovakia
Poland
UAE
Uruguay
Ecuador
Bosnia
Tunisia
Bahrain
Antigua and Barbuda
Libya
Iran
Egypt
Malaysia
Kuwait
Estonia
Venezuela
Lebanon
Algeria
Serbia
Saudi Arabia
China
Brazil
Turkey
Ukraine
Morocco
Vanuatu
Russia
Indonesia
Micronesia
Kyrgyzstan
Bangladesh
Iraq
North Korea
Philippines
Solomon Islands
Bhutan
Laos
Bolivia
Madagascar
Turkmenistan
Yemen
India
Kiribati
Pakistan
Myanmar
Ghana
Gabon
Namibia
Sudan
Senegal
Ethiopia
Tanzania
Congo
Kenya
Benin
Liberia
Rwanda
Cote d'Ivoire
Niger
Guinea
Uganda
Malawi
Botswana
Angola
Mali
South Africa
Somalia
Cameroon
Nigeria
Equ. Guinea
DRC
Zimbabwe
Afghanistan
Chad
Central African Republic
Lesotho
R-squared= 0.40
Number of Observations= 184
Sources: World Bank (Kaufmann et aln 2009), World Bank WDI 2013 (2009-2012)

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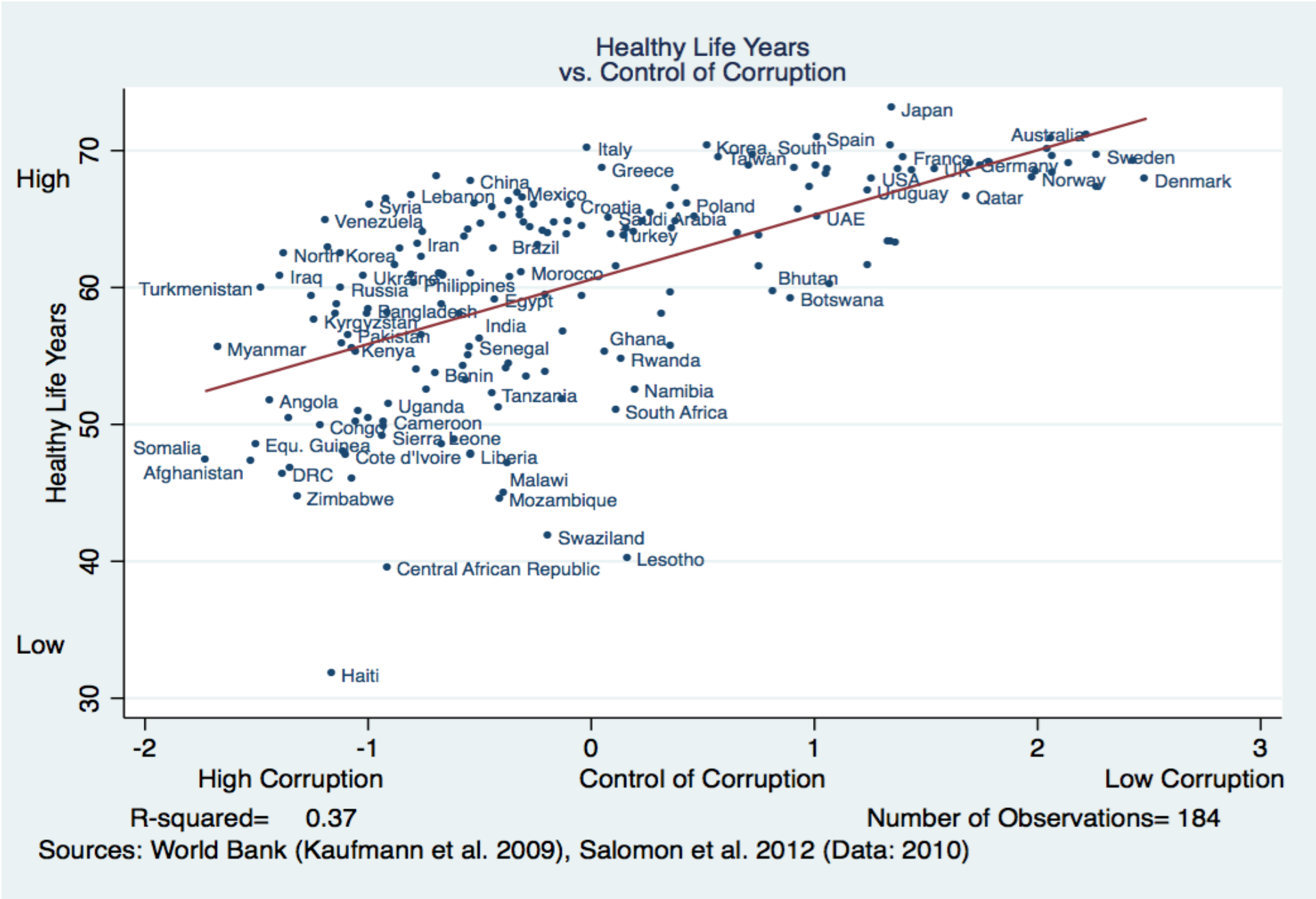
Healthy Life Years
vs. Control of Corruption
Healthy Life Years
High
Low
70
60
50
40
30
Japan
Australia
Spain
Italy
Korea, South
Taiwan
France
Sweden
Greece
UK
Germany
Norway
China
USA
Denmark
Lebanon
Mexico
Uruguay
Qatar
Syria
Croatia
Poland
Venezuela
Saudi Arabia
UAE
Turkey
Iran
Brazil
North Korea
Iraq
Ukraine
Morocco
Bhutan
Turkmenistan
Russia
Philippines
Botswana
Egypt
Bangladesh
Kyrgyzstan
India
Pakistan
Ghana
Myanmar
Kenya
Senegal
Rwanda
Benin
Namibia
Angola
Tanzania
Uganda
South Africa
Congo
Cameroon
Somalia
Sierra Leone
Equ. Guinea
Cote d'Ivoire
Liberia
Afghanistan
DRC
Malawi
Zimbabwe
Mozambique
Swaziland
Lesotho
Central African Republic
Haiti
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
R-squared= 0.37
Number of Observations= 184
Sources: World Bank (Kaufmann et al. 2009), Salomon et al. 2012 (Data: 2010)

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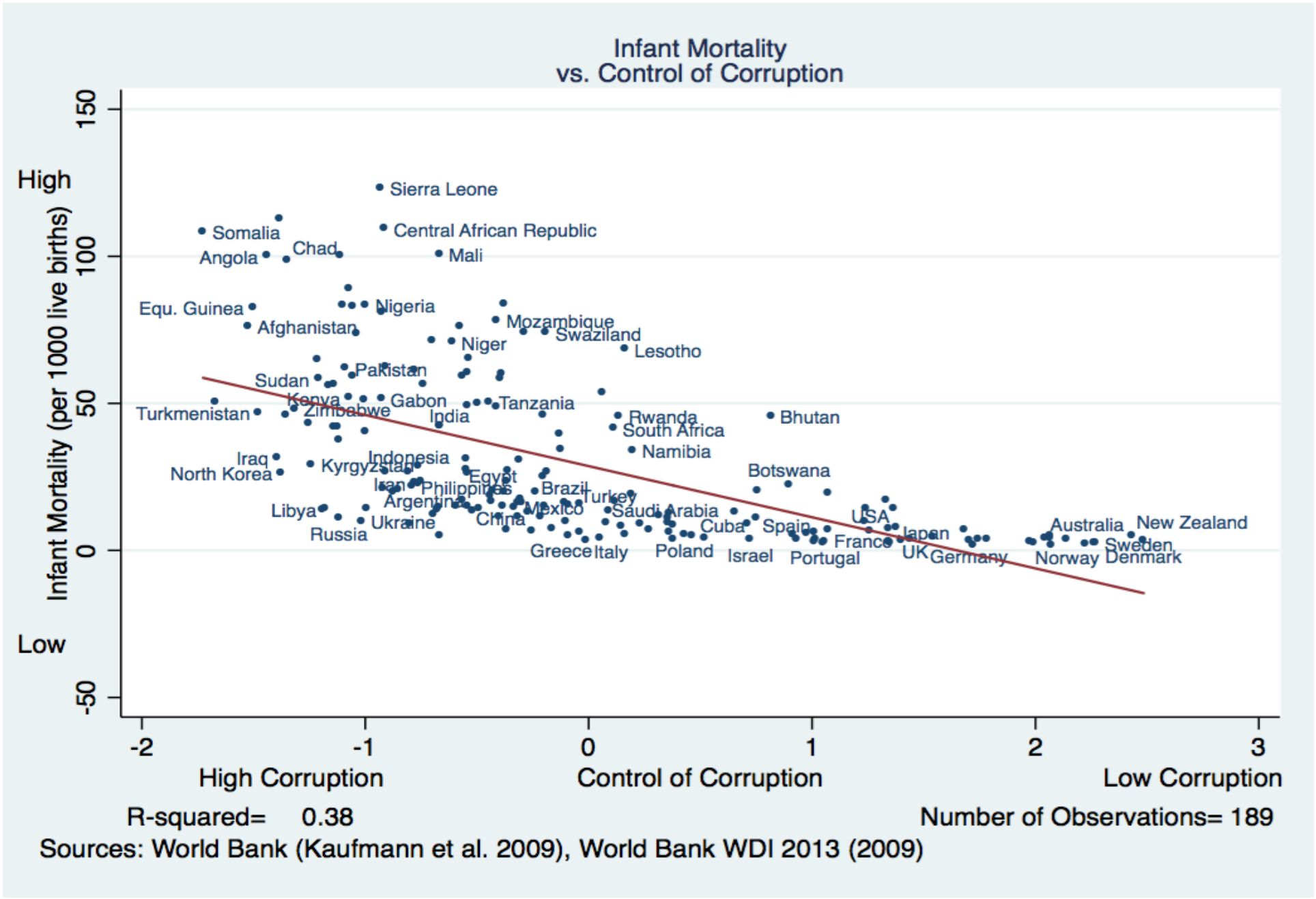
Infant Mortality
vs. Control of Corruption
Infant Mortality (per 1000 live births)
High
Low
150
100
50
0
-50
Sierra Leone
Somalia
Central African Republic
Angola
Chad
Mali
Equ. Guinea
Nigeria
Afghanistan
Mozambique
Swaziland
Niger
Lesotho
Pakistan
Sudan
Kenya
Gabon
Tanzania
Turkmenistan
Zimbabwe
India
Rwanda
Bhutan
South Africa
Namibia
Iraq
Indonesia
Kyrgyzstan
North Korea
Egypt
Botswana
Iran
Philippines
Brazil
Turkey
Argentina
Mexico
Saudi Arabia
USA
Libya
China
Cuba
Spain
Australia
New Zealand
Ukraine
Russia
France
Japan
Sweden
Greece
Italy
Poland
Israel
Portugal
UK
Germany
Norway
Denmark
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
R-squared= 0.38
Number of Observations= 189
Sources: World Bank (Kaufmann et al. 2009), World Bank WDI 2013 (2009)

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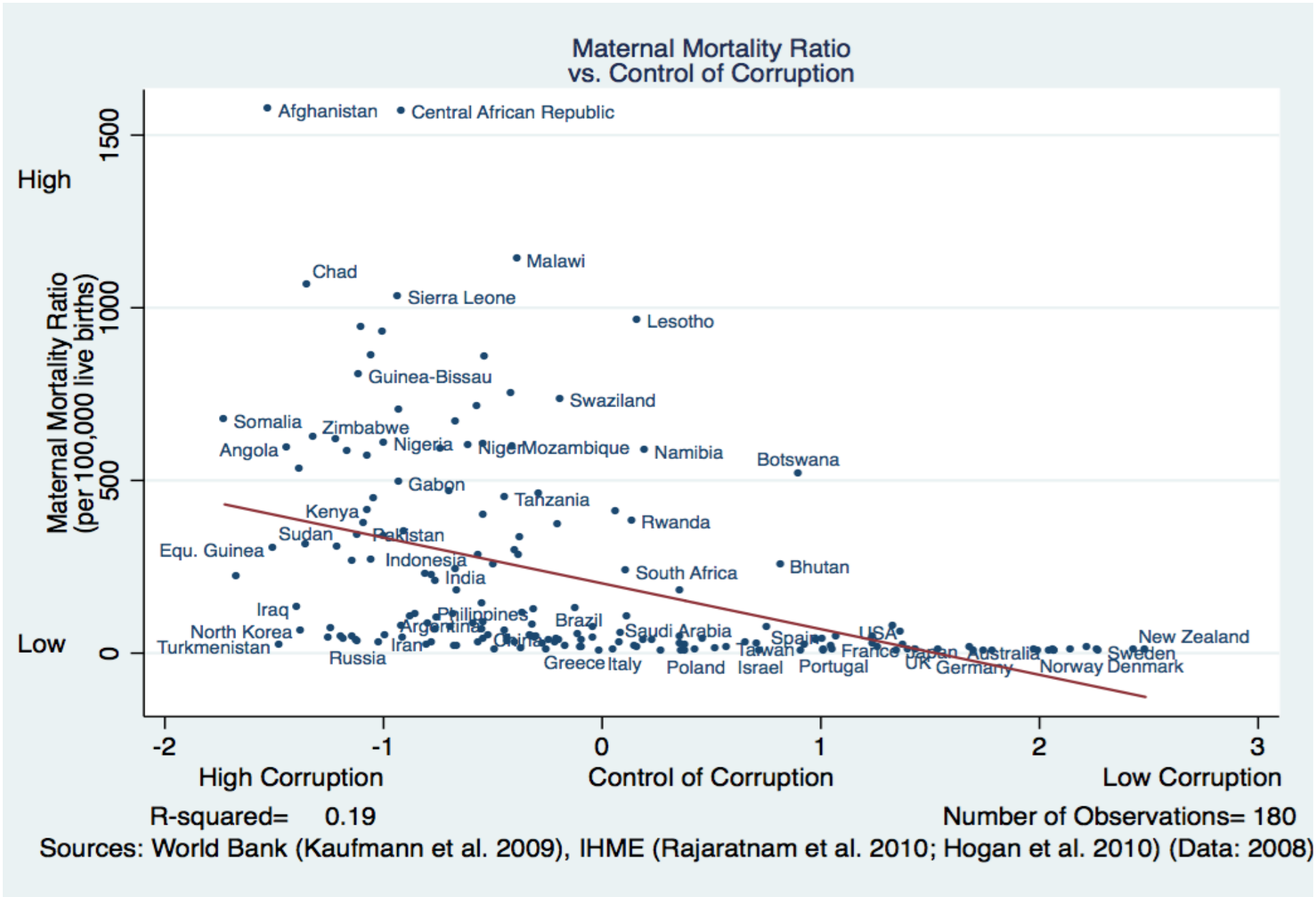
Maternal Mortality Ratio
vs. Control of Corruption
Maternal Mortality Ratio
(per 100,000 live births)
High
Low
1500
1000
500
0
Afghanistan
Central African Republic
Malawi
Chad
Sierra Leone
Lesotho
Guinea-Bissau
Swaziland
Somalia
Zimbabwe
Angola
Nigeria
Niger
Mozambique
Namibia
Botswana
Gabon
Tanzania
Kenya
Rwanda
Sudan
Pakistan
Equ. Guinea
Indonesia
India
South Africa
Bhutan
Iraq
Philippines
Brazil
North Korea
Argentina
Saudi Arabia
Spain
USA
New Zealand
Turkmenistan
Iran
China
Taiwan
France
Japan
Australia
Sweden
Russia
Greece
Italy
Poland
Israel
Portugal
UK
Germany
Norway
Denmark
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
R-squared= 0.19
Number of Observations= 180
Sources: World Bank (Kaufmann et al. 2009), IHME (Rajaratnam et al. 2010; Hogan et al. 2010) (Data: 2008)

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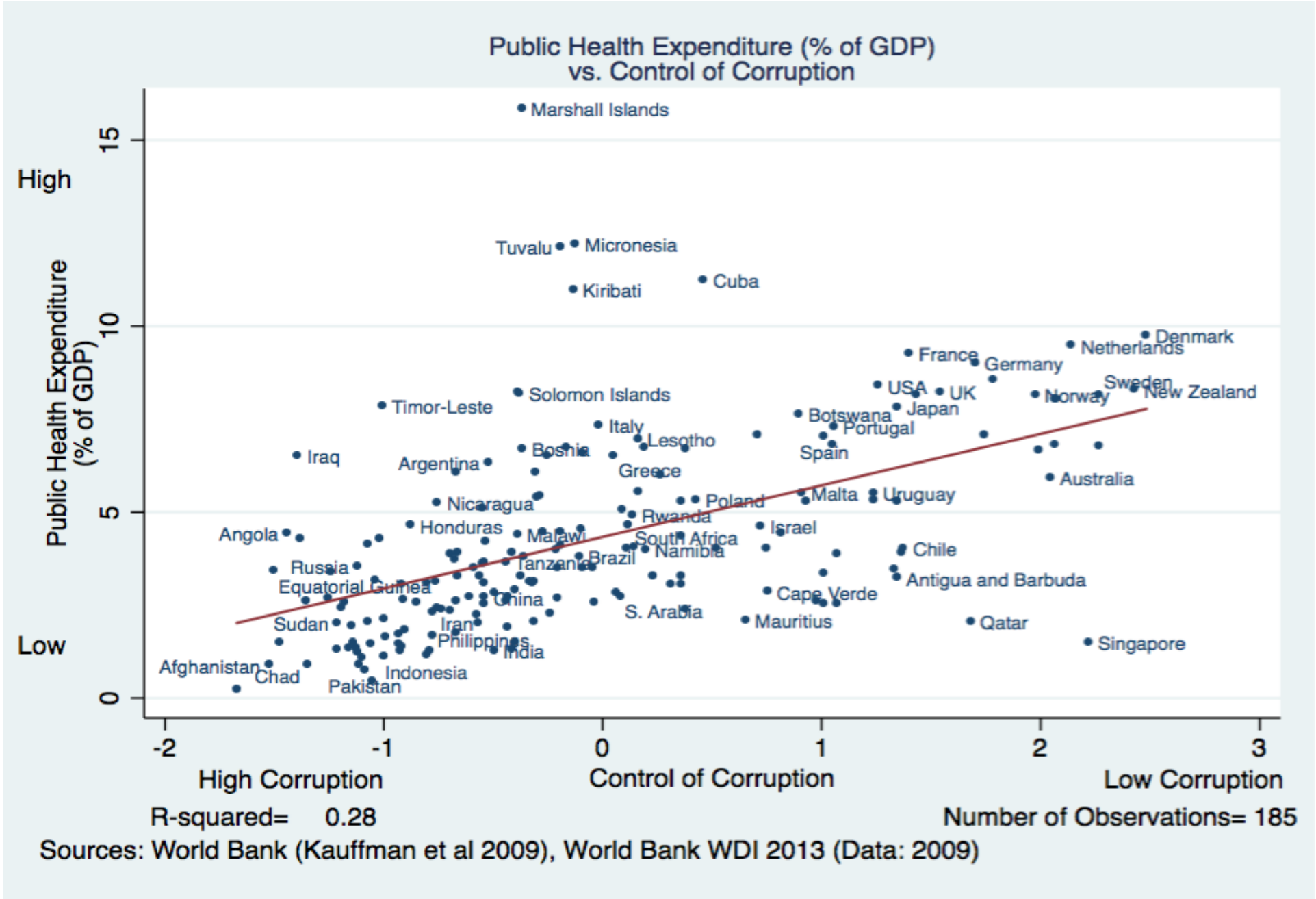
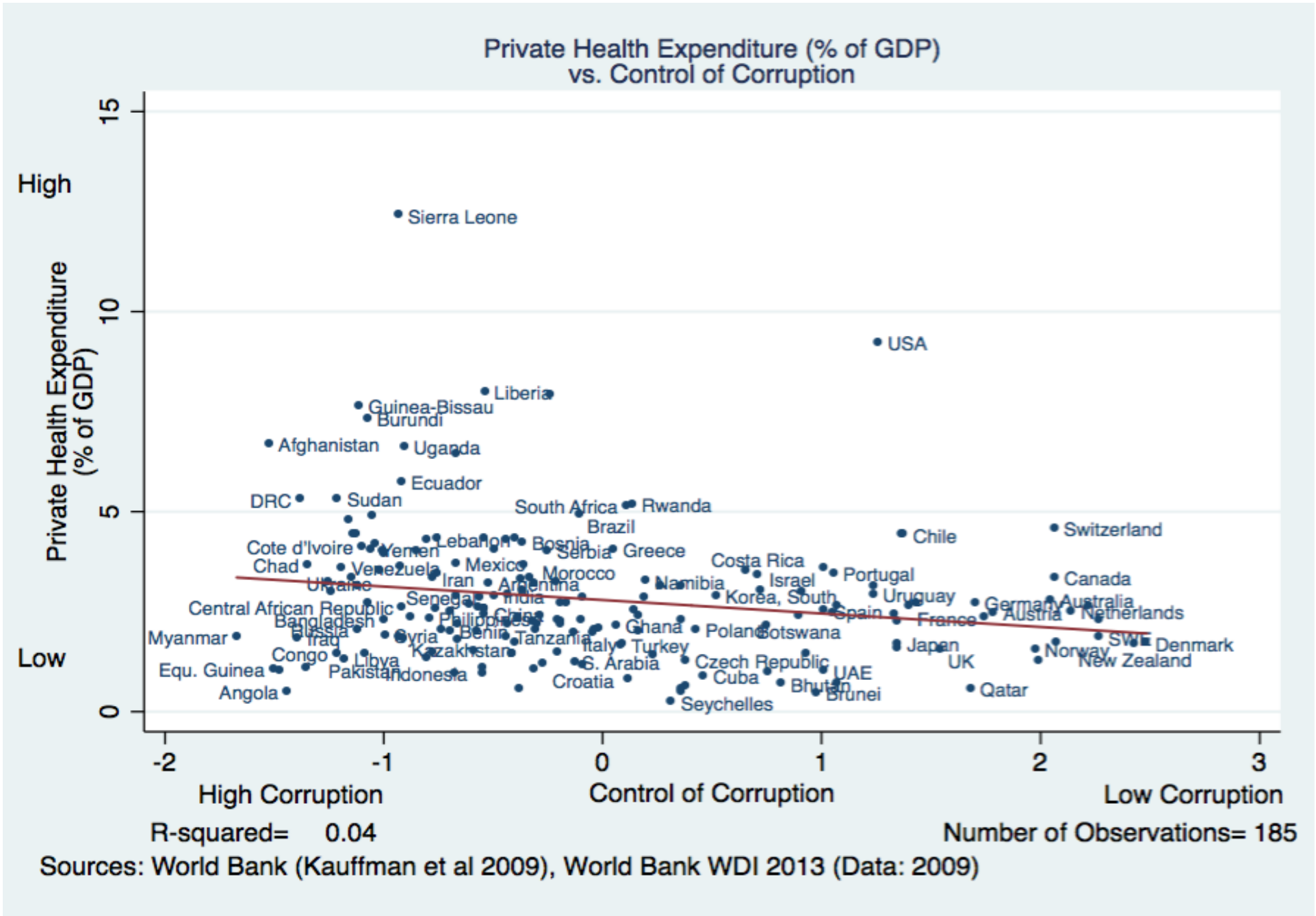
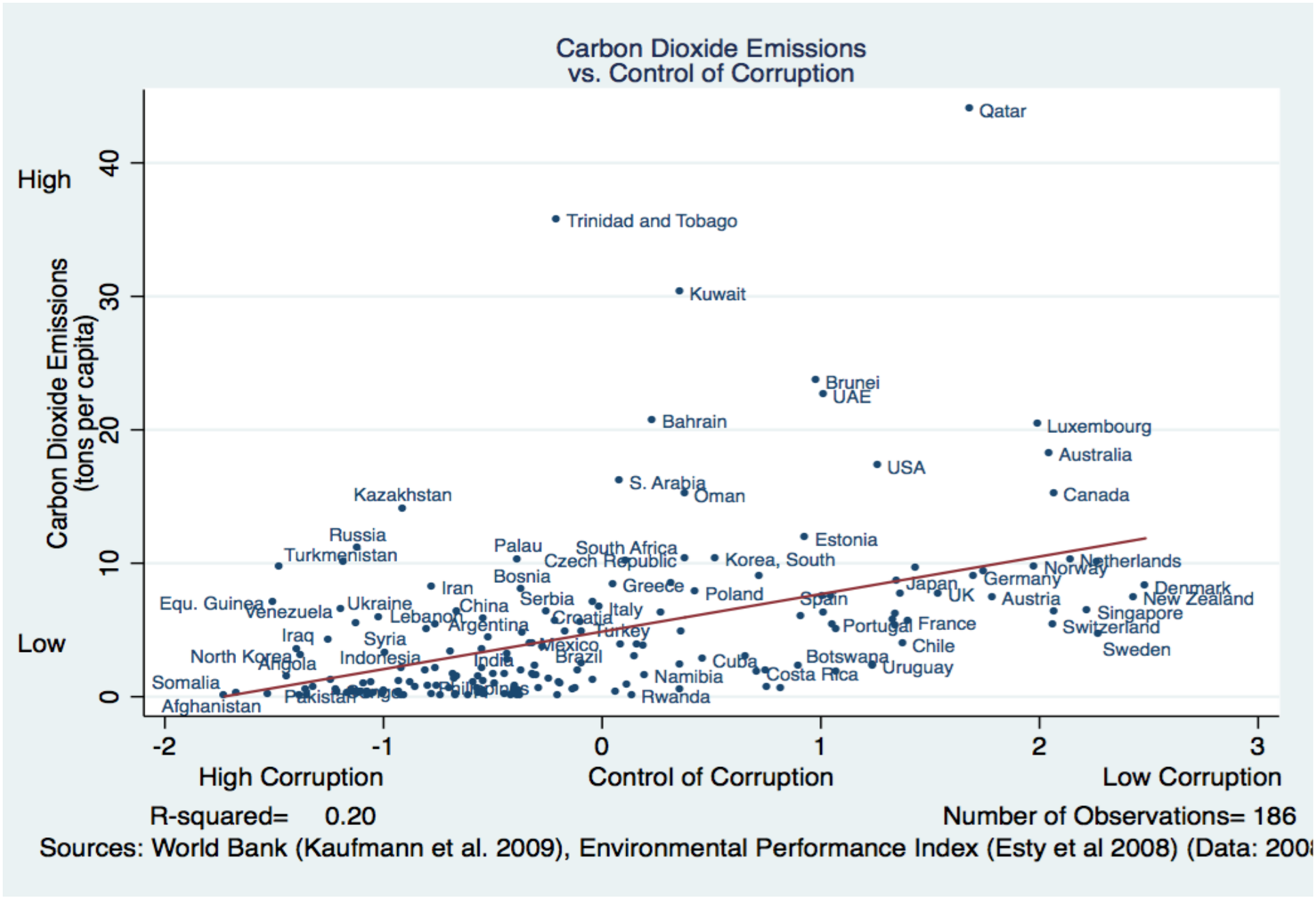

Public Health Expenditure (% of GDP)
vs. Control of Corruption
Public Health Expenditure (% of GDP)
High
Low
0
5
10
15
Marshall Islands
Tuvalu
Micronesia
Kiribati
Cuba
Denmark
Netherlands
France
Germany
Sweden
USA
UK
Norway
New Zealand
Japan
Botswana
Portugal
Solomon Islands
Timor-Leste
Italy
Lesotho
Iraq
Bosnia
Spain
Argentina
Greece
Australia
Malta
Uruguay
Nicaragua
Poland
Rwanda
Angola
Honduras
Malawi
Israel
South Africa
Namibia
Chile
Brazil
Tanzania
Russia
Antigua and Barbuda
Equatorial Guinea
Cape Verde
China
S. Arabia
Sudan
Iran
Mauritius
Qatar
Philippines
India
Singapore
Afghanistan
Chad
Indonesia
Pakistan
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
R-squared= 0.28
Number of Observations= 185
Sources: World Bank (Kauffman et al 2009), World Bank WDI 2013 (Data: 2009)

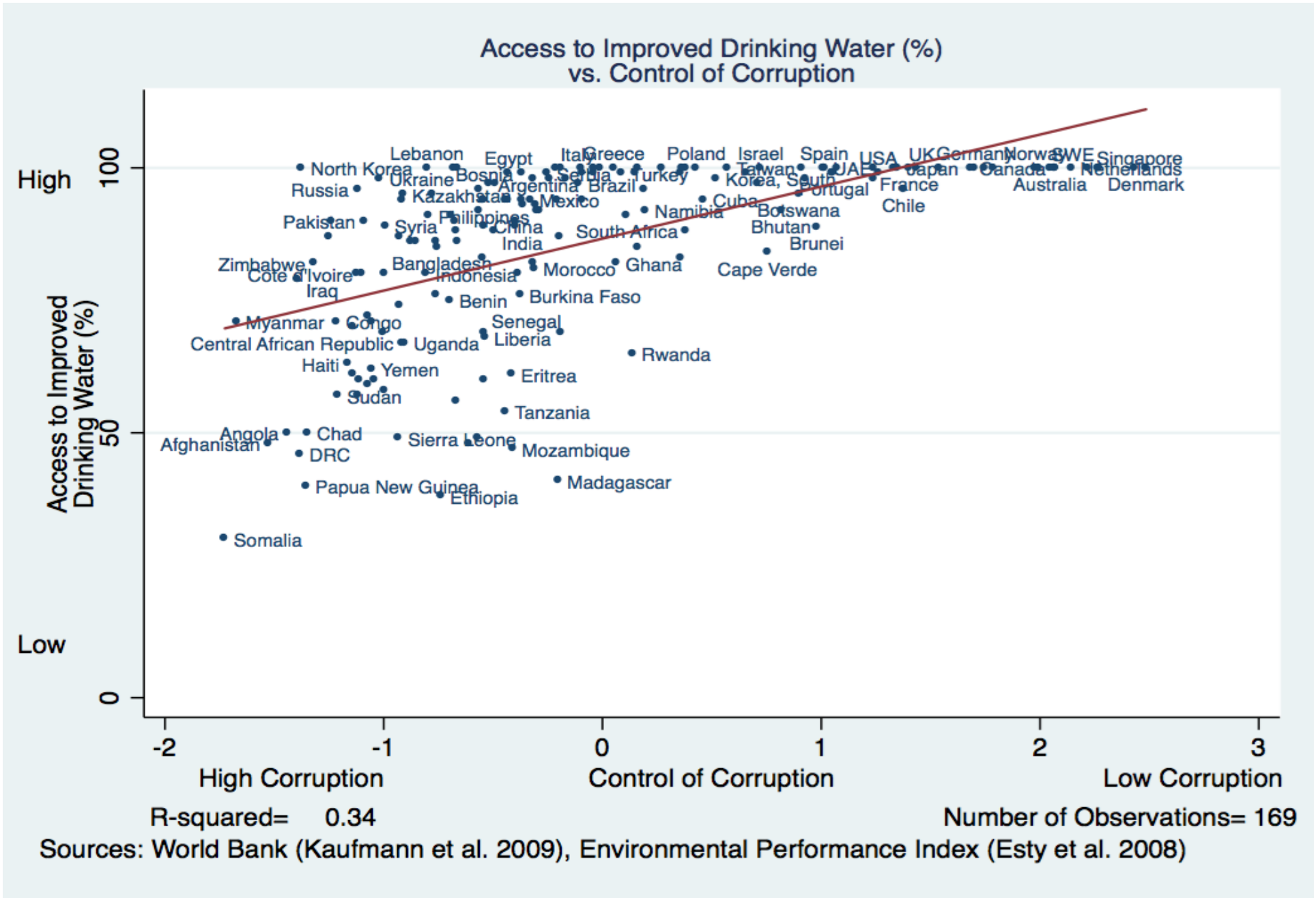
19


Private Health Expenditure (% of GDP)
vs. Control of Corruption
Private Health Expenditure (% of GDP)
High
Low
0
5
10
15
Sierra Leone
USA
Liberia
Guinea-Bissau
Burundi
Afghanistan
Uganda
Ecuador
DRC
Sudan
South Africa
Rwanda
Brazil
Chile
Switzerland
Cote d'Ivoire
Yemen
Lebanon
Bosnia
Serbia
Greece
Chad
Venezuela
Mexico
Morocco
Costa Rica
Israel
Portugal
Canada
Ukraine
Iran
Argentina
Namibia
Korea, South
Uruguay
Germany
Australia
Central African Republic
Senegal
India
Spain
France
Austria
Netherlands
Bangladesh
China
Myanmar
Russia
Iraq
Syria
Benin
Tanzania
Ghana
Poland
Botswana
Japan
SWE
Denmark
Congo
Libya
Kazakhstan
Italy
Turkey
Norway
New Zealand
Equ. Guinea
Pakistan
Indonesia
S. Arabia
Czech Republic
UK
UAE
Angola
Croatia
Cuba
Bhutan
Brunei
Qatar
Seychelles
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
R-squared= 0.04
Number of Observations= 185
Sources: World Bank (Kauffman et al 2009), World Bank WDI 2013 (Data: 2009)

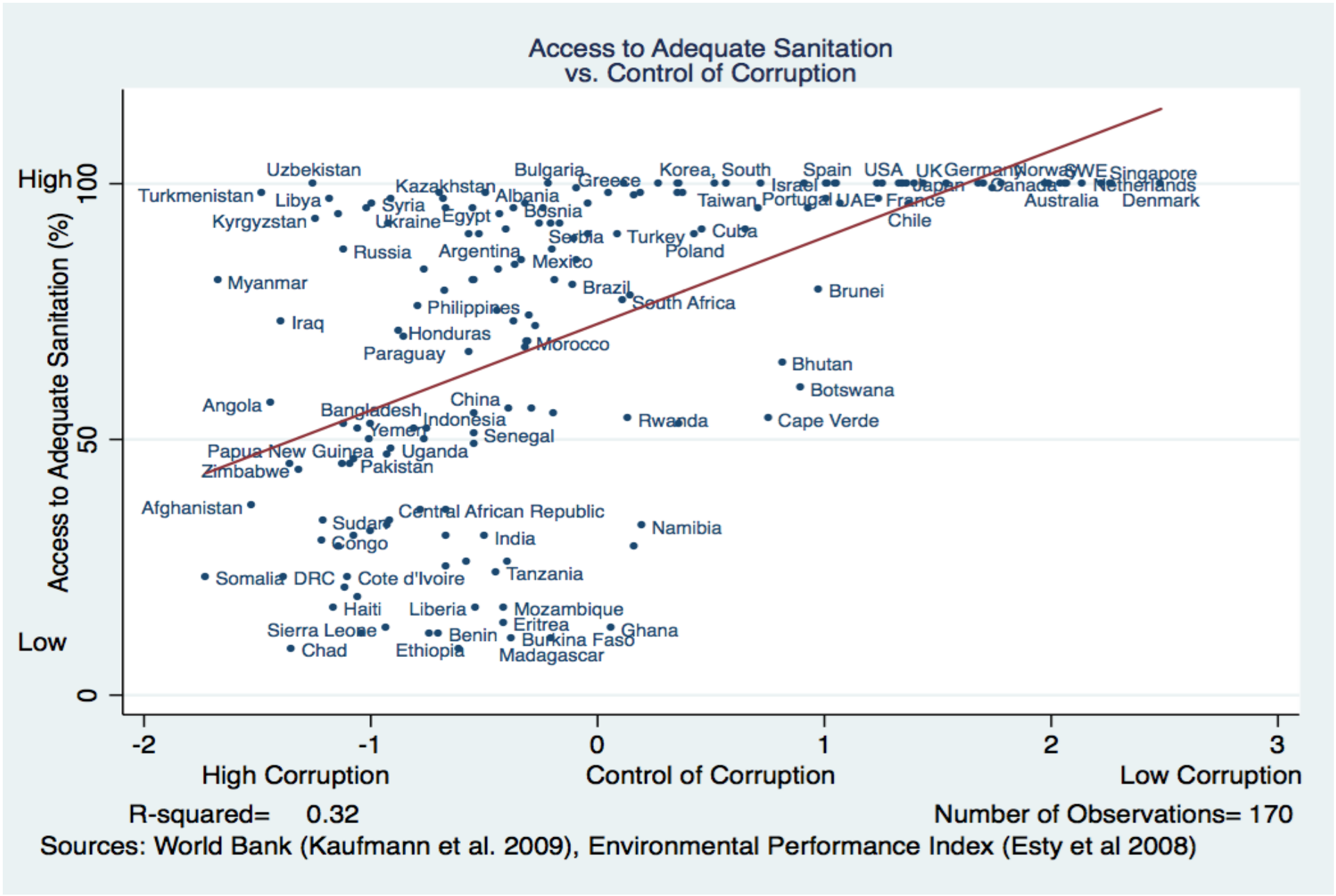
20


Carbon Dioxide Emissions
vs. Control of Corruption
Carbon Dioxide Emissions
(tons per capita)
High
Low
0
10
20
30
40
Qatar
Trinidad and Tobago
Kuwait
Brunei
UAE
Bahrain
Luxembourg
Australia
USA
S. Arabia
Oman
Canada
Kazakhstan
Russia
Turkmenistan
Palau
South Africa
Czech Republic
Korea, South
Estonia
Netherlands
Norway
Germany
Japan
UK
Austria
Denmark
New Zealand
Singapore
Switzerland
Sweden
Bosnia
Iran
Greece
Poland
Spain
Portugal
France
Chile
Equ. Guinea
Venezuela
Ukraine
Lebanon
China
Serbia
Croatia
Italy
Turkey
Argentina
Iraq
Syria
Mexico
Brazil
India
Indonesia
North Korea
Angola
Cuba
Botswana
Uruguay
Costa Rica
Namibia
Somalia
Rwanda
Afghanistan
Pakistan
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
R-squared= 0.20
Number of Observations= 186
Sources: World Bank (Kaufmann et al. 2009), Environmental Performance Index (Esty et al 2008) (Data: 200

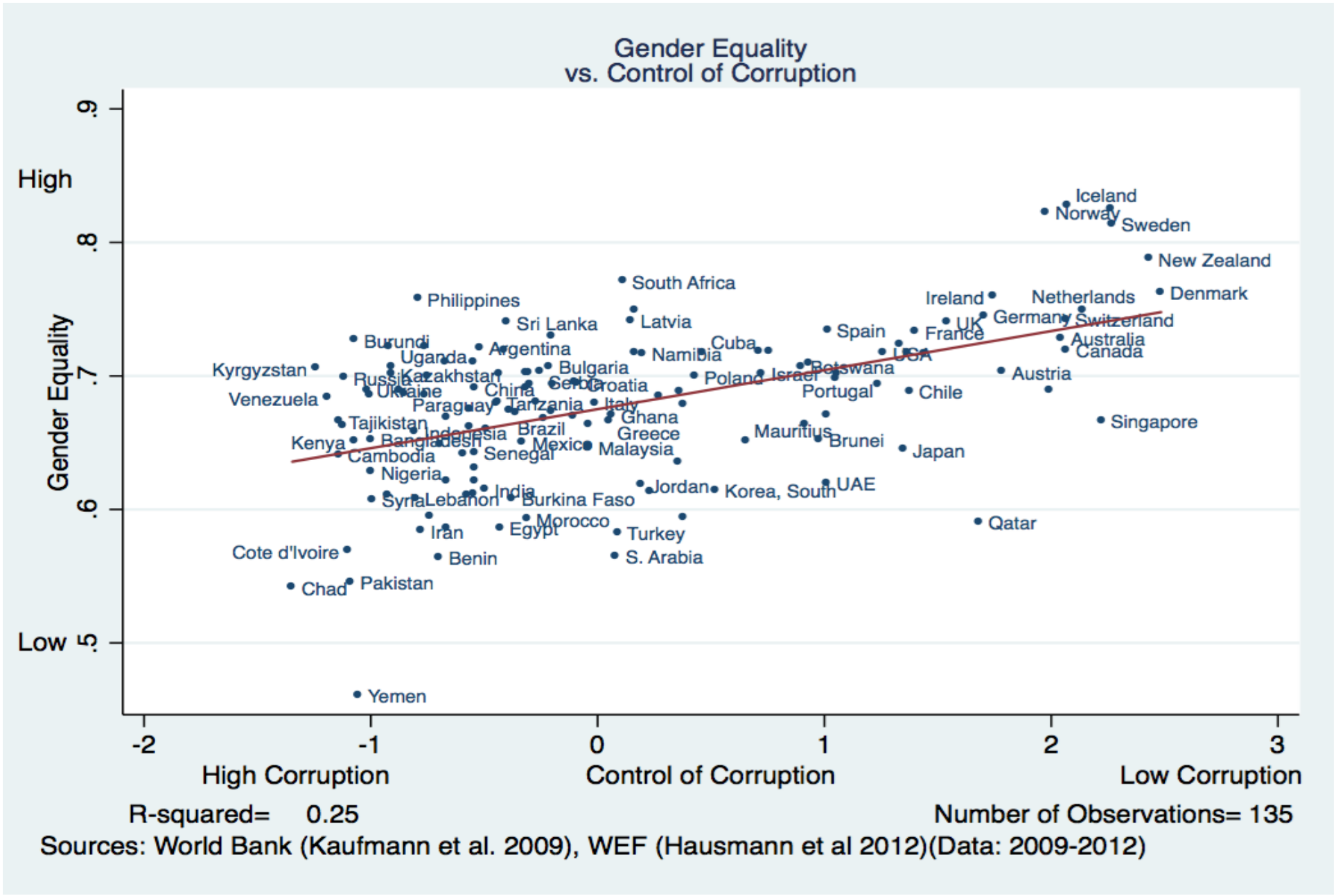
21


Access to Improved Drinking Water (%)
vs. Control of Corruption
Access to Improved Drinking Water (%)
High
Low
100
50
0
Lebanon
Egypt
Italy
Greece
Poland
Israel
Spain
USA
UK
Germany
Norway
SWE
Singapore
North Korea
Ukraine
Bosnia
Serbia
Turkey
Taiwan
UAE
Japan
Canada
Netherlands
Russia
Kazakhstan
Argentina
Brazil
Korea, South
Portugal
France
Australia
Denmark
Mexico
Cuba
Chile
Namibia
Botswana
Pakistan
Philippines
Syria
China
South Africa
Bhutan
India
Brunei
Zimbabwe
Bangladesh
Morocco
Ghana
Cape Verde
Cote d'Ivoire
Indonesia
Iraq
Benin
Burkina Faso
Myanmar
Congo
Senegal
Central African Republic
Uganda
Liberia
Rwanda
Haiti
Yemen
Eritrea
Sudan
Tanzania
Angola
Chad
Sierra Leone
Afghanistan
DRC
Mozambique
Papua New Guinea
Madagascar
Ethiopia
Somalia
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
R-squared= 0.34
Number of Observations= 169
Sources: World Bank (Kaufmann et al. 2009), Environmental Performance Index (Esty et al. 2008)

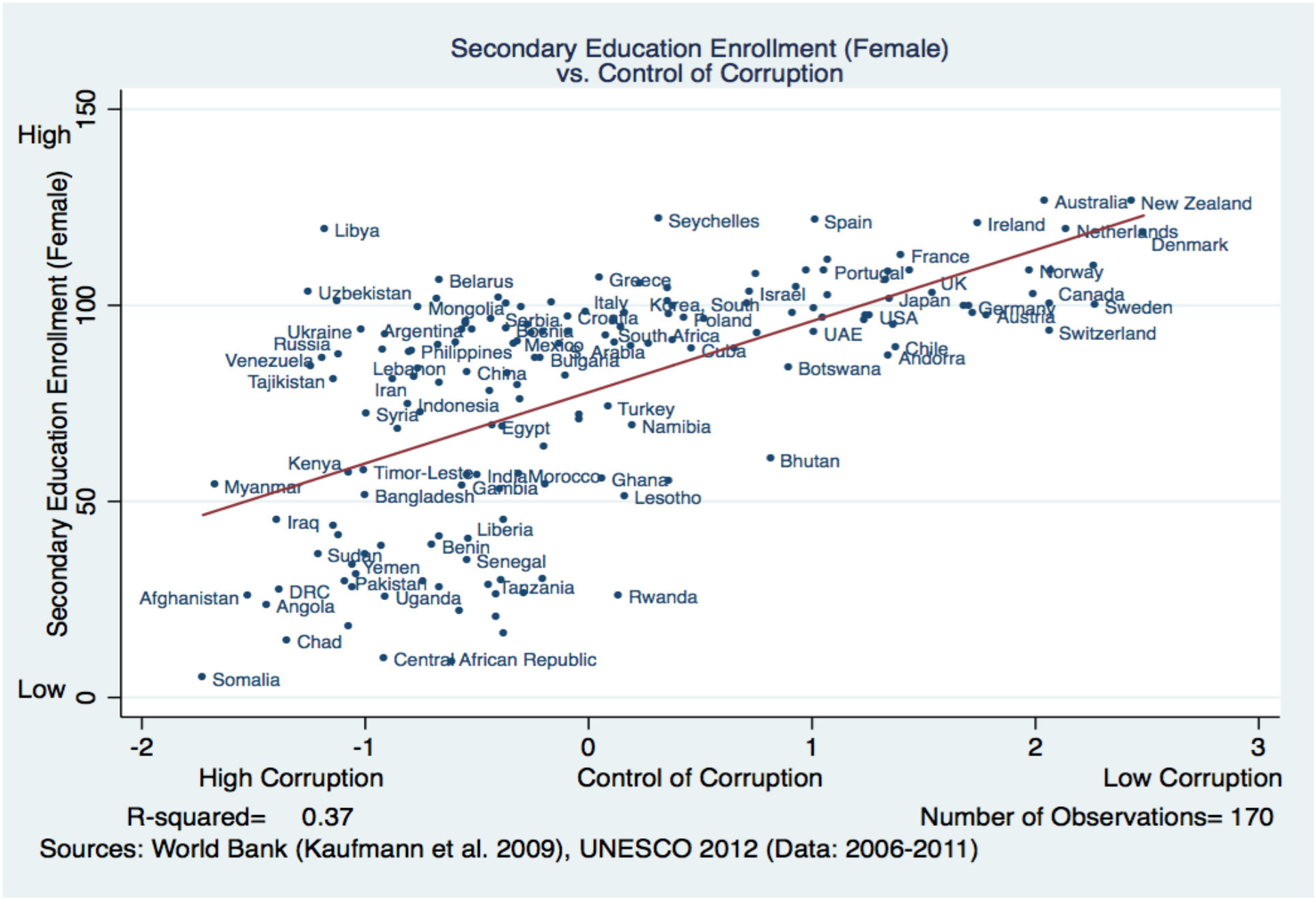
22


Access to Adequate Sanitation
vs. Control of Corruption
Access to Adequate Sanitation (%)
High
Low
100
50
0
Uzbekistan
Bulgaria
Korea, South
Spain
USA
UK
Germany
Norway
SWE
Singapore
Kazakhstan
Greece
Israel
Netherlands
Turkmenistan
Libya
Albania
Taiwan
Portugal
UAE
France
Canada
Australia
Denmark
Syria
Bosnia
Kyrgyzstan
Egypt
Ukraine
Chile
Serbia
Turkey
Cuba
Poland
Russia
Argentina
Mexico
Myanmar
Brazil
Brunei
South Africa
Philippines
Iraq
Honduras
Morocco
Paraguay
Bhutan
Botswana
Angola
China
Bangladesh
Indonesia
Rwanda
Cape Verde
Yemen
Senegal
Papua New Guinea
Uganda
Zimbabwe
Pakistan
Afghanistan
Central African Republic
Namibia
Sudan
India
Congo
Somalia
DRC
Cote d'Ivoire
Tanzania
Haiti
Liberia
Mozambique
Eritrea
Sierra Leone
Benin
Ghana
Burkina Faso
Chad
Ethiopia
Madagascar
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
R-squared= 0.32
Number of Observations= 170
Sources: World Bank (Kaufmann et al. 2009), Environmental Performance Index (Esty et al 2008)

23


Gender Equality
vs. Control of Corruption
Gender Equality
High
Low
.5
.6
.7
.8
.9
Iceland
Norway
Sweden
New Zealand
South Africa
Philippines
Ireland
Netherlands
Denmark
Sri Lanka
Latvia
Germany
Switzerland
UK
Spain
France
Burundi
Cuba
Australia
Uganda
Argentina
Namibia
USA
Canada
Kyrgyzstan
Bulgaria
Botswana
Russia
Kazakhstan
Poland
Israel
Austria
Ukraine
China
Serbia
Croatia
Portugal
Chile
Venezuela
Paraguay
Tanzania
Italy
Ghana
Singapore
Tajikistan
Brazil
Greece
Mauritius
Kenya
Bangladesh
Mexico
Malaysia
Brunei
Japan
Cambodia
Senegal
Nigeria
India
Jordan
Korea, South
UAE
Syria
Lebanon
Burkina Faso
Morocco
Qatar
Iran
Egypt
Turkey
Cote d'Ivoire
Benin
S. Arabia
Chad
Pakistan
Yemen
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
R-squared= 0.25
Number of Observations= 135
Sources: World Bank (Kaufmann et al. 2009), WEF (Hausmann et al 2012)(Data: 2009-2012)

24


Secondary Education Enrollment (Female)
vs. Control of Corruption
Secondary Education Enrollment (Female)
High
Low
150
100
50
0
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
R-squared= 0.37
Number of Observations= 170
Sources: World Bank (Kaufmann et al. 2009), UNESCO 2012 (Data: 2006-2011)
Australia
New Zealand
Seychelles
Spain
Ireland
Netherlands
Denmark
Libya
France
Portugal
Norway
Belarus
Greece
Uzbekistan
Israel
UK
Canada
Mongolia
Italy
Korea, South
Japan
Germany
Sweden
Serbia
Croatia
Poland
USA
Austria
Ukraine
Argentina
Bosnia
South Africa
UAE
Switzerland
Russia
Mexico
Philippines
Arabia
Cuba
Chile
Venezuela
Bulgaria
Andorra
Lebanon
China
Botswana
Tajikistan
Iran
Indonesia
Turkey
Syria
Egypt
Namibia
Bhutan
Kenya
Timor-Leste
India
Morocco
Ghana
Myanmar
Gambia
Bangladesh
Lesotho
Iraq
Liberia
Benin
Sudan
Senegal
Yemen
Pakistan
Tanzania
Afghanistan
DRC
Uganda
Rwanda
Angola
Chad
Central African Republic
Somalia

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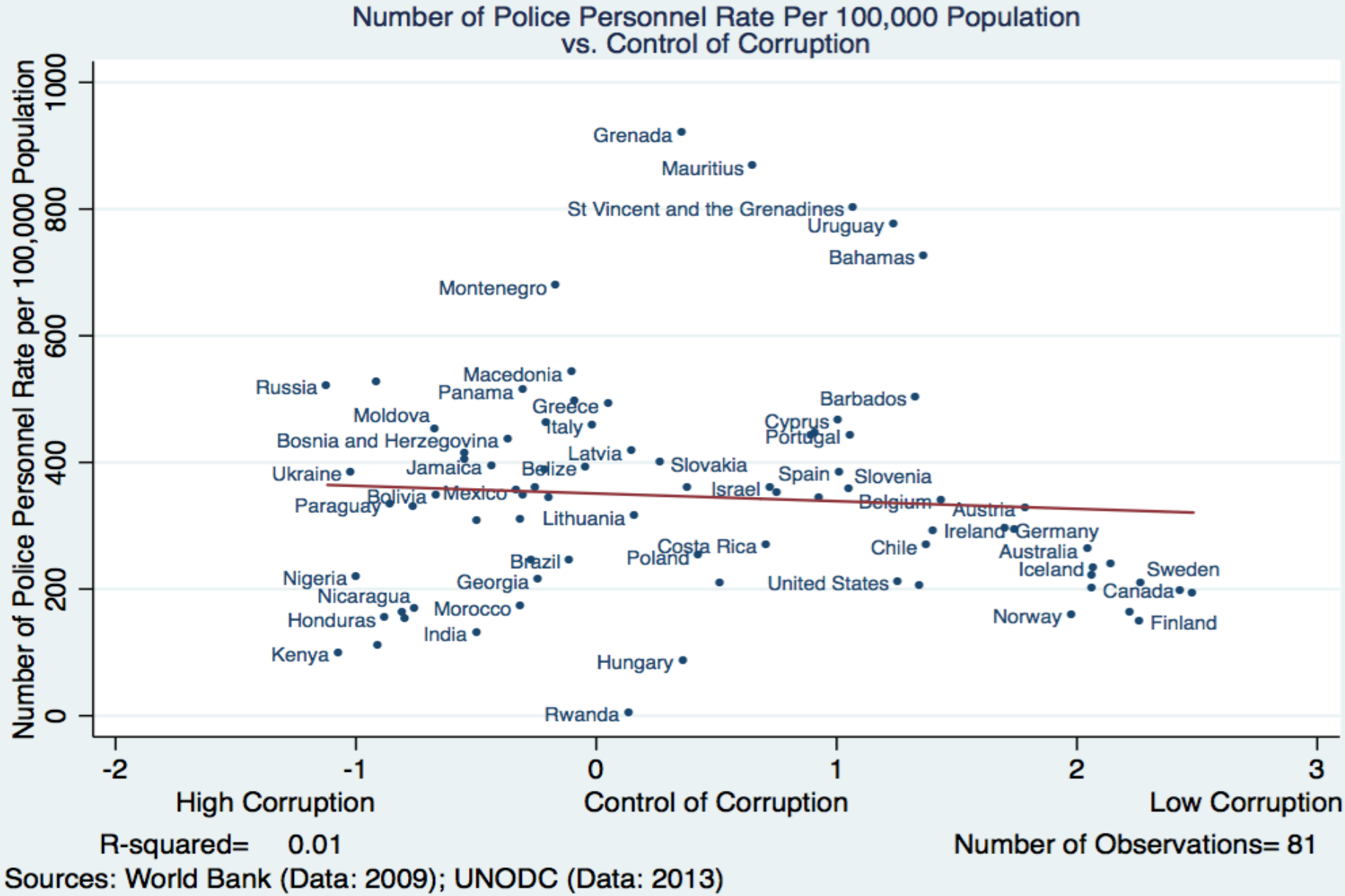
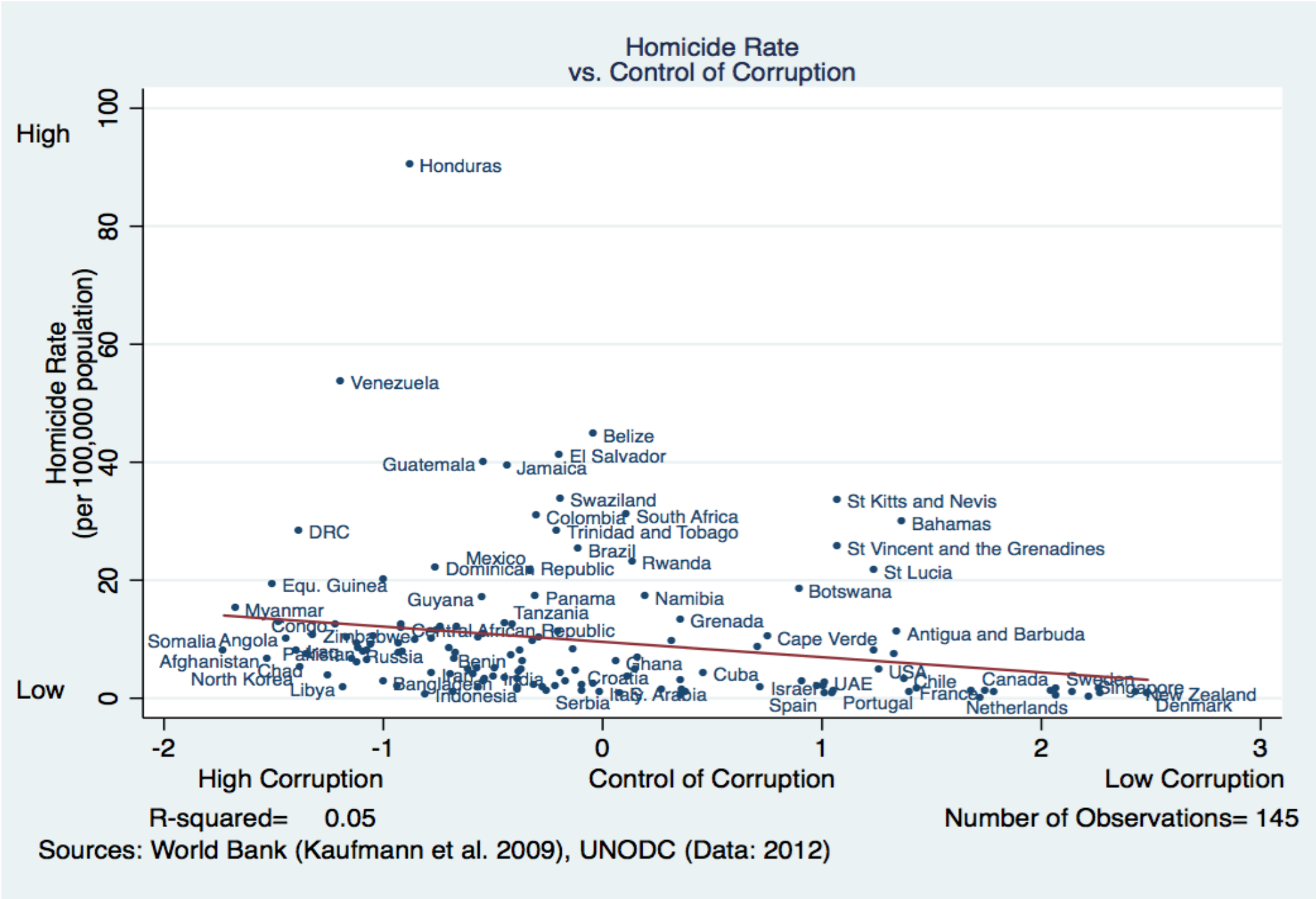
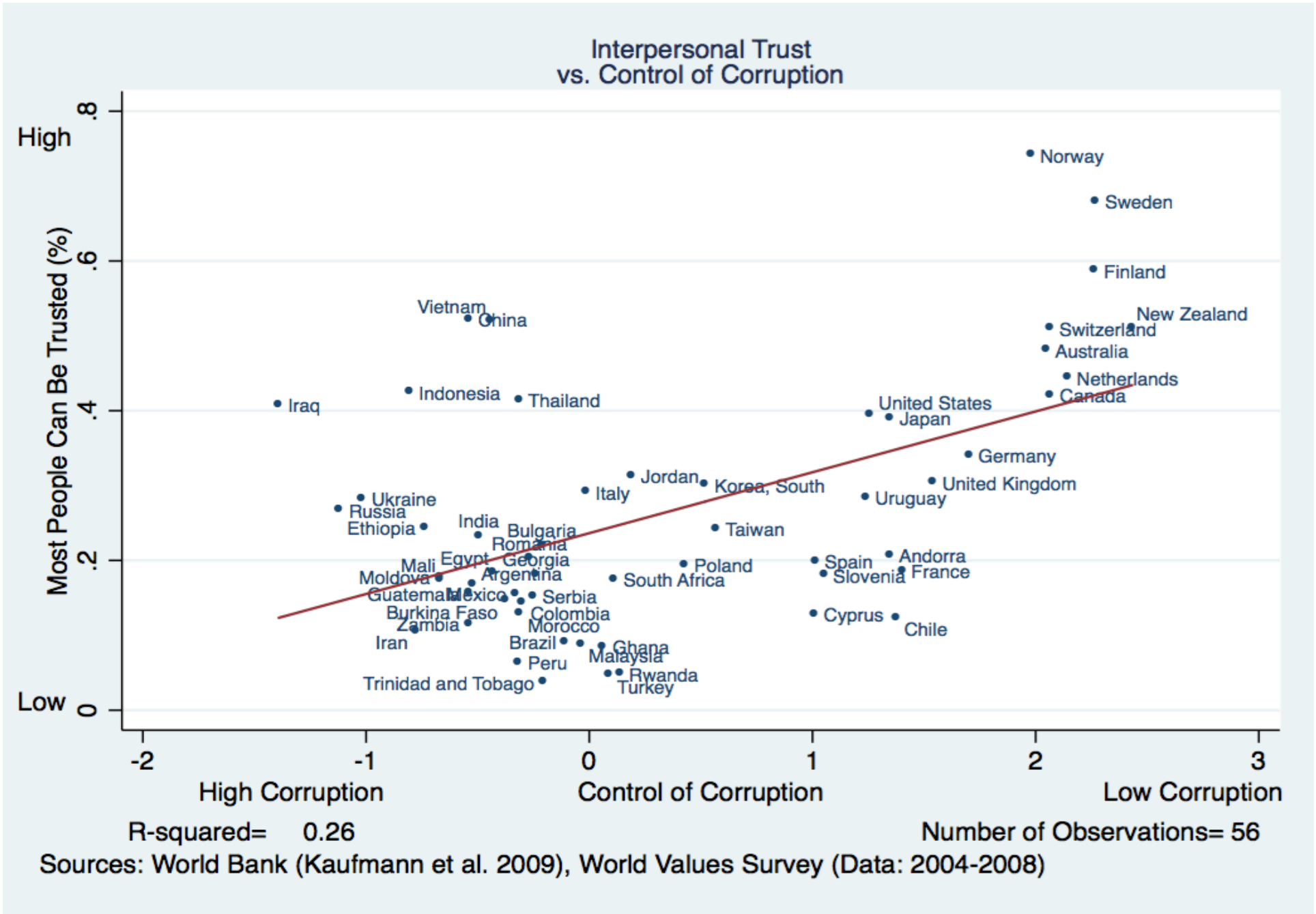

Number of Police Personnel Rate Per 100,000 Population
vs. Control of Corruption
Number of Police Personnel Rate per 100,000 Population
0
200
400
600
800
1000
Grenada
Mauritius
St Vincent and the Grenadines
Uruguay
Bahamas
Montenegro
Russia
Macedonia
Panama
Greece
Moldova
Italy
Barbados
Cyprus
Portugal
Bosnia and Herzegovina
Latvia
Slovakia
Ukraine
Jamaica
Belize
Spain
Slovenia
Israel
Bolivia
Mexico
Belgium
Austria
Paraguay
Lithuania
Ireland
Germany
Costa Rica
Chile
Australia
Brazil
Poland
Iceland
Sweden
Nigeria
Georgia
United States
Nicaragua
Canada
Morocco
Honduras
Norway
Finland
India
Kenya
Hungary
Rwanda
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
R-squared= 0.01
Number of Observations= 81
Sources: World Bank (Data: 2009); UNODC (Data: 2013)


Homicide Rate
vs. Control of Corruption
Homicide Rate
(per 100,000 population)
High
Low
0
20
40
60
80
100
Honduras
Venezuela
Belize
El Salvador
Guatemala
Jamaica
Swaziland
Colombia
South Africa
Trinidad and Tobago
DRC
Brazil
Mexico
Dominican Republic
Rwanda
Equ. Guinea
Guyana
Panama
Namibia
Myanmar
Tanzania
Grenada
Congo
Somalia
Angola
Zimbabwe
Central African Republic
Cape Verde
Afghanistan
Russia
Benin
Ghana
Chad
North Korea
Libya
Bangladesh
India
Croatia
Cuba
Indonesia
Serbia
Israel
UAE
Spain
Portugal
Chile
France
Canada
Netherlands
Sweden
Singapore
New Zealand
Denmark
St Kitts and Nevis
Bahamas
St Vincent and the Grenadines
St Lucia
Botswana
Antigua and Barbuda
USA
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
R-squared= 0.05
Number of Observations= 145
Sources: World Bank (Kaufmann et al. 2009), UNODC (Data: 2012)


Interpersonal Trust
vs. Control of Corruption
Most People Can Be Trusted (%)
High
Low
0
.2
.4
.6
.8
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
Norway
Sweden
Finland
New Zealand
Switzerland
Australia
Netherlands
Canada
United States
Japan
Germany
United Kingdom
Uruguay
Spain
Andorra
France
Slovenia
Cyprus
Chile
Taiwan
Poland
South Africa
Jordan
Korea, South
Italy
Vietnam
China
Indonesia
Thailand
Iraq
Ukraine
Russia
Ethiopia
India
Bulgaria
Romania
Egypt
Georgia
Mali
Moldova
Argentina
Guatemala
Mexico
Serbia
Burkina Faso
Colombia
Zambia
Morocco
Iran
Brazil
Ghana
Malaysia
Peru
Rwanda
Turkey
Trinidad and Tobago
R-squared= 0.26
Number of Observations= 56
Sources: World Bank (Kaufmann et al. 2009), World Values Survey (Data: 2004-2008)

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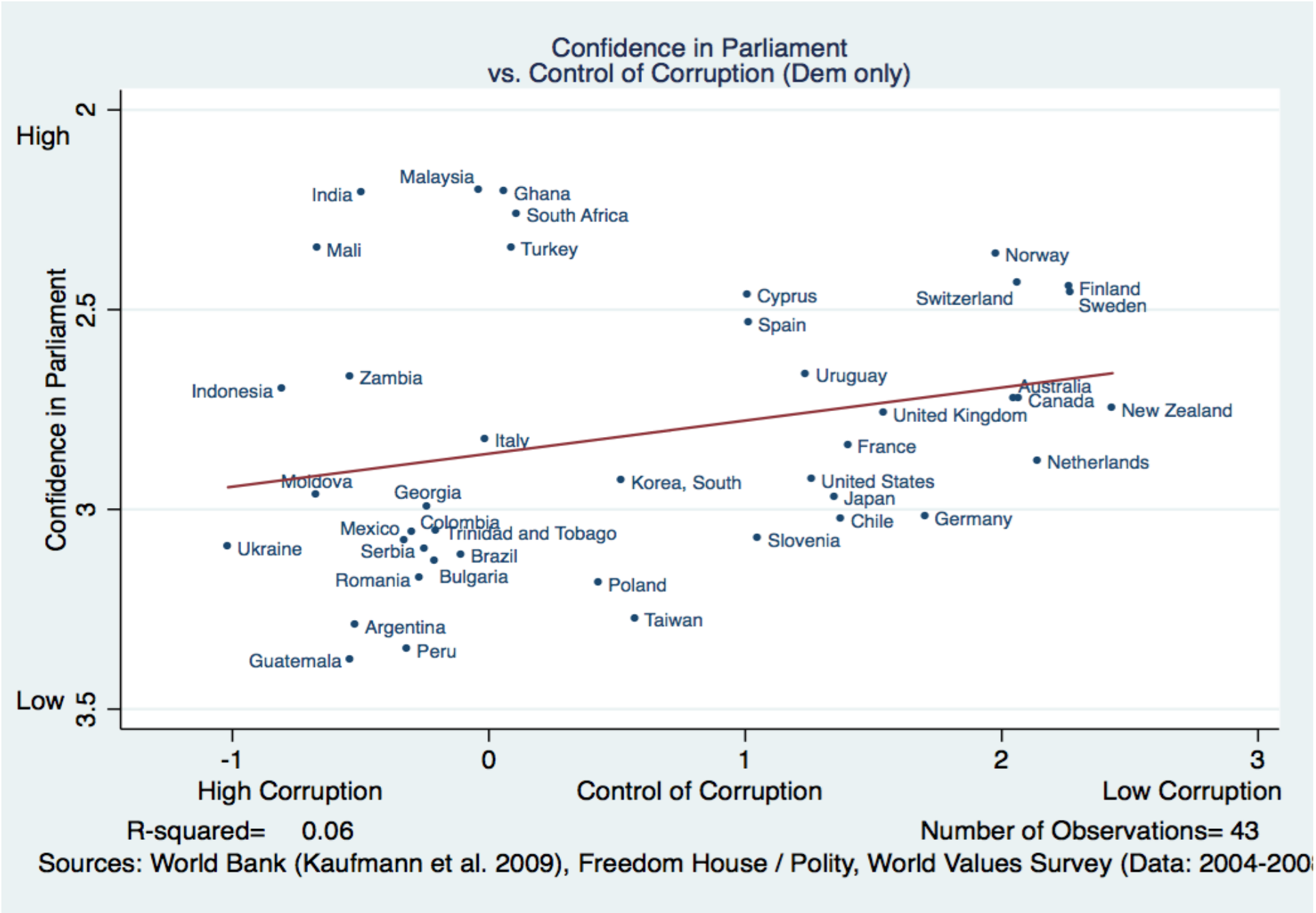
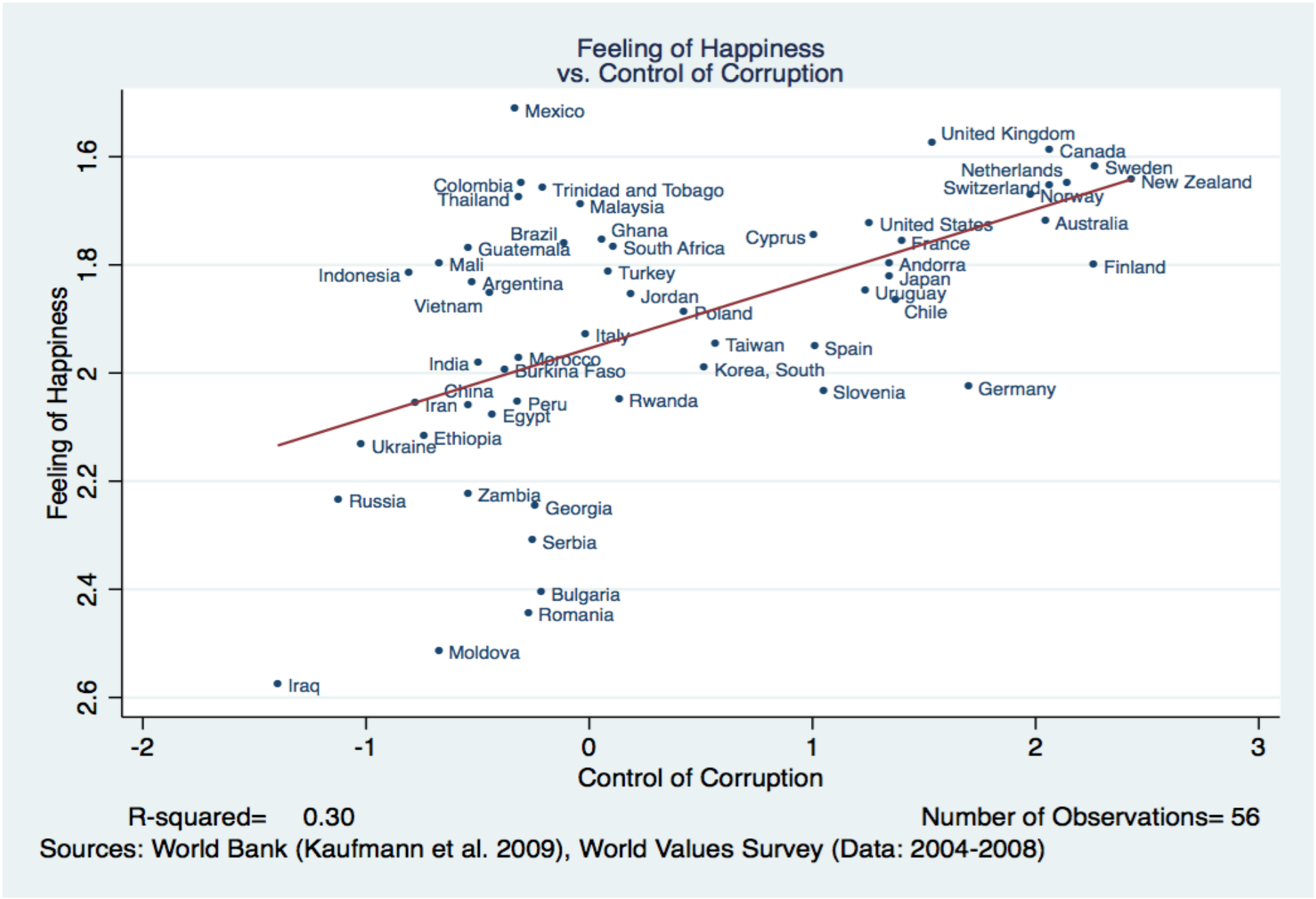

Confidence in Parliament
vs. Control of Corruption (Dem only)
Confidence in Parliament
High
Low
2
2.5
3
3.5
India
Malaysia
Ghana
South Africa
Mali
Turkey
Cyprus
Spain
Norway
Switzerland
Finland
Sweden
Indonesia
Zambia
Uruguay
Australia
Canada
New Zealand
United Kingdom
Italy
France
Netherlands
Moldova
Georgia
Korea, South
United States
Japan
Chile
Germany
Mexico
Colombia
Trinidad and Tobago
Slovenia
Ukraine
Serbia
Brazil
Romania
Bulgaria
Poland
Taiwan
Argentina
Peru
Guatemala
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
R-squared= 0.06
Number of Observations= 43
Sources: World Bank (Kaufmann et al. 2009), Freedom House / Polity, World Values Survey (Data: 2004-200


Feeling of Happiness
vs. Control of Corruption
Feeling of Happiness
1.6
1.8
2
2.2
2.4
2.6
-2
-1
0
1
2
3
Control of Corruption
Mexico
United Kingdom
Canada
Netherlands
Sweden
Switzerland
Norway
New Zealand
Colombia
Thailand
Trinidad and Tobago
Malaysia
United States
Australia
Brazil
Ghana
Cyprus
France
Guatemala
South Africa
Andorra
Finland
Mali
Indonesia
Turkey
Japan
Argentina
Uruguay
Jordan
Vietnam
Chile
Poland
Italy
Taiwan
Spain
India
Morocco
Burkina Faso
Korea, South
China
Slovenia
Germany
Iran
Peru
Rwanda
Egypt
Ethiopia
Ukraine
Russia
Zambia
Georgia
Serbia
Bulgaria
Romania
Moldova
Iraq
R-squared= 0.30
Number of Observations= 56
Sources: World Bank (Kaufmann et al. 2009), World Values Survey (Data: 2004-2008)

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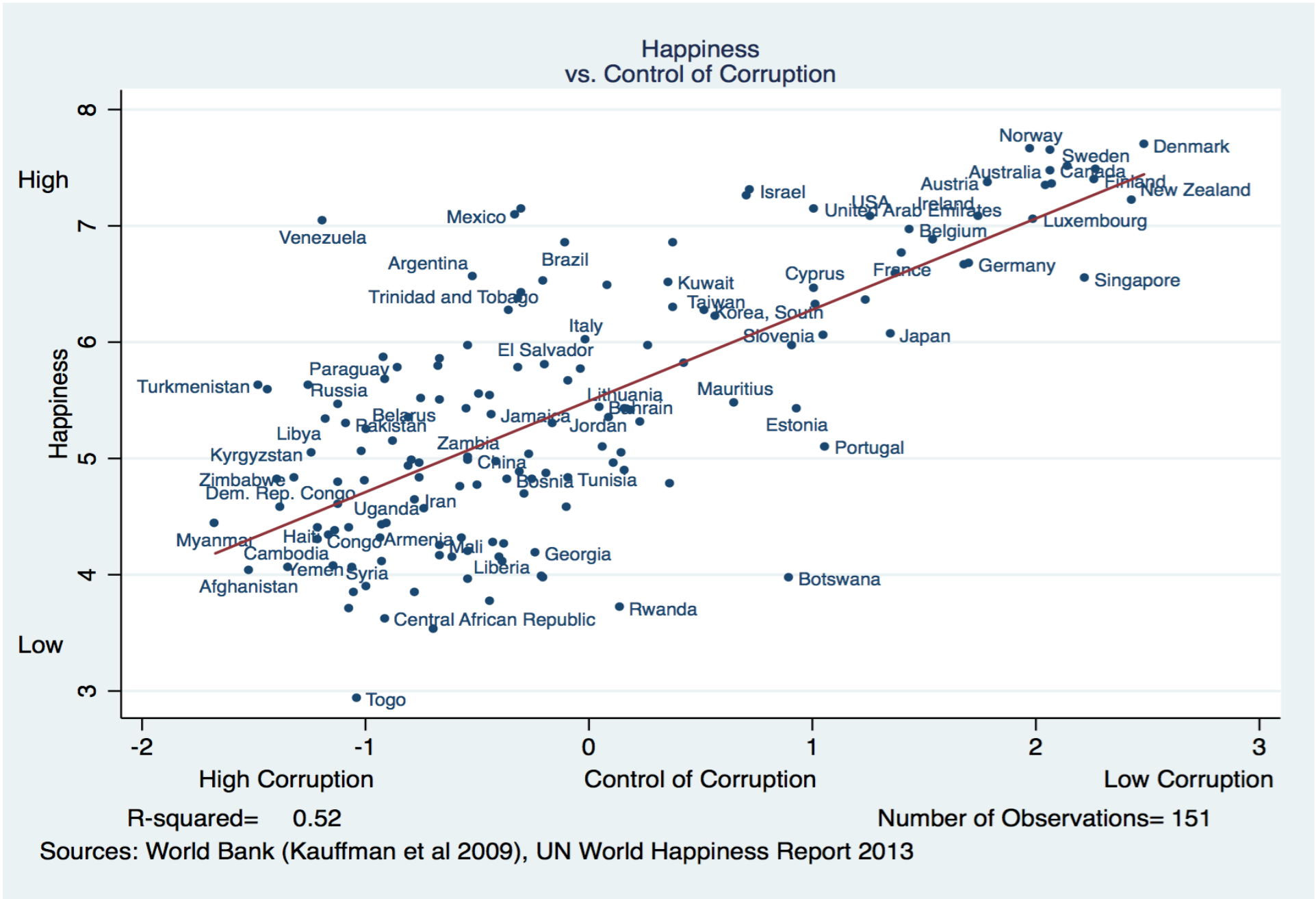
Happiness
vs. Control of Corruption
High
Low
Happiness
8
7
6
5
4
3
Norway
Denmark
Sweden
Australia
Canada
Finland
Austria
New Zealand
Israel
USA
Ireland
United Arab Emirates
Luxembourg
Belgium
Mexico
Venezuela
Argentina
Brazil
Cyprus
France
Germany
Singapore
Kuwait
Trinidad and Tobago
Taiwan
Korea, South
Italy
Slovenia
Japan
El Salvador
Paraguay
Turkmenistan
Russia
Mauritius
Lithuania
Bahrain
Belarus
Jamaica
Jordan
Estonia
Libya
Pakistan
Zambia
Portugal
Kyrgyzstan
China
Zimbabwe
Bosnia
Tunisia
Dem. Rep. Congo
Uganda
Iran
Myanmar
Haiti
Congo
Armenia
Mali
Georgia
Cambodia
Yemen
Syria
Liberia
Botswana
Afghanistan
Rwanda
Central African Republic
Togo
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
R-squared= 0.52
Number of Observations= 151
Sources: World Bank (Kauffman et al 2009), UN World Happiness Report 2013

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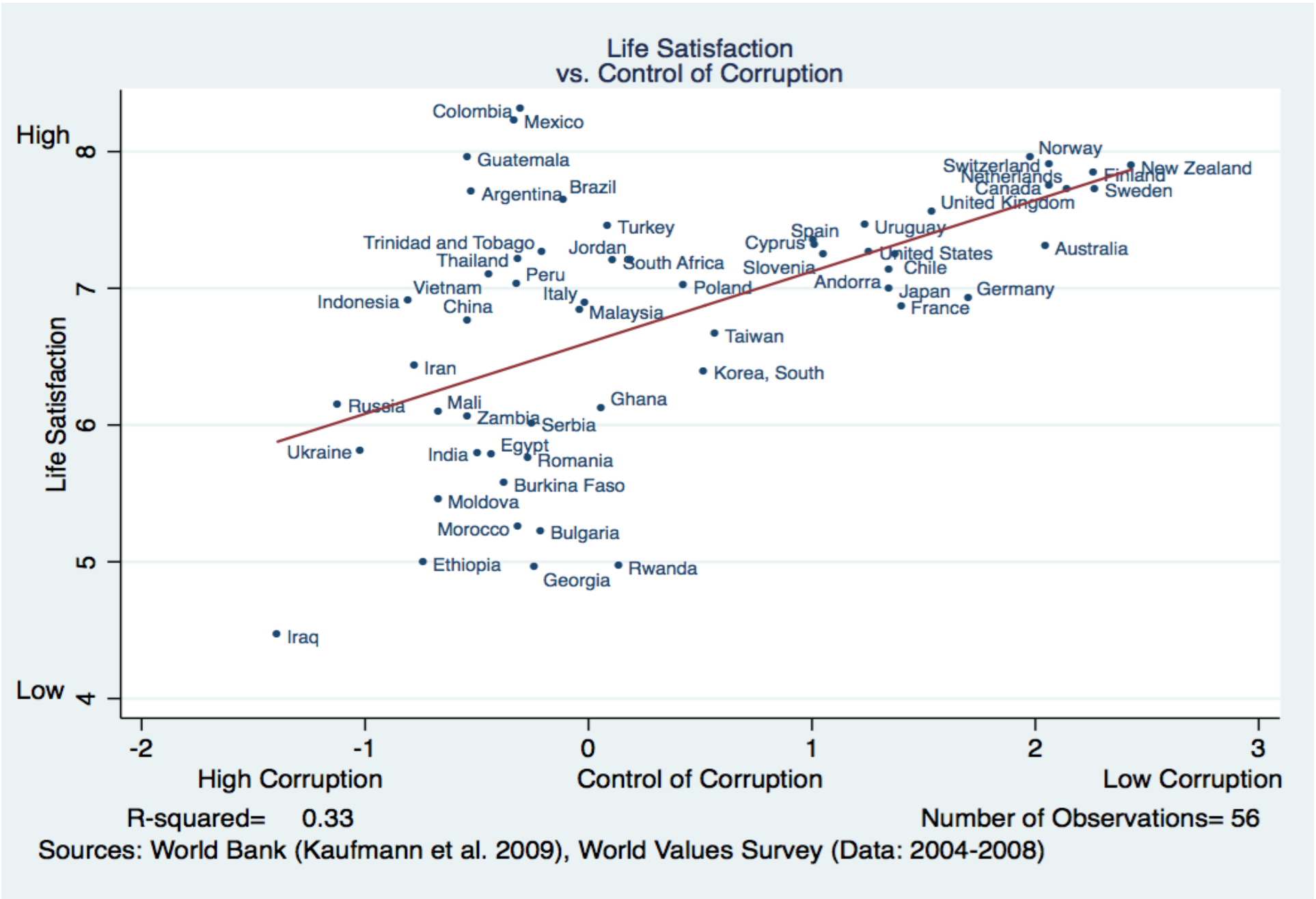
Life Satisfaction
vs. Control of Corruption
High
Low
Life Satisfaction
8
7
6
5
4
Colombia
Mexico
Guatemala
Argentina
Brazil
Turkey
Trinidad and Tobago
Jordan
Thailand
South Africa
Peru
Vietnam
Indonesia
China
Italy
Malaysia
Poland
Taiwan
Iran
Korea, South
Russia
Mali
Zambia
Serbia
Ghana
Ukraine
India
Egypt
Romania
Burkina Faso
Moldova
Morocco
Bulgaria
Ethiopia
Georgia
Rwanda
Iraq
Norway
Switzerland
Netherlands
Canada
New Zealand
Finland
Sweden
United Kingdom
Spain
Uruguay
Cyprus
United States
Australia
Slovenia
Chile
Andorra
Japan
Germany
France
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
R-squared= 0.33
Number of Observations= 56
Sources: World Bank (Kaufmann et al. 2009), World Values Survey (Data: 2004-2008)

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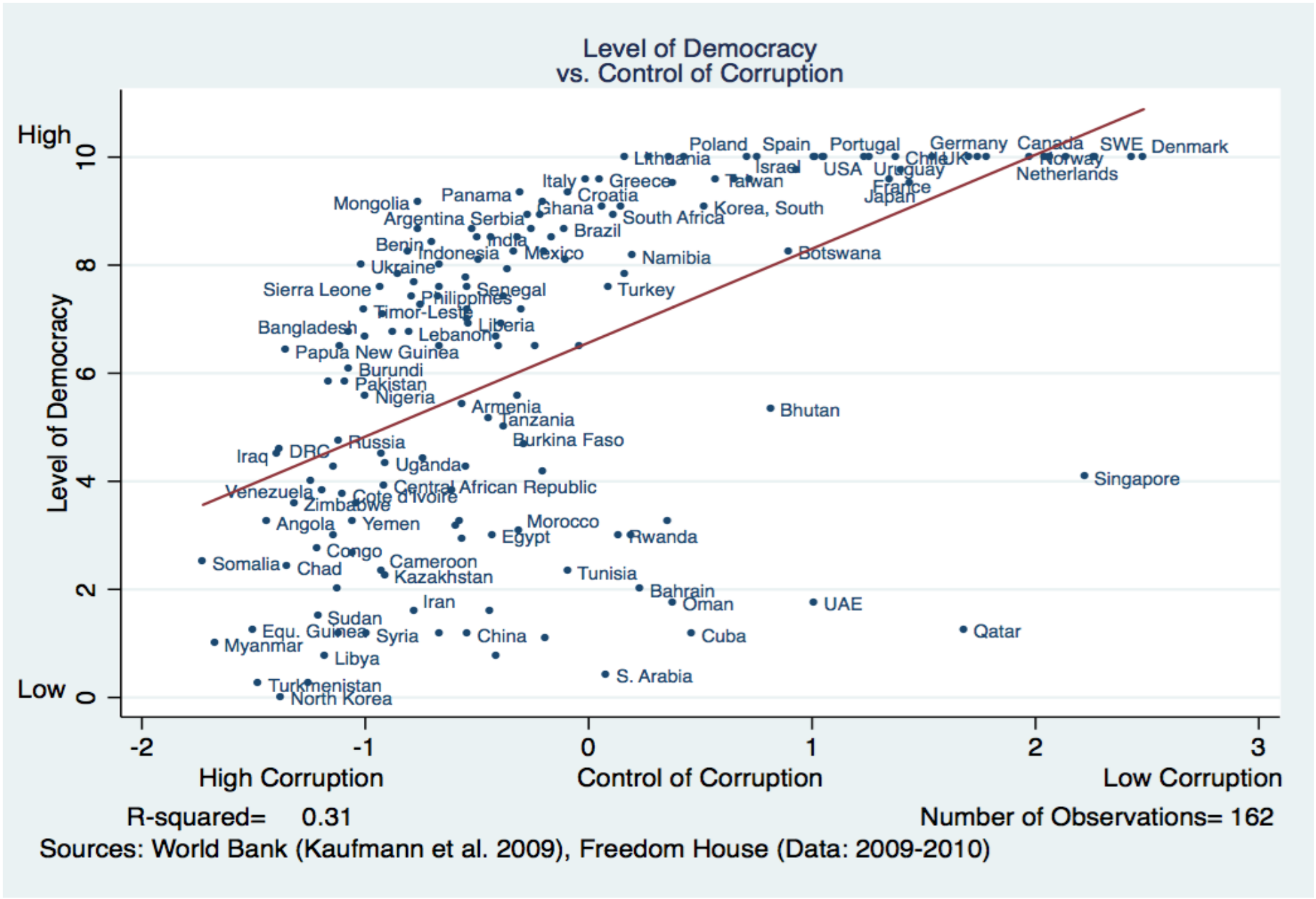
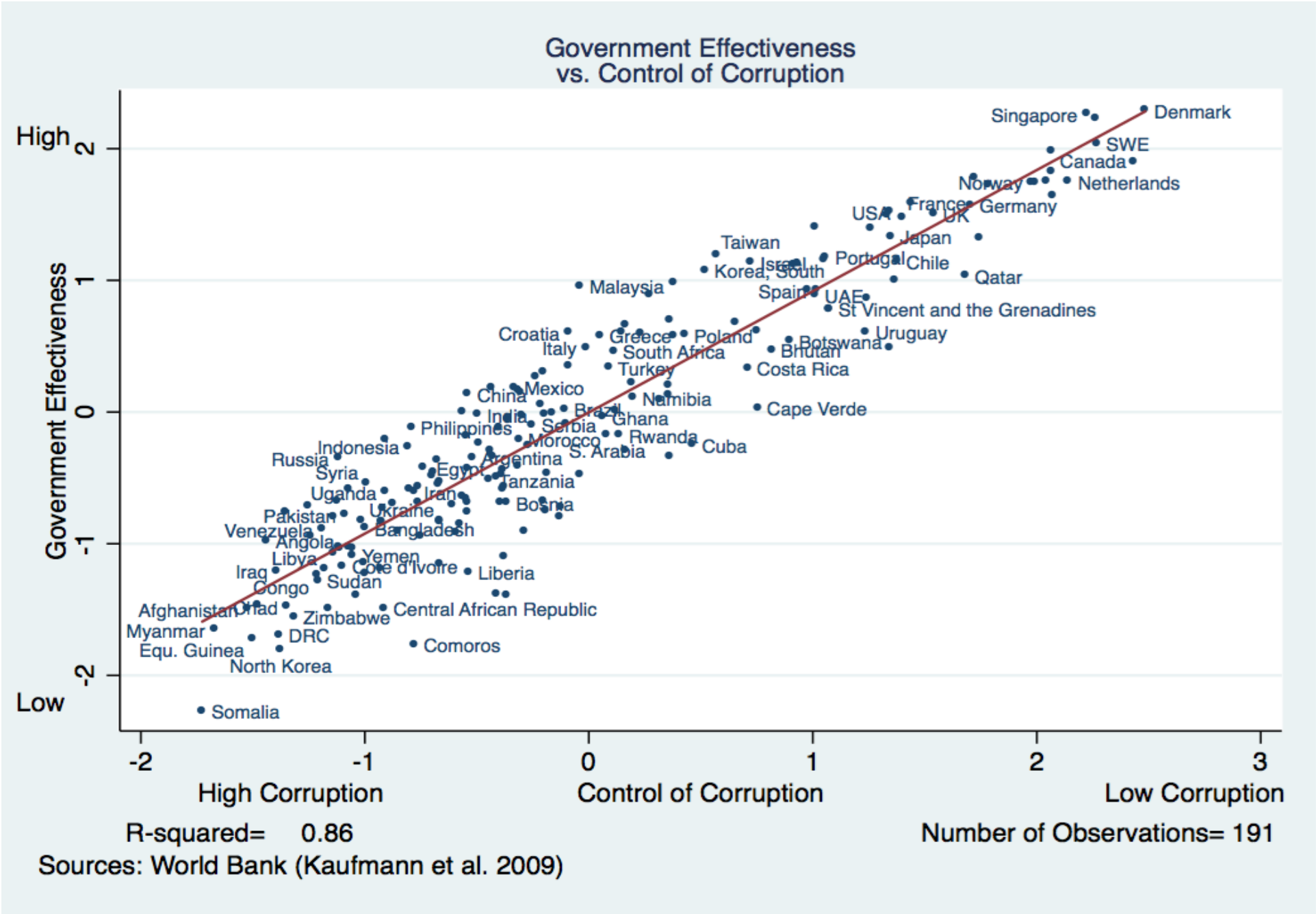

Level of Democracy
vs. Control of Corruption
High
Low
Level of Democracy
0
2
4
6
8
10
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
R-squared= 0.31
Number of Observations= 162
Sources: World Bank (Kaufmann et al. 2009), Freedom House (Data: 2009-2010)
Poland
Spain
Portugal
Germany
Canada
SWE
Denmark
Lithuania
Chile
UK
Norway
Israel
USA
Uruguay
Netherlands
France
Japan
Italy
Greece
Taiwan
Panama
Croatia
Mongolia
Ghana
Korea, South
Argentina
Serbia
South Africa
Brazil
India
Benin
Indonesia
Mexico
Namibia
Botswana
Ukraine
Sierra Leone
Senegal
Turkey
Philippines
Timor-Leste
Liberia
Bangladesh
Lebanon
Papua New Guinea
Burundi
Pakistan
Nigeria
Armenia
Bhutan
Tanzania
Burkina Faso
Russia
Iraq
DRC
Uganda
Singapore
Venezuela
Central African Republic
Cote d'Ivoire
Zimbabwe
Angola
Yemen
Morocco
Egypt
Rwanda
Congo
Somalia
Chad
Cameroon
Kazakhstan
Tunisia
Bahrain
Oman
UAE
Iran
Sudan
Equ. Guinea
Syria
China
Cuba
Qatar
Myanmar
Libya
S. Arabia
Turkmenistan
North Korea

33


Government Effectiveness
vs. Control of Corruption
Government Effectiveness
High
Low
2
1
0
-1
-2
Singapore
Denmark
SWE
Canada
Netherlands
Norway
France
Germany
USA
UK
Japan
Taiwan
Portugal
Chile
Israel
Korea, South
Qatar
Malaysia
Spain
UAE
St Vincent and the Grenadines
Uruguay
Croatia
Greece
Poland
Botswana
Italy
South Africa
Bhutan
Turkey
Costa Rica
Mexico
China
Namibia
Cape Verde
India
Brazil
Ghana
Philippines
Serbia
Morocco
Rwanda
Cuba
Indonesia
S. Arabia
Russia
Argentina
Egypt
Syria
Tanzania
Uganda
Iran
Bosnia
Pakistan
Ukraine
Venezuela
Bangladesh
Angola
Libya
Yemen
Iraq
Cote d'Ivoire
Liberia
Congo
Sudan
Afghanistan
Iraq
Zimbabwe
Central African Republic
Myanmar
DRC
Equ. Guinea
Comoros
North Korea
Somalia
-2
-1
0
1
2
3
High Corruption
Control of Corruption
Low Corruption
R-squared= 0.86
Number of Observations= 191
Sources: World Bank (Kaufmann et al. 2009)

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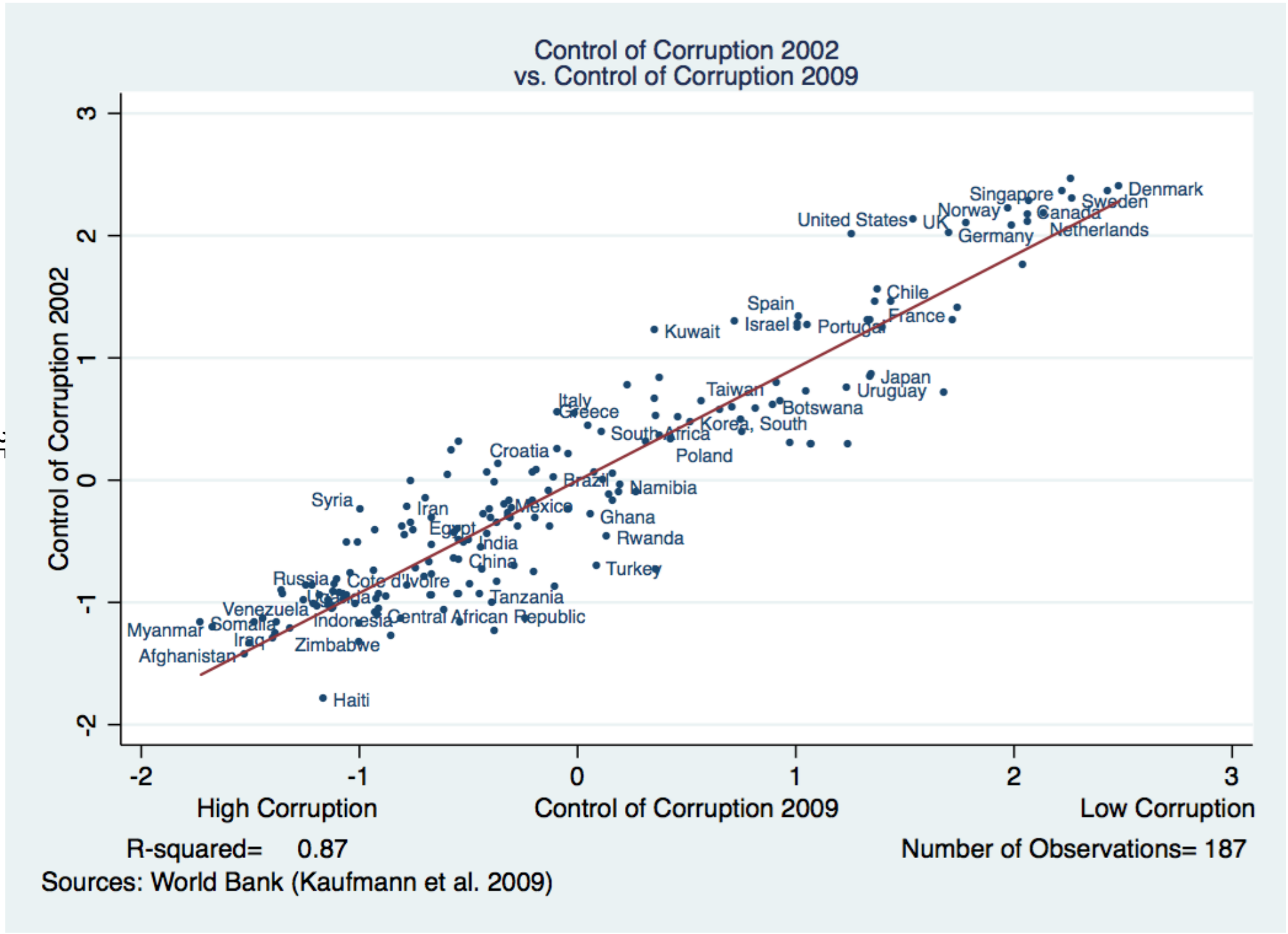
Control of Corruption 2002
vs. Control of Corruption 2009
Control of Corruption 2002
3
2
1
0
-1
-2
-2
-1
0
1
2
3
High Corruption
Control of Corruption 2009
Low Corruption
R-squared= 0.87
Number of Observations= 187
Sources: World Bank (Kaufmann et al. 2009)
Denmark
Singapore
Sweden
Norway
Canada
United States
UK
Netherlands
Germany
Chile
Spain
France
Israel
Portugal
Kuwait
Japan
Taiwan
Uruguay
Italy
Greece
Botswana
Korea, South
South Africa
Poland
Croatia
Brazil
Namibia
Syria
Iran
Mexico
Ghana
Egypt
India
Rwanda
China
Turkey
Russia
Cote d'Ivoire
Tanzania
Venezuela
Indonesia
Central African Republic
Myanmar
Somalia
Iraq
Zimbabwe
Afghanistan
Haiti

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Correlates of Corruption– Description of variables[1]

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, clerts, 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
(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

Feeling of Happiness World Values Survey

Taking all things together, how happy would you say you are?

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

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.

References

Barro, Robert and Jong-Wha Lee, April 2010, "A New Data Set of Educational Attainment in the World, 1950-2010." NBER Working Paper No. 15902

Esty, D. C. et al. 2008. 2008 Environmental Performance Index. Yale Center for Environmental Law & Policy, Center for International Earth Science Information Network (Columbia University), World Economic Forum, Joint Research Centre of the European Commission. http://epi.yale.edu/Home

Gakidou, E., Cowling, K., Lozano, R. and Murray, C.J.L. 2010. "Increased educational attainment and its effect on child mortality in 175 countries between 1970 and 2009: a systematic analysis". Lancet, 376: 959-974.

Hausmann, R., Tyson, L. D., Zahidi, S. 2012. The Global Gender Gap Report 2012, Published Online. World Economic Forum.

Helliwell, John. Layard, Richard and Sachs, Jeffrey. World Happiness Report 2013.

Heritage Foundation 2013. 2013 Index of Economic Freedom, published online. http://www.heritage.org/ January 22, 2013.

Hogan, M. C. et al. 2010. "Maternal mortality for 181 countries, 1980–2008: a systematic analysis of progress towards Millennium Development Goal 5". Lancet, 375: 1609-1623.

Kaufmann, D., Kraay, A. and Mastruzzi, M. 2009. "Governance Matters VIII: Aggregate and Individual Governance Indicators for 1996–2008". World Bank Policy Research Paper No. 4978. http://ssrn.com/abstract=1424591

Kekic, L. 2007. "The Economist Intelligence Unit's index of democracy." The Economist. The World in 2007. London.

La Porta, R., López-de-Silanes, F., Shleifer, A. and Vishny, R. 1999. The Quality of Government. Journal of Law, Economics and Organization, 15(1): 222-279.

Marshall, M. G. and Jaggers, K. Gurr, T. R. 2011. 'Polity IV Project: Political Regime Characteristics and Transitions, 1800-2011. http://www.systemicpeace.org/polity/polity4.htm, January 29, 2013

Salomon JA, Wang H, Freeman MK, Vos T, Flaxman AD, Lopez AD, Murray CJL. Healthy life expectancy for 187 countries, 1990–2010: a systematic analysis for the Global Burden Disease Study 2010. *The Lancet*. 2012 Dec 13; 380: 2144–2162.

Schwab, Klaus, "The Global Competetiveness Report 2012-2013", World Economic Forum.

Teorell, Jan. Carl Dahlström & Stefan Dahlberg. 2011. The QoG Expert Survey Dataset. University of Gothenburg: The Quality of Government Institute. http://www.qog.pol.gu.se

Teorell, Jan, Nicholas Charron, Stefan Dahlberg, Sören Holmberg, Bo Rothstein, Petrus Sundin & Richard Svensson. 2013. The Quality of Government Dataset, version 20Dec13. University of Gothenburg: The Quality of Government Institute, http://www.qog.pol.gu.se

Transparency International. 2012. Corruption perception Index 2012, published online. http://www.transparency.org/research/cpi/overview . January 29, 2013.

UNDP 2013. Human Development Report 2013. "The Rise of the South: Human Progress in a Diverse World". Published online.

UNODC. United Nations Office on Drugs and Crime. http://www.unodc.org/unodc/

World Bank 2013. World Development Indicators. Washington DC: The World Bank Group, Published Online, January 24, 2013.

World Values Survey Association 2009.

World Values Survey 1981-2008 Official Aggregate v.20090901. Aggregate File Producer: ASEP/JDS, Madrid. http://www.worldvaluessurvey.org/