

# Statistical Appendix 2 for Chapter 2 of World Happiness Report 2019, by John F. Helliwell, Haifang Huang and Shun Wang

March 7, 2019

## 1 Data Sources

- Subjective well-being (SWB): A country-year panel of average survey measures of SWB derived from the January, 2019 release of the Gallup World Poll (GWP) covering years from 2005 to 2018, as well the special GWP surveys for a few countries in 2018. The SWB measure, unless stated otherwise, is the national average response to the question of life evaluations. The English wording of the question is “Please imagine a ladder, with steps numbered from 0 at the bottom to 10 at the top. The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time?” This measure is referred to as *Cantril life ladder*, or just *life ladder* in our analysis.
- WGI indicators of governance quality: A country-year panel of governance indicators from the Worldwide Governance Indicators (WGI) project (Kaufmann, Kraay and Mastruzzi; last update: September 21, 2018) covering years up to 2017. According to the source, the WGI indicators “combine the views of a large number of enterprise, citizen and expert survey respondents in industrial and developing countries. They are based on over 30 individual data sources produced by a variety of survey institutes, think tanks, non-governmental organizations, international organizations, and private sector firms.” The WGI project provides data for more than 210 economies over the period 1996 - 2017. For our analysis we use observations that overlap with our panel of subjective well-being. There are six dimensions of governance in the WGI: Voice and Accountability, Political Stability and Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, Control of Corruption. The indicators are on a scale roughly with mean zero and a standard deviation of 1. In places where we need to further reduce the number of dimensions, we use the simple average of the first two measures as an indicator of democratic quality,

and the simple average of the other four measures as an indicator of delivery quality, following Helliwell and Huang (2008).

- Gallup’s National institutions Index and its components from the 2005-2018 Gallup World Poll. We use primarily WP139, confidence in the national government. According to Gallup’s Worldwide Research Methodology and Codebook (June 2013), “[t]he national institutions index reflects citizens’ confidence in key institutions prominent in a country’s leadership: the military, the judicial system, the national government, and the honesty of elections.” The index questions are “Do you have confidence in each of the following, or not? How about the military? (WP137)”, “Do you have confidence in each of the following, or not? How about the judicial system and courts? (WP138)”, “Do you have confidence in each of the following, or not? How about the national government? (WP139)” and “Do you have confidence in each of the following, or not? How about honesty of elections? (WP144)”. Our analysis uses primarily WP139, confidence in the national government.
- Deaths in three types of conflicts – armed conflicts, non-state conflicts and one-sided violence – in the years between 1989 and 2017 are derived from data published by the Uppsala Conflict Data Program (UCDP). According to UCDP definitions (<https://www.pcr.uu.se/research/ucdp/definitions/>), an armed conflict is a “state-based armed conflict is a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths in one calendar year.” A non-state conflict is the “use of armed force between two organised armed groups, neither of which is the government of a state, which results in at least 25 battle-related deaths in a year.” One-sided violence is the “use of armed force by the government of a state or by a formally organised group against civilians which results in at least 25 deaths in a year.”
  - For a country in a year, the value of the variable “conflictDeaths” is the sum of the “best” estimates of total deaths across all events that happened in the year in the country, as recorded in the UCDP Georeferenced Event Dataset (GED) Global version 18.1 (2017), which covers the 1989-2017 period. The death counts include those of participants in the conflicts as well as those of civilians. But with state-based conflicts, the UCDP counts only deaths that are a direct result of the fighting (deaths from gunfire, artillery, combat etc.) Deaths indirectly caused by the conflict, such as deaths resulting from a conflict-induced disease, famine, or neglect of social support, are not counted by the UCDP. The estimates of civilian deaths, therefore, are likely on the conservative side relative to those of conflict participants. Overall, the UCDP indicates that their death estimates are generally among the most conservative estimates available; this is because the UCDP uses highly selective criteria for the verification of counted deaths.

- GED records deaths from acts of terrorism; their classification depends on the targets and perpetrators. In the case of the events that happened within the U.S. border (see below), they are all classified as one-sided violence.
- Lone wolf attacks are not recorded because they are not acts of formally organised groups. One example is Omar Mateen’s killing of 49 people at a Orlando night club. Oklahoma City bombing, which killed 168 people, is not recorded either. The UCDP will record deaths resulting from terrorist attacks provided that they can verify (1) that the attack was committed on behalf of an organized group, and (2) that they can identify what group was responsible. According to UCDP, when the alleged perpetrating group’s claim of responsibility is unclear or dubious, the event will not be included.
- Deaths from gun violence, such as mass shootings in schools and offices, are not recorded unless they are acts on behalf of an organised group.
- For examples, only 5 events are recorded to have happened in the U.S. since 1989 in GED: Three of them are attacks on September 11, 2001 in New York City, at the Pentagon, and at the United Airlines Flight 93 crash site, respectively. The other two are the attack by Syed Farook and Tashfeen Malik in San Bernardino in 2015 and the attack by Sayfullo Saipov in New York in 2017.
- Another example: In Canada, the only deaths recorded in the GED are those from the Hells Angels – Rock Machine biker war between 1994 and 2001.
- The key variable used in our analysis is deaths in current year per 100k current population (variable name `rateconflictDeaths`). Other variables indicating the death rate in the past 3, 5 and 10 years are created and used in some analysis as well.
- The Georeferenced Event Dataset (GED) does not cover Syria. As a result, the country’s death-in-conflict variables are all set to be missing.
- GED identifies locations of events at very detailed geographical levels. For example, for events in the Gaza Strip, the GED location identifiers include the country of Israel, the administrative division of Gaza Strip, and other more detailed geographical information. In the Gallup World Poll, Israel and the Palestinian Territory are regarded as two separate country/territories. For consistency with the Gallup data, we attribute deaths in the Gaza Strip (and the West Bank) to the Palestinian Territory as opposed to Israel. We follow the same principle and divide the deaths between Serbia and Kosovo. Somalia and Somaliland are both assigned missing values for the conflict variables.
- Taiwan and Hong Kong Territories of China: GED did not record any events in these territories. Their death-in-conflict variables are all set to be zero.

- A sizable number of countries (43 to be exact, listed below) did not show up in the Georeferenced Event Dataset (GED) at all. Most of them have stable political environments (or at least not known for conflicts or border changes). Their absence in the data base likely reflect absence of conflict events. But there are also several countries in eastern Europe, some of which are part of the former Soviet block, that are known for drastic transitions, changes in borders and even changes in country names. It is not clear whether their absence in the database reflect absence of conflicts or other reasons. The death-in-conflict variables are all zero (ie it is assumed that there have been no conflicts) for these countries.
  - \* The list of countries that are absent in the GED: Australia, Austria, Belarus, Belize, Benin, Bulgaria, Chile, Costa Rica, Cuba, Cyprus, Czech Republic, Denmark, Dominican Republic, Estonia, Finland, Gabon, Greece, Hungary, Iceland, Ireland, Japan, Kazakhstan, Latvia, Lithuania, Luxembourg, Malawi, Mauritius, Mongolia, Montenegro, New Zealand, Norway, Oman, Poland, Portugal, Singapore, Slovakia, Slovenia, South Korea, Suriname, Switzerland, Turkmenistan, Uruguay, Vietnam
- Global Peace Index from the Institute for Economics and Peace (IEP) that ranks 163 states and territories according to their “state of peace using three thematic domains: the level of Societal Safety and Security; the extent of On-going Domestic and International Conflict; and the degree of Militarisation.” More information is available at <http://www.visionofhumanity.org/>. The data begin from 2008; the latest year is 2018. The index is in a descending order, so that a lower value means a better state of peace.
- Political Rights (pr) and Civil Liberties (cl) indices are from the Freedom House. The index of political rights measures the electoral process, political pluralism and participation, and functioning of the government. The index of civil liberties is intended to measure the freedom of expression and belief, the associational and organizational rights, the rule of Law, and personal autonomy and individual rights. The indices are on a 40-point scale for political rights and a 60-point scale for civil liberties. A higher value means greater rights or freedom. In our analysis we standardize the scale of the indicators to have a mean zero and a standard deviation of 1 in each year. As the result, the indices measure the relative ranking of a country in the world distribution in each year. For these particular indicators, an increase means a relative improvement in governance quality.
- Corruption Perception Index (cpi) is from the Transparency International. This index reflects the perceived degree of corruption in public sectors. According to the source, “[t]he index, which ranks 180 countries and territories by their perceived levels of public sector corruption according to experts and business-people, uses a scale of 0 to 100, where 0 is highly corrupt and 100 is very clean.

” In our analysis we standardize the scale of the indicator to have a mean zero and a standard deviation of 1 in each year. As the result, the index measures the relative ranking of a country in the world distribution in each year. For this particular indicator, an increase means a relative improvement in governance quality.

- World Press Freedom Index (wpfi) from the Reporters without Borders. This index tries to capture the level of freedom that journalists, news organizations, and netizens enjoy, and authorities’ efforts to respect and ensure respect for this freedom. The index is on a descending scale with a lower score indicating a greater degree of freedom. In our analysis we standardize the scale of the indicator to have a mean zero and a standard deviation of 1 in each year. As the result, the index measures the relative ranking of a country in the world distribution in each year. For this particular indicator, an increase means a relative deterioration in governance quality.
- Index of Economic Freedom (wefi) from the Heritage Foundation. This index indicates the degree of economic freedom on a scale of 0 to 100 on an ascending scale with 100 indicating maximum freedom. The index considers ten components of freedom in four broad categories: Rule of Law (property rights, government integrity, judicial effectiveness), Government Size (government spending, tax burden, fiscal health), Regulatory Efficiency (business freedom, labor freedom, monetary freedom) and Open Markets (trade freedom, investment freedom, financial freedom). In our analysis we standardize the scale of the indicator to have a mean zero and a standard deviation of 1 in each year. As the result, the index measures the relative ranking of a country in the world distribution in each year. For this particular indicator, an increase means a relative improvement in governance quality.
- Democracy: An indicator of democracy from the *Quality of Government Standard Dataset* (version January 2015), by Teorell, Jan, Stefan Dahlberg, Sren Holmberg, Bo Rothstein, Natalia Alvarado Pachon & Richard Svensson. 2019. University of Gothenburg: The Quality of Government Institute. Variable ”ht\_regtype”. The indicator equals 1 if a country in a year is a democracy. It is zero otherwise. The most recent observation is 2014. We extend the data to 2018 by assigning years after 2014 to use the 2014 value.
- An indicator for proportional-representation democracy: it is based on information from the *Quality of Government Standard Dataset* and information from the Institute for Democracy and Electoral Assistance’s (International IDEA) Electoral System Design Database (Accessed January 2019). The indicator is 1 if the country in a particular year is regarded as a democracy in the *Quality of Government Standard Dataset* and has a proportional voting system according to the International IDEA. Otherwise it equals to 0. From the website of the International IDEA, we obtain the information on voting systems both for the most recent election and for elections in the early 2000s. A small number of

countries experienced changes during the period. For such countries interpolation is used for years between two different voting system. Hypothetically, let's say a country switched from a non-PR system in 2005 to a PR system in 2015. Its PR indicator equals zero in 2005 and the years before then. It then increases gradually when moving towards 2015 (when PR=1). The indicator equals to 1 in and after the year 2015. In case when the most recent observation is before 2018 (the last year in our analysis), we assume there is no change after the most recent election, and assign all years after that to use the value associated with the most recent election.

- An indicator for presidential democracy and a dummy indicator for parliamentary democracy: they are based on information from the *Quality of Government Standard Dataset* and information reported in “Democratic Electoral Systems around the world, 1946-2011” by Nils-Christian Bormann and Matt Golder (2013), *Electoral Studies* (32) pp360–369. A country is a presidential democracy if it is described as a presidential democracy in Nils-Christian Bormann and Matt Golder (2013), and is regarded as a democracy in the *Quality of Government Standard Dataset*. Otherwise it is 0. The indicator for presidential democracy is similarly derived. In case of missing values, we use the same interpolation and extrapolation method that we use for the indicator of proportional-representation democracy described earlier.
- General government tax revenues (% GDP) is from the World Bank Open Data (Source: IMF GFS, World Bank and OECD) Table Number GC.TAX.TOTL.GD.ZS. We use interpolation and extrapolation method to fill in the missing years.
- General government final consumption expenditure (% GDP) is from the World Bank Open Data (Source: IMF GFS, World Bank and OECD) Table Number NE.CON.GOV.T.ZS. We use interpolation and extrapolation method to fill in the missing years.
- General government total education expenditure (% GDP) is from the World Bank World Development Indicators Table Number SE.XPD.TOTL.GD.ZS. We use interpolation and extrapolation method to fill in the missing years.
- General government total domestic healthcare expenditure (% GDP) is from the World Bank World Development Indicators Table Number SH.XPD.GHED.GD.ZS. We use interpolation and extrapolation method to fill in the missing years.
- Social security net coverage, 1-10, in 2015 is from the *Quality of Government Standard Dataset* described earlier, Variable “bti\_ssn”. This is a one-year observations. We assign the 2015 value to all years from 2005 to 2018 (our sample years).
- Total Military Expenditure (% GDP): World Bank Table MS.MIL.XPND.GD.ZS. Definition of military expenditure is derived from NATO definitions and include all capital expenditures, explicit military deployments, peacekeeping operations,

and defence ministry administrative costs. Original source: Stockholm International Peace Research Institute (SIPRI)

- Ethnic fractionalization index, linguistic fractionalization index and religious fractionalization index, taken from the *Quality of Government Standard Dataset* described above, are from Alberto Alesina, Arnaud Devleeschauwer, William Easterly, Sergio Kurlat, and Romain Wacziarg (2003) “Fractionalization”, *Journal of Economic Growth*, June 2003, Volume 8, Issue 2, pp 155–194, Their variable names in the Quality of Government Standard Dataset are “al\_ethnic”, “al\_language”, and “al\_religion”, respectively.
- See appendix 1 for information about other variables.

## **2 Sample Coverage, Summary Statistics and Bivariate Correlations**

The Gallup World Poll (GWP) data cover years from 2005 to 2018. But not all data from other sources cover that entire sample. The Worldwide Governance Indicators (WGI) indicators and the Uppsala conflict data, for example, cover up to the year 2017. By and large, our analyses that involve data from outside the GWP cover years from 2005 to 2017. A few regressions that involve the Global Peace Index starts from 2008, the first year with available data.

Table 1: Summary Statistics for Key Variables - 2005-2018 Pooled Sample. Note the indices of political rights, civil liberties, corruption perception, press freedom and economic freedom are still in their original respective scales. In later regression analysis their scales are standardized to have a mean of 0 and a SD of 1

Variable	Mean	Std. Dev.	Min.	Max.	N
Year	2012.28	3.681	2005	2018	1676
Life Ladder	5.44	1.122	2.662	8.019	1676
Per-capita GDP	18064.595	18444.241	637.275	129349.914	1676
Democratic Quality	-0.129	0.867	-2.263	1.575	1548
Delivery Quality	0.004	0.97	-1.963	2.185	1549
WP139 confidence in the national government?	0.482	0.192	0.069	0.994	1504
Healthy life expectancy at birth - updated	63.135	7.563	32.3	76.5	1664
Freedom to make life choices	0.733	0.144	0.258	0.985	1647
Generosity - adjusted for GDP	0	0.163	-0.336	0.678	1622
Social support	0.811	0.119	0.29	0.987	1663
Corruption Perception Index	42.926	20.682	8	96	1501
Political Rights	24.311	12.307	-1	40	1400
Civil Liberties	36.881	15.524	3	60	1400
World Press Freedom Index	31.637	22.607	-10	140.67	1537
Index of Economic Freedom	61.481	10.243	21.4	90.143	1620
Control of Corruption	-0.058	1.022	-1.715	2.465	1549
Government Effectiveness	0.035	0.983	-2.35	2.437	1549
Regulatory Quality	0.083	0.963	-2.274	2.261	1549
Rule of Law	-0.044	1.002	-2.255	2.1	1549
Voice and Accountability	-0.048	0.953	-2.259	1.74	1549
Political Stability, Absence of Violence/Terrorism	-0.21	0.948	-2.81	1.593	1548
Conflict deaths per 100k population	0.856	4.533	0	55.443	1543
Global Peace Index	2.063	0.456	1.091	3.698	1416
Democracy, QGI	0.563	0.496	0	1	1604
Proprtional Represenation	0.294	0.441	0	1	1577
Parliamentary Democracy	0.336	0.47	0	1	1500
Govt tax, perc GDP	16.366	8.002	-11.693	102.36	1392
Govt consumption, perc GDP	15.63	5.194	-7.850	36.699	1622
Govt education exp., perc GDP	4.491	2.257	-9.089	21.488	1444
Govt healthcare exp., perc GDP	3.516	2.343	-3.896	10.162	1626
Safety net coverage, 1-10	5.194	1.947	1	10	1298
Military exp., perc GDP	1.794	1.509	-4.057	13.496	1638
Ethnic fractionalization	0.431	0.259	0	0.930	1467
Linguistic fractionalization	0.38	0.287	0.002	0.923	1405
Religious fractionalization	0.44	0.226	0.003	0.86	1467

Table 2: Correlation Coefficients - 2005-2018 Pooled Sample - Part 1 of 3

Variables	Ladder	LogPerCapitaGDP	Democratic	Delivery	HealthyLE	Freedom	Generosity	SocialSupport	ConflictDeathsRate	PeaceIndex
Ladder	1.00									
LogPerCapitaGDP	0.78	1.00								
Democratic	0.61	0.63	1.00							
Delivery	0.71	0.77	0.86	1.00						
HealthyLE	0.74	0.83	0.60	0.72	1.00					
Freedom	0.52	0.36	0.46	0.49	0.37	1.00				
Generosity	0.20	-0.00	0.14	0.22	0.04	0.35	1.00			
SocialSupport	0.70	0.67	0.53	0.54	0.60	0.41	0.07	1.00		
ConflictDeathsRate	-0.19	-0.15	-0.31	-0.22	-0.16	-0.16	0.02	-0.22	1.00	
PeaceIndex	-0.46	-0.46	-0.83	-0.69	-0.48	-0.43	-0.13	-0.43	0.43	1.00

Table 3: Correlation Coefficients of changes from 2005-2008 to 2016-2018 - Part 1 of 3

Variables	Ladder	LogPerCapitaGDP	Democratic	Delivery	HealthyLE	Freedom	Generosity	SocialSupport	ConflictDeathsRate	PeaceIndex
Ladder	1.00									
LogPerCapitaGDP	0.32	1.00								
Democratic	0.16	0.39	1.00							
Delivery	0.33	0.52	0.42	1.00						
HealthyLE	-0.13	0.11	-0.03	0.00	1.00					
Freedom	0.40	0.24	0.15	0.31	0.14	1.00				
Generosity	0.11	0.02	-0.01	0.16	0.20	0.26	1.00			
SocialSupport	0.41	0.16	0.07	0.27	-0.11	0.18	0.04	1.00		
ConflictDeathsRate	-0.18	-0.17	-0.18	-0.10	-0.01	-0.21	-0.09	-0.14	1.00	
PeaceIndex	-0.20	-0.23	-0.59	-0.26	0.01	-0.14	0.03	0.04	0.30	1.00

Table 4: Correlation Coefficients - 2005-2018 Pooled Sample - Part 2 of 3

Variables	LogPerCapitaGDP	Democratic	Delivery	ControlCorrupt	Effectiveness	Regulation	RuleOfLaw	Voice	Stability	ConflictDeathsRate	PeaceIndex
LogPerCapitaGDP	1.00										
Democratic	0.63	1.00									
Delivery	0.77	0.86	1.00								
ControlCorrupt	0.72	0.84	0.97	1.00							
Effectiveness	0.80	0.82	0.98	0.94	1.00						
Regulation	0.74	0.83	0.97	0.90	0.94	1.00					
RuleOfLaw	0.75	0.86	0.99	0.96	0.96	0.94	1.00				
Voice	0.55	0.91	0.82	0.79	0.77	0.82	0.81	1.00			
Stability	0.60	0.91	0.75	0.74	0.73	0.70	0.75	0.66	1.00		
ConflictDeathsRate	-0.15	-0.31	-0.22	-0.20	-0.22	-0.22	-0.22	-0.19	-0.38	1.00	
PeaceIndex	-0.46	-0.83	-0.69	-0.69	-0.65	-0.64	-0.71	-0.64	-0.87	0.43	1.00

Table 5: Correlation Coefficients of changes from 2005-2008 to 2016-2018 - Part 2 of 3

Variables	LogPerCapitaGDP	Democratic	Delivery	ControlCorrupt	Effectiveness	Regulation	RuleOfLaw	Voice	Stability	ConflictDeathsRate	PeaceIndex
LogPerCapitaGDP	1.00										
Democratic	0.39	1.00									
Delivery	0.52	0.42	1.00								
ControlCorrupt	0.44	0.27	0.84	1.00							
Effectiveness	0.47	0.33	0.85	0.60	1.00						
Regulation	0.43	0.37	0.85	0.59	0.62	1.00					
RuleOfLaw	0.45	0.47	0.88	0.67	0.67	0.66	1.00				
Voice	0.29	0.62	0.44	0.43	0.25	0.34	0.49	1.00			
Stability	0.35	0.94	0.32	0.15	0.29	0.30	0.36	0.32	1.00		
ConflictDeathsRate	-0.17	-0.18	-0.10	-0.02	-0.11	-0.14	-0.05	-0.04	-0.20	1.00	
PeaceIndex	-0.23	-0.59	-0.26	-0.13	-0.15	-0.27	-0.33	-0.32	-0.58	0.30	1.00

Table 6: Correlation Coefficients - 2005-2018 Pooled Sample - Part 3 of 3

Variables	Democratic	Delivery	ConfidenceInGov	CorruptPerception	PolitRights	CivilRights	PressFreedom	EconFreedom	ConflictDeathsRate	PeaceIndex
Democratic	1.00									
Delivery	0.86	1.00								
ConfidenceInGov	-0.13	-0.04	1.00							
CorruptPerception	0.83	0.97	0.01	1.00						
PolitRights	0.84	0.69	-0.30	0.63	1.00					
CivilRights	0.90	0.77	-0.27	0.70	0.95	1.00				
PressFreedom	-0.72	-0.54	0.26	-0.52	-0.73	-0.76	1.00			
EconFreedom	0.71	0.87	-0.05	0.81	0.56	0.65	-0.46	1.00		
ConflictDeathsRate	-0.31	-0.22	-0.02	-0.19	-0.18	-0.22	0.17	-0.10	1.00	
PeaceIndex	-0.83	-0.69	0.00	-0.69	-0.57	-0.64	0.53	-0.56	0.43	1.00

Table 7: Correlation Coefficients of changes from 2005-2008 to 2016-2018 - Part 3 of 3

Variables	Democratic	Delivery	ConfidenceInGov	CorruptPerception	PolitRights	CivilRights	PressFreedom	EconFreedom	ConflictDeathsRate	PeaceIndex
Democratic	1.00									
Delivery	0.42	1.00								
ConfidenceInGov	0.11	0.32	1.00							
CorruptPerception	0.27	0.67	0.26	1.00						
PolitRights	0.38	0.26	0.11	0.23	1.00					
CivilRights	0.36	0.24	0.10	0.12	0.76	1.00				
PressFreedom	-0.43	-0.28	-0.08	-0.16	-0.25	-0.19	1.00			
EconFreedom	0.14	0.60	0.28	0.43	0.17	0.17	-0.08	1.00		
ConflictDeathsRate	-0.18	-0.10	-0.11	-0.09	-0.32	-0.21	-0.01	-0.01	1.00	
PeaceIndex	-0.59	-0.26	-0.04	-0.16	-0.24	-0.35	0.12	-0.15	0.30	1.00

Table 8: Correlation Coefficients - Cross section of countries, part 1

Variables	Ladder	Democracy	Proprtional Rep.	Parliamentary	GovtEducation	GovtHealthcare	SafetyNet	GovtMilitary	Ethnic frac.	Linguistic frac.
Ladder	1.00									
Democracy	0.50	1.00								
Proprtional Rep.	0.32	0.42	1.00							
Parliamentary	0.45	0.69	0.25	1.00						
GovtEducation	0.25	0.36	0.06	0.33	1.00					
GovtHealthcare	0.71	0.56	0.30	0.62	0.37	1.00				
SafetyNet	0.67	0.45	0.27	0.47	0.19	0.63	1.00			
GovtMilitary	-0.02	-0.26	-0.09	-0.15	-0.08	-0.09	0.07	1.00		
Ethnic frac.	-0.11	-0.12	-0.13	-0.04	-0.07	-0.10	-0.20	-0.08	1.00	
Linguistic frac.	-0.26	-0.26	-0.25	-0.15	-0.09	-0.19	-0.20	-0.08	0.70	1.00

Table 9: Correlation Coefficients - Cross section of countries, part 2

Variables	Ladder	GovtTax	GovtConsumption	GovtEducation	GovtHealthcare	SafetyNet	GovtMilitary	Ethnic frac.	Linguistic frac.	Religious frac.
Ladder	1.00									
GovtTax	0.11	1.00								
GovtConsumption	0.24	0.35	1.00							
GovtEducation	0.25	0.33	0.49	1.00						
GovtHealthcare	0.71	0.23	0.49	0.37	1.00					
SafetyNet	0.67	-0.03	0.27	0.19	0.63	1.00				
GovtMilitary	-0.02	0.09	0.15	-0.08	-0.09	0.07	1.00			
Ethnic frac.	-0.11	-0.01	0.02	-0.07	-0.10	-0.20	-0.08	1.00		
Linguistic frac.	-0.26	-0.06	-0.03	-0.09	-0.19	-0.20	-0.08	0.70	1.00	
Religious frac.	-0.18	-0.07	-0.10	-0.08	-0.14	-0.16	0.07	0.11	0.18	1.00

### 3 Regression Outputs

Table 10: Subjective Well-being and Quality of Government Measured by WGI Indicators of Governance, Sample Period 2005-2017

	c1	c2	c3	c4	c5	c6	c7	c8	c9	c10	c11	c12
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Democratic Quality	0.03 (0.13)	0.11 (0.11)	0.02 (0.1)	-.05 (0.12)	-.08 (0.1)	-.14 (0.09)	0.19 (0.13)	0.12 (0.12)	0.09 (0.11)	0.07 (0.11)	0.13 (0.13)	0.1 (0.11)
Delivery Quality	0.79 (0.12)***	0.15 (0.12)	0.06 (0.11)	0.64 (0.13)***	0.34 (0.13)***	0.29 (0.1)***	0.69 (0.2)***	0.45 (0.19)**	0.28 (0.17)*	0.39 (0.18)**	0.42 (0.18)**	0.38 (0.18)**
Logged GDP		0.4 (0.07)***	0.32 (0.06)***		0.42 (0.07)***	0.32 (0.06)***		0.84 (0.23)***	0.77 (0.2)***	0.79 (0.23)***	0.89 (0.23)***	0.78 (0.21)***
Healthy life expectancy at birth - updated		0.04 (0.01)***	0.03 (0.01)***		0.006 (0.01)	0.004 (0.01)						
Freedom to make life choices			1.25 (0.3)***			0.96 (0.28)***			0.92 (0.21)***	1.10 (0.22)***		
Generosity			0.73 (0.27)***			0.58 (0.27)**			0.29 (0.18)		0.33 (0.2)	
Social support			2.29 (0.35)***			1.94 (0.34)***			1.61 (0.29)***			1.83 (0.28)***
Central and Eastern Europe				-.74 (0.18)***	-.72 (0.18)***	-.45 (0.16)***						
Commonwealth of Independent States				-.39 (0.33)	-.36 (0.3)	-.31 (0.22)						
Southeast Asia				-.55 (0.21)***	-.40 (0.21)*	-.60 (0.16)***						
South Asia				-.95 (0.26)***	-.56 (0.31)*	-.41 (0.37)						
East Asia				-.82 (0.19)***	-.87 (0.19)***	-.76 (0.22)***						
Latin America and Caribbean				0.28 (0.22)	0.34 (0.21)	0.28 (0.18)						
North America and ANZ				0.29 (0.1)***	0.37 (0.12)***	0.2 (0.1)**						
Middle East and North Africa				-.42 (0.24)*	-.56 (0.23)**	-.39 (0.22)*						
Sub-Saharan Africa				-1.30 (0.23)***	-.68 (0.3)**	-.60 (0.28)**						
Obs.	1548	1537	1458	1548	1537	1458	1548	1548	1469	1519	1495	1535
e(N-clust)	162	161	159	162	161	159	162	162	160	162	161	161
R <sup>2</sup>	0.51	0.66	0.74	0.71	0.76	0.8	0.08	0.11	0.19	0.15	0.12	0.16

Notes: Notes 1). Columns (1) to (3) show estimates from pooled regressions with year fixed effects but without regional or country fixed effects. Columns (4) to (6) are from the same pooled regressions but with the addition of regional fixed effects. Columns (7) to (9) are from panel regressions with country fixed effects, in addition to the year fixed effects that are present in all the 9 regressions. Columns (10) to (12) repeat Columns (7) to (9) with only one of the three social variables, instead of including them all at once. For the last six columns, within country r-squared are reported. 2) Standard errors in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at 10 percent, 5 percent and 1 percent levels. All standard errors are cluster-adjusted at the country level. 3) the r-squared from pooled regressions are not comparable to those from country fixed effect regressions. The calculation of the latter does not take into account the variations across countries, and focuses solely on variations within a country over time. 4). All regressions include year fixed effects.

Table 11: Subgroup Analysis Comparing Countries With High Delivery Quality and Countries With Low Delivery Quality, Country Fixed Effects Regressions, Sample Period 2005-2017

	HighD	LowD	HighD2	LowD2	HighD3	LowD3	HighDbf12	LowDbf12	HighDbf12B	LowDbf12B
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Democratic Quality	0.02 (0.2)	0.23 (0.15)	-.04 (0.16)	0.19 (0.14)	0.06 (0.21)	0.13 (0.13)	0.65 (0.23)***	0.16 (0.19)	0.87 (0.24)***	0.07 (0.15)
Delivery Quality	0.7 (0.26)***	0.71 (0.27)***	0.27 (0.24)	0.56 (0.27)**	0.21 (0.25)	0.33 (0.22)	0.26 (0.33)	0.62 (0.28)**	0.07 (0.34)	0.39 (0.27)
Logged GDP			1.60 (0.38)***	0.51 (0.29)*	1.25 (0.35)***	0.58 (0.27)**	1.39 (0.57)**	0.3 (0.44)	1.40 (0.55)**	0.81 (0.42)*
Freedom to make life choices					0.45 (0.32)	1.02 (0.27)***			0.54 (0.38)	1.01 (0.31)***
Generosity					0.65 (0.22)***	0.17 (0.24)			0.76 (0.28)***	0.04 (0.28)
Social support					2.56 (0.69)***	1.43 (0.32)***			1.62 (0.73)**	1.46 (0.37)***
Obs.	620	928	620	928	580	889	339	509	306	480
e(N-clust)	62	100	62	100	61	99	61	98	60	97
$R^2$	0.08	0.1	0.18	0.1	0.25	0.19	0.2	0.1	0.24	0.21

Notes: 1) The sample is split by whether the measure of delivery quality for a country, averaged across all years in the full sample, is greater or lower than zero. 2). All estimates are from panel regressions with country fixed effects and year fixed effects. Within country r-squared are reported. 3). Standard errors in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at 10 percent, 5 percent and 1 percent levels. All standard errors are cluster-adjusted at the country level. 4) The last four columns use only observations up to the year 2012, the sample period in Helliwell et al (2018).

Table 12: Indicators of Governance from Alternative Sources, Country Fixed Effects Regressions, Sample Period 2005-2017

	c1	c2	c3
	(1)	(2)	(3)
Corruption Perception Index on standardized scale	0.32 (0.12)***	0.19 (0.12)*	0.11 (0.11)
Political Rights on standardized scale	0.11 (0.1)	0.07 (0.1)	0.03 (0.11)
Civil Liberties on standardized scale	-0.07 (0.18)	-0.08 (0.17)	0.07 (0.17)
Index of Economic Freedom on standardized scale	0.09 (0.1)	-0.001 (0.09)	-0.04 (0.1)
World Press Freedom Index on standardized scale	-0.08 (0.05)	-0.07 (0.05)	-0.05 (0.05)
Logged GDP		1.22 (0.24)***	1.11 (0.23)***
Freedom to make life choices			0.95 (0.26)***
Generosity			0.23 (0.19)
Social support			1.49 (0.31)***
Obs.	1316	1316	1242
e(N-clust)	153	153	151
$R^2$	0.06	0.11	0.19

Notes: 1). Standard errors in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at 10 percent, 5 percent and 1 percent levels. All standard errors are cluster-adjusted at the country level.

Table 13: Gallup World Poll's Measure of Confidence in National Government, Country Fixed Effects Regressions, Sample Period 2005-2017/18

	c1	c2	c3	c4	c5	c6
	(1)	(2)	(3)	(4)	(5)	(6)
WP139 confidence in the national government?	0.83 (0.18)***	0.68 (0.15)***	0.6 (0.16)***	0.45 (0.17)***	0.44 (0.17)***	0.52 (0.16)***
Democratic Quality			-0.003 (0.11)	0.04 (0.11)		
Delivery Quality			0.39 (0.21)*	0.28 (0.19)	0.3 (0.18)*	
Logged GDP		1.08 (0.28)***	0.93 (0.27)***	0.78 (0.23)***	0.8 (0.24)***	0.88 (0.25)***
Freedom to make life choices				0.62 (0.24)***	0.65 (0.24)***	0.61 (0.24)**
Generosity				0.22 (0.19)	0.21 (0.2)	0.34 (0.2)*
Social support				1.74 (0.3)***	1.71 (0.31)***	1.69 (0.33)***
Obs.	1504	1504	1388	1345	1346	1460
e(N-clust)	152	152	152	151	151	151
$R^2$	0.09	0.13	0.14	0.2	0.2	0.19

Notes: 1). All estimates are from panel regressions with country fixed effects and year fixed effects. Within country r-squared are reported. 2). Standard errors in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at 10 percent, 5 percent and 1 percent levels. All standard errors are cluster-adjusted at the country level.

Table 14: Alternative Specifications Experiment 1: Cross-sectional Regressions of Levels in Period 2005-2018 (Columns 1 and 2) and Cross-sectional Regression of Changes from 2005-08 to 2016-18 (Columns 3-5)

	c1	c2	c3	c4	c5
	(1)	(2)	(3)	(4)	(5)
Democratic Quality	0.14 (0.1)	-0.04 (0.11)	-0.04 (0.18)		
Delivery Quality	0.13 (0.11)	0.32 (0.12)***	0.53 (0.26)**		0.68 (0.39)*
Logged GDP	0.38 (0.07)***	0.39 (0.07)***	0.65 (0.28)**	1.04 (0.33)***	0.9 (0.34)***
Healthy life expectancy at birth - updated	0.04 (0.01)***	0.009 (0.01)			
Corruption Perception Index on standardized scale				-0.18 (0.21)	-0.43 (0.25)*
Political Rights on standardized scale				-0.19 (0.31)	-0.14 (0.31)
Civil Liberties on standardized scale				0.2 (0.34)	0.14 (0.34)
World Press Freedom Index on standardized scale				-0.06 (0.15)	-0.02 (0.15)
Index of Economic Freedom on standardized scale				0.26 (0.14)*	0.16 (0.15)
Central and Eastern Europe		-0.73 (0.17)***			
Commonwealth of Independent States		-0.37 (0.21)*			
Southeast Asia		-0.44 (0.22)**			
South Asia		-0.62 (0.25)**			
East Asia		-0.87 (0.22)***			
Latin America and Caribbean		0.26 (0.18)			
North America and ANZ		0.34 (0.25)			
Middle East and North Africa		-0.52 (0.2)***			
Sub-Saharan Africa		-0.69 (0.24)***			
Obs.	161	161	128	112	112
$R^2$	0.74	0.84	0.14	0.15	0.17

Notes: 1). Columns (1) and (2) show estimates from cross-sectional regressions that use observations that are the 2005-2018 averages at the country level. Columns (3)-(5), on the other hand, are cross-sectional regressions of changes, specifically changes from the 2005-08 period to the 2016-18 period. 2). Standard errors in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at 10 percent, 5 percent and 1 percent levels.

Table 15: Alternative Specifications Experiment 2: Cross-sectional Regressions of Levels in Period 2005-2018 (Columns 1 and 2) and Cross-sectional Regression of Changes from 2005-08 to 2016-18 (Columns 3-5)

	c1	c2	c3	c4	c5
	(1)	(2)	(3)	(4)	(5)
Democratic Quality	0.04 (0.09)	-.15 (0.1)	0.02 (0.16)		
Delivery Quality	0.07 (0.1)	0.27 (0.11)**	0.15 (0.24)		0.23 (0.38)
Logged GDP	0.28 (0.07)***	0.29 (0.07)***	0.4 (0.26)	0.58 (0.31)*	0.55 (0.32)*
Healthy life expectancy at birth - updated	0.03 (0.01)***	0.01 (0.01)			
Freedom to make life choices	1.32 (0.4)***	1.00 (0.38)***	1.59 (0.42)***	1.58 (0.55)***	1.50 (0.56)***
Generosity	0.66 (0.29)**	0.58 (0.29)**	0.03 (0.44)	-.10 (0.5)	-.15 (0.5)
Social support	2.36 (0.52)***	1.87 (0.46)***	3.48 (0.81)***	3.58 (0.93)***	3.51 (0.94)***
Corruption Perception Index on standardized scale				-.09 (0.19)	-.18 (0.24)
Political Rights on standardized scale				-.53 (0.29)*	-.50 (0.3)*
Civil Liberties on standardized scale				0.33 (0.31)	0.3 (0.32)
World Press Freedom Index on standardized scale				-.13 (0.14)	-.11 (0.14)
Index of Economic Freedom on standardized scale				0.14 (0.13)	0.12 (0.14)
Central and Eastern Europe		-.48 (0.16)***			
Commonwealth of Independent States		-.37 (0.2)*			
Southeast Asia		-.70 (0.2)***			
South Asia		-.55 (0.22)**			
East Asia		-.73 (0.19)***			
Latin America and Caribbean		0.23 (0.16)			
North America and ANZ		0.18 (0.22)			
Middle East and North Africa		-.45 (0.18)**			
Sub-Saharan Africa		-.59 (0.22)***			
Obs.	159	159	128	112	112
$R^2$	0.82	0.88	0.33	0.32	0.32

Notes: 1). Columns (1) and (2) show estimates from cross-sectional regressions that use observations that are the 2005-2018 averages at the country level. Columns (3)-(5), on the other hand, are cross-sectional regressions of changes, specifically changes from the 2005-08 period to the 2016-18 period. 2). Standard errors in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at 10 percent, 5 percent and 1 percent levels.

Table 16: Happiness, forms of government, voting systems, government spending, ethnic factionalization, with year fixed effects but without regional fixed effects; 2005-2018. Note that forms of government, elections, and ethnic fractionalization have little variations overtime within a country; all standard errors are cluster-adjusted at the country level

	c1	c2	c3	c4	c5	c6	c7	c8	c9	c10	c11	c12
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Democracy, QGI	0.67 (0.2)***	0.51 (0.12)***	0.42 (0.12)***							0.36 (0.17)**	0.42 (0.15)***	0.38 (0.14)***
Proprtional Represenation	0.47 (0.2)**	0.16 (0.14)	0.07 (0.11)							-0.13 (0.15)	-0.03 (0.12)	-0.11 (0.13)
Parliamentary Democracy	0.35 (0.2)*	-0.33 (0.15)**	-0.28 (0.13)**							-0.80 (0.19)***	-0.74 (0.16)***	-0.58 (0.17)***
Govt education exp., perc GDP				-0.01 (0.03)	-0.002 (0.02)	-0.01 (0.03)				0.03 (0.02)	0.04 (0.02)**	0.04 (0.02)**
Govt healthcare exp., perc GDP				0.1 (0.05)*	0.09 (0.04)**	0.12 (0.04)***				0.09 (0.04)**	0.09 (0.04)**	0.11 (0.04)***
Military exp., perc GDP				-0.003 (0.05)	-0.09 (0.05)*	-0.10 (0.04)***				0.03 (0.04)	-0.03 (0.04)	-0.07 (0.03)**
Safety net coverage, 1-10				0.25 (0.04)***	-0.03 (0.06)	-0.05 (0.06)				0.31 (0.04)***	0.06 (0.07)	-0.03 (0.07)
Ethnic fractionalization							0.5 (0.45)	0.37 (0.24)		0.83 (0.38)**	0.38 (0.28)	0.32 (0.27)
Linguistic fractionalization							-1.11 (0.38)***	-0.42 (0.23)*		-0.83 (0.39)**	-0.34 (0.27)	-0.38 (0.29)
Religious fractionalization							-0.77 (0.43)*	-0.25 (0.23)		-0.27 (0.26)	0.05 (0.23)	0.07 (0.26)
Logged GDP		0.68 (0.04)***	0.45 (0.06)***		0.61 (0.09)***	0.55 (0.09)***		0.72 (0.04)***	0.45 (0.06)***		0.48 (0.09)***	0.47 (0.09)***
Delivery Quality			0.05 (0.09)			-0.15 (0.12)			0.07 (0.08)			0.02 (0.1)
Freedom to make life choices			0.88 (0.32)***			1.25 (0.41)***			1.16 (0.32)***			0.63 (0.35)*
Generosity			0.6 (0.29)**			0.25 (0.34)			0.68 (0.29)**			0.11 (0.33)
Social support			2.31 (0.41)***			1.62 (0.39)***			2.52 (0.39)***			1.40 (0.44)***
Perceptions of corruption			-0.71 (0.3)**			-0.46 (0.37)			-0.43 (0.29)			-0.32 (0.35)
Obs.	1453	1453	1212	1131	1131	979	1405	1405	1409	856	856	733
e(N-clust)	144	144	136	110	110	107	133	133	158	81	81	79
$R^2$	0.28	0.65	0.76	0.4	0.54	0.62	0.1	0.64	0.73	0.61	0.68	0.72

Notes: 1). Standard errors in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at 10 percent, 5 percent and 1 percent levels. All standard errors are cluster-adjusted at the level of countries.

Table 17: Happiness, forms of government, voting systems, government spending, ethnic factionalization, with year fixed effects and regional fixed effects; 2005-2018. Note that forms of government, elections, and ethnic fractionalization have little variations overtime within a country; all standard errors are cluster-adjusted at the country level

	c1	c2	c3	c4	c5	c6	c7	c8	c9	c10	c11	c12
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Democracy, QGI	0.28 (0.18)	0.14 (0.09)	0.1 (0.09)							0.08 (0.14)	0.06 (0.1)	0.05 (0.1)
Proprtional Represenation	0.09 (0.14)	0.07 (0.11)	0.01 (0.1)							-0.17 (0.13)	-0.08 (0.11)	-0.15 (0.11)
Parliamentary Democracy	0.1 (0.22)	0.04 (0.17)	0.04 (0.14)							0.04 (0.21)	0.15 (0.17)	0.14 (0.14)
Govt education exp., perc GDP				-0.02 (0.02)	-0.02 (0.02)	-0.02 (0.02)				-0.02 (0.02)	-0.002 (0.02)	0.006 (0.02)
Govt healthcare exp., perc GDP				0.04 (0.04)	0.05 (0.03)	0.06 (0.03)*				0.05 (0.04)	0.08 (0.04)**	0.08 (0.03)**
Military exp., perc GDP				0.008 (0.04)	-0.02 (0.04)	-0.06 (0.03)**				0.02 (0.05)	-0.008 (0.04)	-0.06 (0.03)**
Safety net coverage, 1-10				0.2 (0.04)***	0.04 (0.05)	-0.03 (0.06)				0.21 (0.05)***	0.009 (0.06)	-0.11 (0.07)
Ethnic fractionalization							-0.16 (0.27)	-0.13 (0.2)		0.13 (0.36)	-0.25 (0.24)	-0.28 (0.23)
Linguistic fractionalization							0.04 (0.29)	0.08 (0.19)		-0.18 (0.32)	0.16 (0.19)	0.11 (0.19)
Religious fractionalization							0.05 (0.25)	0.13 (0.17)		0.73 (0.32)**	0.7 (0.22)***	0.65 (0.25)***
Logged GDP		0.62 (0.06)***	0.35 (0.07)***		0.43 (0.08)***	0.37 (0.08)***		0.55 (0.07)***	0.31 (0.06)***		0.5 (0.08)***	0.45 (0.07)***
Delivery Quality			0.19 (0.09)**			0.11 (0.09)			0.2 (0.09)**			0.19 (0.09)**
Freedom to make life choices			0.83 (0.32)***			0.55 (0.32)*			0.8 (0.3)***			0.52 (0.32)*
Generosity			0.52 (0.29)*			0.17 (0.28)			0.61 (0.29)**			-0.01 (0.27)
Social support			2.02 (0.38)***			1.38 (0.32)***			1.96 (0.35)***			1.31 (0.32)***
Perceptions of corruption			-0.25 (0.32)			-0.05 (0.28)			-0.20 (0.28)			-0.04 (0.29)
Obs.	1453	1453	1212	1131	1131	979	1405	1405	1409	856	856	733
e(N-clust)	144	144	136	110	110	107	133	133	158	81	81	79
$R^2$	0.6	0.73	0.8	0.64	0.68	0.73	0.63	0.75	0.8	0.7	0.74	0.78

Notes: 1). Standard errors in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at 10 percent, 5 percent and 1 percent levels. All standard errors are cluster-adjusted at the level of countries.

Table 18: Happiness, government spending, with year fixed effects and country fixed effects; 2005-2018. Note that social safety net drops out due to lack of variations within a country in the data

	c1	c2	c3
	(1)	(2)	(3)
Govt education exp., perc GDP	-.01 (0.04)	-.009 (0.03)	-.008 (0.02)
Govt healthcare exp., perc GDP	-.001 (0.04)	0.009 (0.04)	0.02 (0.04)
Safety net coverage, 1-10			
Military exp., perc GDP	0.03 (0.03)	0.04 (0.03)	0.01 (0.02)
Logged GDP		1.12 (0.39)***	0.78 (0.36)**
Delivery Quality			0.34 (0.22)
Freedom to make life choices			0.79 (0.26)***
Generosity			0.23 (0.25)
Social support			1.42 (0.34)***
Perceptions of corruption			-.46 (0.3)
Obs.	1131	1131	979
e(N-clust)	110	110	107
$R^2$	0.04	0.08	0.17

Notes: 1). Standard errors in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at 10 percent, 5 percent and 1 percent levels. All standard errors are cluster-adjusted at the level of countries.

Table 19: Happiness and Conflicts by Severity, 2005-2017

	c1	c2	c3	c4	c5	c6	c7	c8	c9
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Having conflict deaths reported in Uppsala CDP (0 or 1)	-0.56 (0.14)***	-0.06 (0.1)	0.06 (0.08)	-0.11 (0.09)	-0.02 (0.07)	0.07 (0.07)	-0.08 (0.04)*	-0.04 (0.04)	-0.01 (0.04)
Conflict death rate ranked above 90th pctl (0 or 1)	-0.87 (0.2)***	-0.52 (0.13)***	-0.28 (0.18)	-0.79 (0.17)***	-0.46 (0.11)***	-0.36 (0.14)**	-0.18 (0.09)**	-0.02 (0.08)	-0.06 (0.08)
Logged GDP		0.72 (0.04)***	0.32 (0.06)***		0.56 (0.06)***	0.36 (0.06)***		1.07 (0.24)***	0.95 (0.26)***
Healthy life expectancy at birth - updated			0.03 (0.009)***			0.01 (0.01)			
Freedom to make life choices			1.05 (0.31)***			0.9 (0.28)***			0.84 (0.21)***
Generosity			0.72 (0.28)***			0.7 (0.3)**			0.32 (0.19)*
Social support			2.37 (0.39)***			1.89 (0.33)***			1.51 (0.32)***
Perceptions of corruption			-0.54 (0.3)*			-0.42 (0.26)			-0.58 (0.23)**
Obs.	1542	1542	1391	1542	1542	1391	1542	1542	1402
e(N-clust)	161	161	156	161	161	156	161	161	157
R <sup>2</sup>	0.1	0.62	0.75	0.63	0.75	0.8	0.04	0.09	0.18

Notes: 1). Columns (1) to (3) show estimates from pooled regressions without regional fixed effects. Columns (4) to (6) add regional fixed effects to columns (1) to (3). Columns (7) to (9) show estimates from regressions with country fixed effects. All regressions include year fixed effects. 2). Standard errors in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at 10 percent, 5 percent and 1 percent levels. All standard errors are cluster-adjusted at the level of countries.

Table 20: List of countries in our sample that experienced severe conflicts, defined as those with conflict-death rates in some years ranked above the 90th percentile in the distribution of yearly death rates with positive values. Note that the Uppsala GED (version 18.1) does not have data on Syria

---

country

---

Afghanistan  
Central African Republic  
Chad  
Congo (Kinshasa)  
Georgia  
Iraq  
Lebanon  
Libya  
Palestinian Territories  
South Sudan  
Sri Lanka  
Sudan  
Ukraine  
Yemen

---

Table 21: Happiness and Global Peace Index, 2008-2018

	c1	c2	c3	c4	c5	c6	c7	c8	c9
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Global Peace Index	-1.14 (0.18)***	-.34 (0.13)***	0.08 (0.12)	-.54 (0.14)***	-.26 (0.12)**	0.05 (0.12)	-.60 (0.18)***	-.37 (0.17)**	-.32 (0.18)*
Logged GDP		0.68 (0.04)***	0.31 (0.07)***		0.54 (0.07)***	0.35 (0.07)***		1.02 (0.29)***	0.95 (0.33)***
Healthy life expectancy at birth - updated			0.04 (0.01)***			0.02 (0.01)			
Freedom to make life choices			1.20 (0.31)***			1.03 (0.28)***			0.77 (0.24)***
Generosity			0.66 (0.3)**			0.73 (0.31)**			0.53 (0.2)***
Social support			2.39 (0.36)***			1.87 (0.34)***			1.56 (0.36)***
Perceptions of corruption			-.63 (0.31)**			-.47 (0.29)			-.60 (0.26)**
Obs.	1416	1416	1311	1416	1416	1311	1416	1416	1318
e(N-clust)	154	154	149	154	154	149	154	154	151
$R^2$	0.22	0.62	0.75	0.63	0.73	0.79	0.05	0.08	0.18

Notes: 1). Columns (1) to (3) show estimates from pooled regressions without regional fixed effects. Columns (4) to (6) add regional fixed effects to columns (1) to (3). Columns (7) to (9) show estimates from regressions with country fixed effects. All regressions include year fixed effects. 2). Standard errors in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at 10 percent, 5 percent and 1 percent levels. All standard errors are cluster-adjusted at the level of countries.

Figure 1: Scatter plot: Happiness and Global Peace Index, 2016-2018

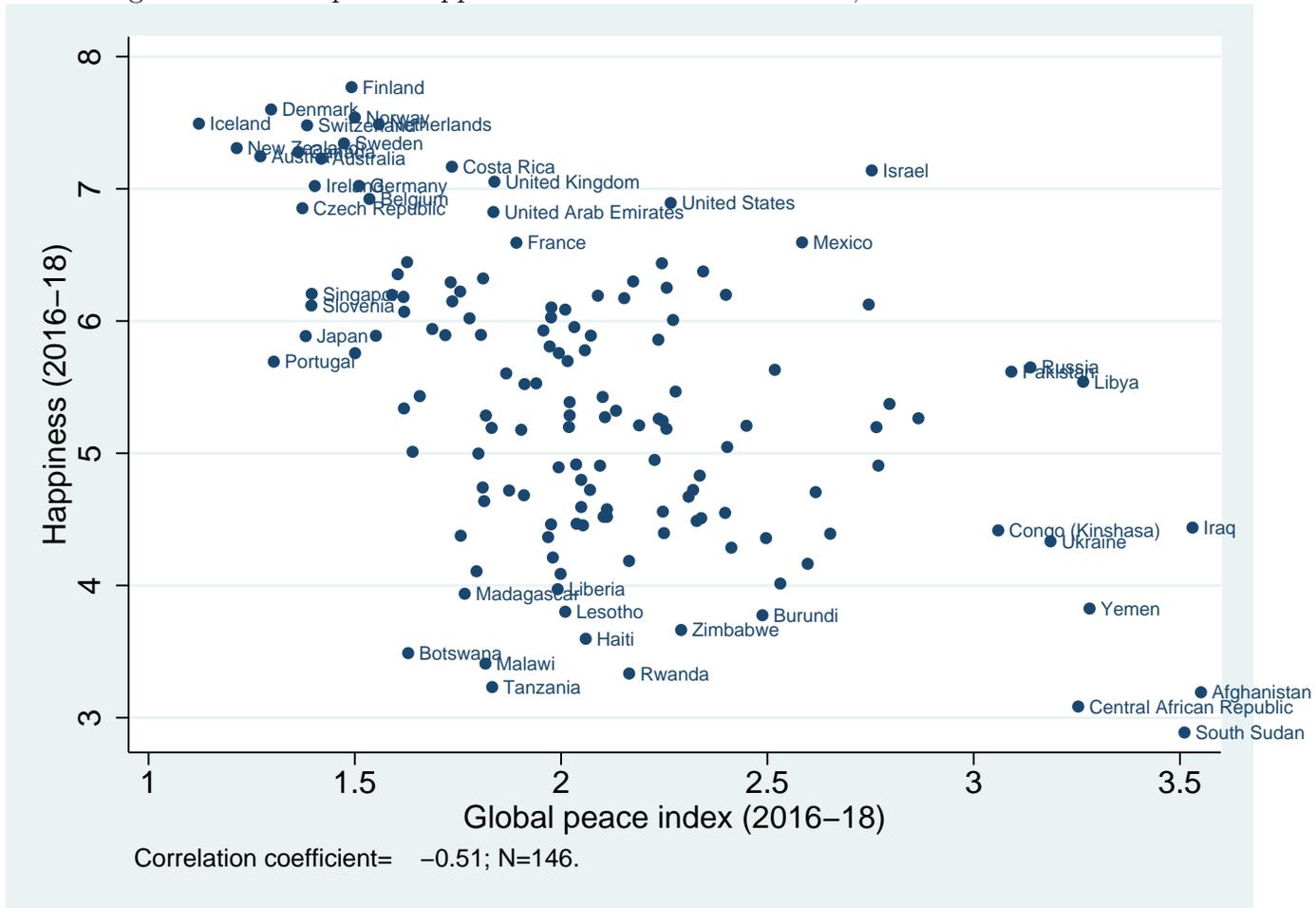


Figure 2: Scatter plot: Changes in Happiness and Changes in Global Peace Index, 2006-08 to 2016-2018

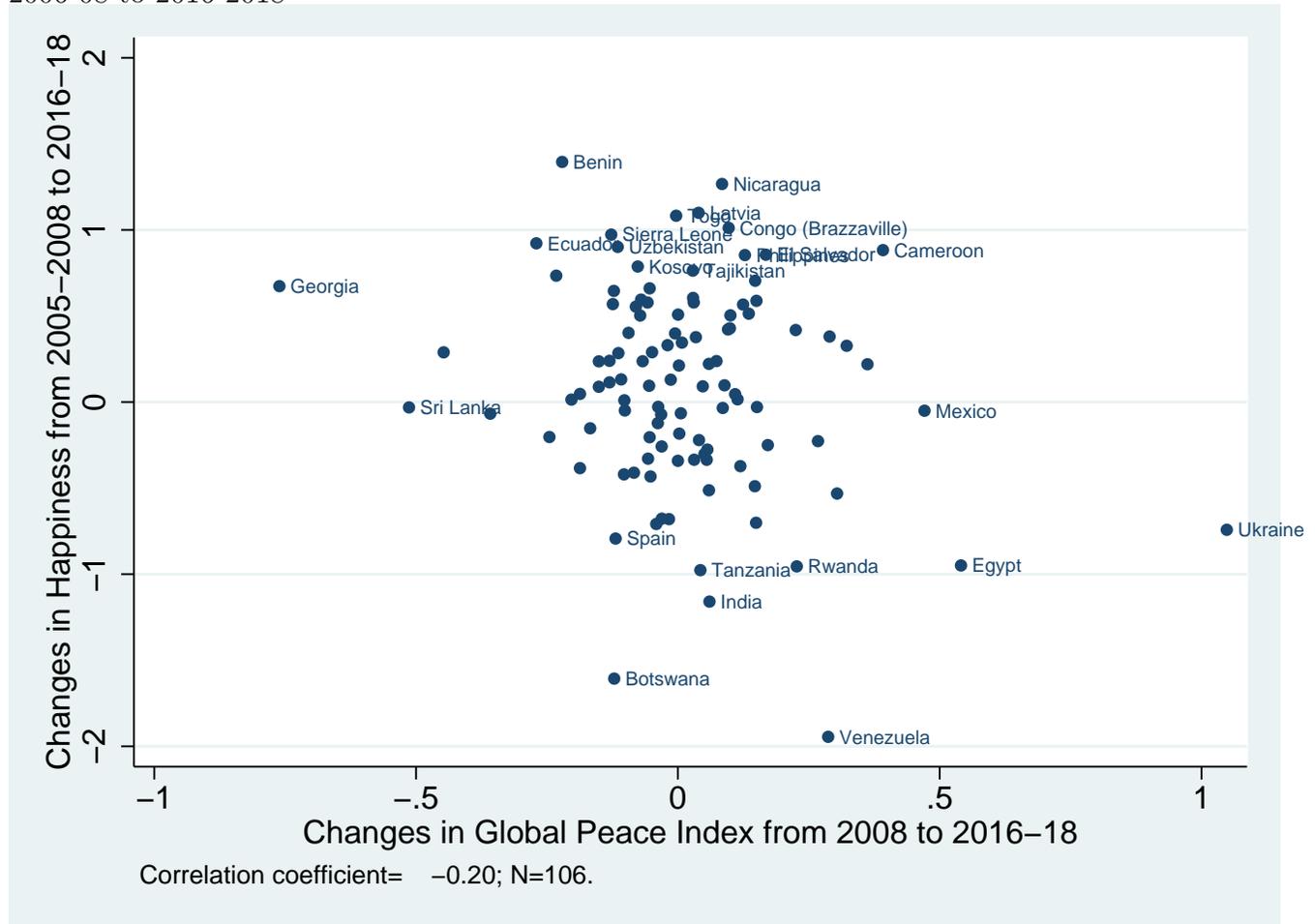


Table 22: Changes in Delivery Quality from the 2005-08 Period to the 2016-17 Period, and their Estimated Contribution to Life Ladder

	Delivery quality			Contribution to Ladder		Actual $\Delta$ Ladder
	2005-08	2016-17	$\Delta$ Delivery	Low Estimate	High Estimate	
Georgia	-.04	.66	.7	.2	.31	.67
Rwanda	-.35	.26	.62	.17	.28	-.95
Palestinian Territories	-.77	-.24	.54	.15	.24	.28
Belarus	-1.1	-.57	.53	.15	.24	-.26
United Arab Emirates	.7	1.09	.4	.11	.18	.09
Kazakhstan	-.69	-.31	.38	.11	.17	.11
Laos	-1.08	-.72	.36	.1	.16	-.42
Azerbaijan	-.79	-.46	.34	.09	.15	.5
Taiwan Province of China	.85	1.18	.33	.09	.15	.58
Indonesia	-.5	-.19	.31	.09	.14	.24
Lithuania	.65	.96	.3	.08	.14	.38
Montenegro	-.22	.08	.3	.08	.13	.33
Vietnam	-.51	-.22	.29	.08	.13	-.22
Albania	-.42	-.13	.29	.08	.13	.08
Zimbabwe	-1.64	-1.36	.28	.08	.13	.24
Ecuador	-.96	-.69	.28	.08	.12	.92
Paraguay	-.89	-.62	.27	.08	.12	.57
Togo	-1.08	-.81	.27	.07	.12	1.08
Serbia	-.35	-.09	.26	.07	.12	.85
Japan	1.28	1.53	.25	.07	.11	-.34
Romania	-.07	.18	.25	.07	.11	.85
Afghanistan	-1.66	-1.42	.24	.07	.11	-.53
Saudi Arabia	-.04	.2	.24	.07	.11	-.68
Argentina	-.43	-.2	.23	.07	.1	-.03
Macedonia	-.22	.01	.23	.06	.1	.78
Poland	.49	.72	.22	.06	.1	.44
Latvia	.66	.88	.21	.06	.09	1.1
Mongolia	-.46	-.25	.2	.06	.09	.73
Kenya	-.68	-.48	.2	.06	.09	.24
Norway	1.79	1.98	.19	.05	.09	.02
Iran	-.9	-.71	.19	.05	.09	-.71
China	-.28	-.09	.18	.05	.08	.43
Kyrgyzstan	-.97	-.8	.17	.05	.08	.57
Bangladesh	-.93	-.76	.17	.05	.08	-.2
Bosnia and Herzegovina	-.49	-.32	.17	.05	.08	.49
Dominican Republic	-.55	-.38	.17	.05	.07	.42
Estonia	1.16	1.32	.16	.04	.07	.51
Senegal	-.34	-.18	.16	.04	.07	.09
Armenia	-.28	-.14	.14	.04	.06	-.05
Israel	1.04	1.18	.14	.04	.06	.05
Peru	-.3	-.15	.14	.04	.06	.65

*Continued on next page...*

	Delivery quality			Contribution to Ladder		Actual $\Delta$ Ladder
	2005-08	2016-17	$\Delta$ Delivery	Low Estimate	High Estimate	
Uzbekistan	-1.21	-1.07	.14	.04	.06	.9
Sierra Leone	-1.03	-.9	.13	.04	.06	.97
New Zealand	1.89	2.02	.13	.04	.06	-.12
Czech Republic	.81	.94	.13	.04	.06	.38
South Korea	.83	.95	.13	.04	.06	.4
Russia	-.68	-.56	.12	.03	.06	.38
Philippines	-.34	-.23	.12	.03	.05	.85
Jamaica	-.04	.08	.12	.03	.05	-.32
Switzerland	1.87	1.96	.09	.03	.04	.01
Germany	1.65	1.75	.09	.03	.04	.5
Uruguay	.65	.74	.09	.03	.04	.58
Cambodia	-.96	-.87	.09	.02	.04	.66
Croatia	.29	.37	.09	.02	.04	-.39
Zambia	-.56	-.47	.09	.02	.04	-.41
Bulgaria	.1	.18	.08	.02	.04	1.17
Singapore	1.99	2.07	.08	.02	.03	-.38
Canada	1.79	1.85	.07	.02	.03	-.18
Costa Rica	.38	.45	.06	.02	.03	.05
Kosovo	-.42	-.36	.06	.02	.03	.79
Moldova	-.55	-.49	.06	.02	.03	.4
Ukraine	-.66	-.61	.06	.02	.02	-.74
Netherlands	1.85	1.9	.05	.02	.02	-.03
Chad	-1.42	-1.37	.05	.01	.02	.29
Colombia	-.13	-.08	.05	.01	.02	.01
Mauritania	-.77	-.73	.05	.01	.02	.29
Sweden	1.9	1.94	.05	.01	.02	-.03
Iraq	-1.4	-1.36	.04	.01	.02	-.15
Pakistan	-.74	-.71	.04	.01	.02	.51
Liberia	-1.03	-.99	.04	.01	.02	.01
Congo (Brazzaville)	-1.21	-1.19	.03	.01	.01	1.01
Hong Kong S.A.R. of China	1.81	1.83	.03	.01	.01	.11
Namibia	.12	.14	.03	.01	.01	-.25
Cameroon	-.97	-.95	.03	.01	.01	.88
Thailand	.01	.04	.02	.01	.01	.24
Burkina Faso	-.41	-.39	.02	.01	.01	.7
Nicaragua	-.71	-.69	.02	.01	.01	1.27
India	-.14	-.12	.02	.01	.01	-1.16
Portugal	1.03	1.04	.01	0	.01	.13
Nigeria	-.99	-.98	.01	0	0	.42
Guatemala	-.66	-.66	0	0	0	.22
Niger	-.65	-.66	0	0	0	.59
Slovenia	.93	.91	-.02	-.01	-.01	.31
United Kingdom	1.72	1.7	-.02	-.01	-.01	.13
Honduras	-.69	-.72	-.03	-.01	-.01	.55
United States	1.55	1.52	-.03	-.01	-.01	-.43

*Continued on next page...*

	Delivery quality			Contribution to Ladder		Actual $\Delta$ Ladder
	2005-08	2016-17	$\Delta$ Delivery	Low Estimate	High Estimate	
Finland	2.02	1.99	-.03	-.01	-.01	.1
Tajikistan	-1.13	-1.16	-.03	-.01	-.01	.76
Belgium	1.41	1.37	-.04	-.01	-.02	-.28
Sri Lanka	-.13	-.17	-.04	-.01	-.02	-.03
Panama	.04	0	-.04	-.01	-.02	-.33
Benin	-.52	-.56	-.04	-.01	-.02	1.39
Uganda	-.48	-.53	-.05	-.01	-.02	-.07
Australia	1.81	1.75	-.06	-.02	-.03	-.07
Jordan	.27	.19	-.08	-.02	-.04	-.7
Nepal	-.69	-.78	-.08	-.02	-.04	.33
Botswana	.68	.59	-.09	-.03	-.04	-1.61
Bolivia	-.72	-.82	-.1	-.03	-.04	.35
Tanzania	-.39	-.5	-.1	-.03	-.05	-.98
Slovakia	.75	.64	-.11	-.03	-.05	.93
Italy	.54	.42	-.11	-.03	-.05	-.51
Ghana	.01	-.11	-.12	-.03	-.05	.09
Brazil	-.14	-.27	-.13	-.04	-.06	-.25
France	1.44	1.31	-.13	-.04	-.06	-.3
El Salvador	-.25	-.41	-.16	-.04	-.07	.86
Central African Republic	-1.4	-1.56	-.16	-.04	-.07	-1.08
Malawi	-.47	-.64	-.17	-.05	-.08	-.95
Trinidad and Tobago	.13	-.05	-.17	-.05	-.08	-.07
Mexico	-.08	-.27	-.19	-.05	-.09	-.05
Ireland	1.71	1.5	-.21	-.06	-.09	-.34
Lebanon	-.45	-.67	-.21	-.06	-.1	.28
South Africa	.37	.15	-.22	-.06	-.1	-.49
Denmark	2.1	1.88	-.22	-.06	-.1	-.34
Chile	1.34	1.11	-.23	-.06	-.1	.6
Turkey	.17	-.06	-.23	-.06	-.1	.22
Austria	1.81	1.57	-.24	-.07	-.11	.09
Haiti	-1.17	-1.42	-.24	-.07	-.11	-.2
Mali	-.5	-.74	-.24	-.07	-.11	.33
Egypt	-.38	-.66	-.28	-.08	-.12	-.95
Iceland	1.84	1.56	-.28	-.08	-.13	.6
Cyprus	1.19	.9	-.29	-.08	-.13	-.19
Spain	1.19	.89	-.3	-.08	-.14	-.79
Mozambique	-.55	-.87	-.32	-.09	-.14	-.23
Hungary	.86	.42	-.44	-.12	-.2	.68
Kuwait	.39	-.12	-.5	-.14	-.23	-.05
Madagascar	-.39	-.92	-.53	-.15	-.24	-.37
Venezuela	-1.2	-1.73	-.54	-.15	-.24	-1.95
Greece	.68	.11	-.57	-.16	-.25	-1.04
Yemen	-.83	-1.67	-.84	-.23	-.38	-1.1

Notes: 1) The column with the heading “2005-08 Avg.” shows the average value of delivery quality over the 2005-2008 period in the GWP sample matched with the governance

measure. The column with “2016-17 Avg.” shows the 2016-17 average. The estimated effects of changes in delivery quality are shown in Table 10. The “high estimate” is based on the estimated effect of delivery quality reported in column (8), based on country fixed-effects regressions. The “low estimate” is based on column (9), based on country fixed-effects regressions that include all the social variables. 2). The correlation coefficient between the changes are shown in Table 3, which shows the correlation coefficients.

Table 23: Changes in GDP Per Capita from the 2005-08 Period to the 2016-18 Period, and their Estimated Contribution to Life Ladder

	Log of GDP per capita			Contribution to Ladder		Actual $\Delta$ Ladder
	2005-08	2016-18	$\Delta$	Low Estimate	High Estimate	
China	8.88	9.64	.75	.58	.64	.43
Laos	8.17	8.79	.62	.48	.52	-.42
Uzbekistan	8.17	8.74	.57	.44	.49	.9
India	8.2	8.77	.57	.44	.48	-1.16
Bangladesh	7.67	8.17	.5	.38	.42	-.2
Sri Lanka	8.9	9.38	.48	.37	.41	-.03
Georgia	8.7	9.18	.48	.37	.41	.67
Vietnam	8.25	8.73	.48	.37	.41	-.22
Mongolia	8.9	9.38	.48	.37	.41	.73
Panama	9.54	10.01	.47	.36	.4	-.33
Cambodia	7.75	8.2	.46	.35	.39	.66
Rwanda	7.08	7.53	.45	.34	.38	-.95
Ghana	7.91	8.32	.41	.32	.35	.09
Indonesia	8.92	9.32	.41	.31	.34	.24
Tajikistan	7.54	7.95	.4	.31	.34	.76
Philippines	8.55	8.94	.39	.3	.33	.85
Romania	9.67	10.05	.38	.29	.32	.85
Poland	9.82	10.19	.37	.28	.31	.44
Dominican Republic	9.22	9.59	.37	.28	.31	.42
Uruguay	9.57	9.93	.36	.28	.3	.58
Turkey	9.76	10.12	.36	.28	.3	.22
Ireland	10.76	11.11	.36	.27	.3	-.34
Moldova	8.2	8.55	.35	.27	.3	.4
Peru	9.07	9.42	.35	.27	.29	.65
Malaysia	9.9	10.24	.33	.25	.28	-.68
Slovakia	9.99	10.32	.33	.25	.28	.93
Tanzania	7.56	7.89	.33	.25	.28	-.98
Afghanistan	7.17	7.5	.33	.25	.28	-.53
Mozambique	6.72	7.04	.32	.25	.27	-.23
Bolivia	8.52	8.84	.32	.25	.27	.35
Nepal	7.48	7.8	.32	.24	.27	.33
Albania	9.08	9.38	.3	.23	.25	.08
Zambia	7.92	8.21	.3	.23	.25	-.41
Paraguay	8.79	9.09	.29	.23	.25	.57
Nicaragua	8.29	8.58	.29	.22	.24	1.27
Lithuania	10.01	10.29	.29	.22	.24	.38
Zimbabwe	7.27	7.55	.28	.22	.24	.24
Thailand	9.43	9.7	.27	.21	.23	.24
Iraq	9.41	9.68	.27	.21	.23	-.15
Colombia	9.23	9.5	.27	.2	.22	.01
Kyrgyzstan	7.86	8.13	.26	.2	.22	.57

*Continued on next page...*

	Log of GDP per capita			Contribution to Ladder		Actual $\Delta$ Ladder
	2005-08	2016-18	$\Delta$	Low Estimate	High Estimate	
Kazakhstan	9.83	10.09	.26	.2	.22	.11
South Korea	10.23	10.49	.26	.2	.22	.4
Kosovo	8.92	9.17	.26	.2	.22	.79
Bulgaria	9.58	9.83	.25	.19	.21	1.17
Kenya	7.76	8.01	.25	.19	.21	.24
Bosnia and Herzegovina	9.14	9.37	.23	.18	.2	.49
Burkina Faso	7.21	7.44	.23	.18	.2	.7
Armenia	8.84	9.07	.23	.18	.2	-.05
Singapore	11.11	11.34	.23	.18	.2	-.38
Belarus	9.52	9.75	.23	.18	.2	-.26
Costa Rica	9.42	9.65	.23	.18	.2	.05
Macedonia	9.26	9.49	.23	.18	.2	.78
Sierra Leone	7.02	7.24	.22	.17	.19	.97
Azerbaijan	9.46	9.68	.22	.17	.19	.5
Uganda	7.22	7.44	.22	.17	.18	-.07
Chile	9.83	10.04	.22	.17	.18	.6
Malawi	6.78	7	.22	.17	.18	-.95
Hong Kong S.A.R. of China	10.72	10.92	.2	.16	.17	.11
Egypt	9.07	9.27	.19	.15	.16	-.95
Botswana	9.48	9.67	.19	.15	.16	-1.61
Palestinian Territories	8.27	8.46	.19	.14	.16	.28
Pakistan	8.34	8.53	.18	.14	.16	.51
Montenegro	9.52	9.7	.18	.14	.15	.33
Togo	7.08	7.26	.18	.14	.15	1.08
Latvia	9.95	10.13	.18	.14	.15	1.1
Czech Republic	10.22	10.39	.17	.13	.15	.38
Nigeria	8.42	8.59	.17	.13	.14	.42
Niger	6.67	6.83	.16	.12	.14	.59
Namibia	9	9.16	.16	.12	.14	-.25
Ecuador	9.11	9.26	.16	.12	.13	.92
Cameroon	7.97	8.12	.15	.12	.13	.88
El Salvador	8.74	8.89	.15	.12	.13	.86
Israel	10.26	10.41	.15	.12	.13	.05
Senegal	7.67	7.81	.15	.11	.12	.09
Serbia	9.41	9.55	.14	.11	.12	.85
Benin	7.49	7.63	.14	.11	.12	1.39
Iran	9.72	9.86	.13	.1	.11	-.71
Hungary	10.04	10.17	.13	.1	.11	.68
Honduras	8.29	8.42	.13	.1	.11	.55
Germany	10.59	10.72	.13	.1	.11	.5
Liberia	6.5	6.63	.13	.1	.11	.01
New Zealand	10.38	10.49	.12	.09	.1	-.12
Mali	7.49	7.61	.11	.09	.1	.33
Estonia	10.17	10.29	.11	.09	.1	.51
Guatemala	8.8	8.91	.11	.09	.09	.22

*Continued on next page...*

	Log of GDP per capita			Contribution to Ladder		Actual $\Delta$ Ladder
	2005-08	2016-18	$\Delta$	Low Estimate	High Estimate	
Australia	10.6	10.71	.11	.08	.09	-.07
Slovenia	10.25	10.35	.1	.08	.08	.31
Russia	10.03	10.12	.09	.07	.08	.38
Sweden	10.67	10.76	.09	.07	.08	-.03
Saudi Arabia	10.73	10.81	.08	.06	.07	-.68
Brazil	9.48	9.55	.07	.06	.06	-.25
Japan	10.5	10.57	.07	.05	.06	-.34
Mexico	9.69	9.76	.07	.05	.06	-.05
United States	10.83	10.9	.07	.05	.06	-.43
Canada	10.63	10.69	.06	.05	.05	-.18
Iceland	10.68	10.74	.06	.05	.05	.6
Switzerland	10.91	10.96	.06	.04	.05	.01
Netherlands	10.73	10.79	.06	.04	.05	-.03
Argentina	9.78	9.83	.05	.04	.04	-.03
Mauritania	8.14	8.19	.05	.04	.04	.29
South Africa	9.36	9.41	.05	.04	.04	-.49
Congo (Brazzaville)	8.46	8.51	.05	.04	.04	1.01
Croatia	9.98	10.03	.05	.04	.04	-.39
United Kingdom	10.54	10.59	.05	.04	.04	.13
Haiti	7.37	7.41	.05	.04	.04	-.2
Austria	10.68	10.72	.04	.03	.04	.09
France	10.52	10.56	.04	.03	.03	-.3
Belgium	10.62	10.66	.04	.03	.03	-.28
Chad	7.46	7.5	.03	.03	.03	.29
Lebanon	9.48	9.5	.03	.02	.02	.28
Portugal	10.21	10.24	.02	.02	.02	.13
Denmark	10.73	10.75	.02	.02	.02	-.34
Spain	10.43	10.44	.01	.01	.01	-.79
Norway	11.07	11.08	.01	.01	.01	.02
Finland	10.63	10.61	-.02	-.02	-.02	.1
Madagascar	7.29	7.26	-.03	-.03	-.03	-.37
Jamaica	9.06	9.01	-.05	-.04	-.04	-.32
Ukraine	9.03	8.98	-.05	-.04	-.05	-.74
Trinidad and Tobago	10.34	10.27	-.07	-.05	-.06	-.07
Italy	10.55	10.47	-.08	-.06	-.07	-.51
Cyprus	10.45	10.37	-.08	-.06	-.07	-.19
Burundi	6.63	6.54	-.09	-.07	-.08	.21
Jordan	9.14	9.03	-.11	-.09	-.09	-.7
Greece	10.34	10.11	-.22	-.17	-.19	-1.04
United Arab Emirates	11.39	11.12	-.26	-.2	-.22	.09
Central African Republic	6.75	6.48	-.27	-.21	-.23	-1.08
Venezuela	9.7	9.42	-.28	-.22	-.24	-1.95
Kuwait	11.47	11.12	-.36	-.28	-.3	-.05
Yemen	8.34	7.3	-1.04	-.8	-.88	-1.1

Notes: 1) The column with the heading “2005-08 Avg.” shows the average value of the

logarithm of GDP per capita over the 2005-2008 period in the GWP sample matched with the governance measure. The column with “2016-18 Avg.” shows the 2016-18 average. The estimated effects of changes in per-capita GDP are shown in Table 10. The “high estimate” is based on the estimated effect reported in column (8), based on country fixed-effects regressions. The “low estimate” is based on column (9), based on country fixed-effects regressions that include all the social variables. 2). The correlation coefficient between the changes are shown in Table 3, which shows the correlation coefficients.

Table 24: Changes in Sense of Freedom from the 2005-08 Period to the 2016-18 Period, and their Estimated Contribution to Life Ladder

	Freedom			Contribution to Ladder		Actual $\Delta$ Ladder
	2005-08	2016-18	$\Delta$	Low Estimate	High Estimate	
Kosovo	.38	.86	.48	.44		.79
Burundi	.26	.65	.39	.36		.21
Zimbabwe	.41	.75	.34	.31		.24
Macedonia	.44	.73	.29	.27		.78
Bangladesh	.61	.89	.28	.26		-.2
Bosnia and Herzegovina	.34	.62	.28	.26		.49
Iraq	.39	.65	.26	.24		-.15
Guatemala	.64	.9	.26	.24		.22
Pakistan	.45	.71	.25	.23		.51
Mozambique	.61	.86	.25	.23		-.23
Nepal	.57	.82	.24	.23		.33
Albania	.53	.77	.24	.22		.08
Saudi Arabia	.58	.81	.24	.22		-.68
Madagascar	.33	.56	.23	.21		-.37
Togo	.46	.69	.23	.21		1.08
Congo (Brazzaville)	.53	.75	.23	.21		1.01
Serbia	.45	.68	.23	.21		.85
Chad	.38	.6	.22	.2		.29
Indonesia	.64	.86	.22	.2		.24
Palestinian Territories	.42	.63	.21	.19		.28
Ecuador	.66	.86	.2	.19		.92
Mali	.52	.73	.2	.19		.33
Honduras	.67	.87	.2	.19		.55
Paraguay	.68	.87	.19	.18		.57
Georgia	.54	.73	.19	.18		.67
Nigeria	.62	.8	.18	.17		.42
Slovakia	.54	.72	.18	.17		.93
Peru	.65	.83	.18	.17		.65
Kyrgyzstan	.69	.87	.18	.17		.57
Uzbekistan	.81	.98	.17	.16		.9
Estonia	.7	.86	.16	.15		.51
El Salvador	.65	.81	.15	.14		.86
Singapore	.76	.92	.15	.14		-.38
Argentina	.69	.84	.15	.14		-.03
Armenia	.53	.68	.15	.14		-.05
Kenya	.66	.81	.15	.13		.24
Cameroon	.63	.77	.14	.13		.88
Bulgaria	.57	.7	.14	.13		1.17
Panama	.74	.88	.14	.13		-.33
Jamaica	.74	.86	.12	.11		-.32
Jordan	.65	.77	.12	.11		-.7

*Continued on next page...*

	Freedom			Contribution to Ladder		Actual $\Delta$ Ladder
	2005-08	2016-18	$\Delta$	Low Estimate	High Estimate	
Bolivia	.76	.88	.12	.11		.35
India	.75	.87	.11	.1		-1.16
Portugal	.76	.87	.11	.1		.13
Iran	.6	.7	.11	.1		-.71
Azerbaijan	.63	.74	.11	.1		.5
Turkey	.5	.61	.11	.1		.22
Tanzania	.69	.79	.11	.1		-.98
Taiwan Province of China	.64	.74	.1	.1		.58
Zambia	.71	.81	.1	.09		-.41
Russia	.63	.72	.1	.09		.38
Benin	.64	.74	.1	.09		1.39
Montenegro	.51	.61	.09	.09		.33
Lithuania	.59	.69	.09	.09		.38
Cambodia	.87	.96	.09	.09		.66
Kuwait	.77	.86	.09	.09		-.05
Romania	.74	.84	.09	.09		.85
Mexico	.72	.81	.09	.08		-.05
Uruguay	.8	.89	.09	.08		.58
Rwanda	.83	.91	.08	.07		-.95
Mongolia	.63	.71	.08	.07		.73
South Africa	.7	.77	.08	.07		-.49
Sri Lanka	.76	.84	.08	.07		-.03
Poland	.78	.85	.07	.07		.44
Philippines	.85	.92	.07	.06		.85
Uganda	.68	.75	.07	.06		-.07
Burkina Faso	.59	.66	.07	.06		.7
Niger	.66	.73	.06	.06		.59
Chile	.68	.74	.06	.06		.6
Iceland	.89	.95	.06	.06		.6
Germany	.8	.86	.06	.05		.5
Malaysia	.82	.87	.05	.05		-.68
United Arab Emirates	.9	.95	.05	.05		.09
Ukraine	.53	.59	.05	.05		-.74
Thailand	.87	.92	.05	.05		.24
Colombia	.8	.84	.05	.04		.01
New Zealand	.9	.94	.04	.04		-.12
Kazakhstan	.75	.79	.03	.03		.11
Israel	.72	.76	.03	.03		.05
China	.85	.89	.03	.03		.43
Croatia	.66	.69	.03	.03		-.39
Netherlands	.89	.92	.02	.02		-.03
Nicaragua	.79	.81	.02	.02		1.27
Trinidad and Tobago	.84	.86	.02	.02		-.07
Moldova	.63	.64	.01	.01		.4
Costa Rica	.91	.92	.01	.01		.05

*Continued on next page...*

	Freedom			Contribution to Ladder		Actual $\Delta$ Ladder
	2005-08	2016-18	$\Delta$	Low Estimate	High Estimate	
Switzerland	.92	.93	.01	.01		.01
Japan	.81	.82	.01	.01		-.34
Latvia	.66	.66	.01	.01		1.1
Laos	.89	.9	.01	.01		-.42
Senegal	.68	.69	0	0		.09
Vietnam	.9	.9	0	0		-.22
Sweden	.93	.93	0	0		-.03
Haiti	.46	.46	0	0		-.2
Norway	.95	.96	0	0		.02
Australia	.91	.92	0	0		-.07
Namibia	.78	.78	0	0		-.25
Dominican Republic	.86	.86	0	0		.42
Finland	.95	.95	0	0		.1
Sierra Leone	.71	.7	0	0		.97
Liberia	.76	.75	0	0		.01
Canada	.94	.93	0	0		-.18
Czech Republic	.83	.82	-.01	-.01		.38
Lebanon	.63	.62	-.01	-.01		.28
Hungary	.62	.61	-.01	-.01		.68
Tajikistan	.78	.77	-.01	-.01		.76
Denmark	.96	.95	-.01	-.01		-.34
Botswana	.84	.83	-.01	-.01		-1.61
Slovenia	.94	.92	-.01	-.01		.31
Austria	.91	.89	-.02	-.01		.09
United Kingdom	.84	.82	-.02	-.01		.13
Malawi	.84	.82	-.02	-.02		-.95
France	.84	.81	-.03	-.02		-.3
Central African Republic	.66	.63	-.03	-.03		-1.08
Belarus	.67	.64	-.03	-.03		-.26
Ireland	.92	.88	-.04	-.04		-.34
Brazil	.81	.77	-.04	-.04		-.25
Italy	.68	.64	-.04	-.04		-.51
Cyprus	.84	.79	-.05	-.05		-.19
South Korea	.63	.58	-.06	-.05		.4
Belgium	.9	.84	-.06	-.06		-.28
Egypt	.71	.64	-.07	-.06		-.95
United States	.89	.82	-.07	-.06		-.43
Ghana	.86	.77	-.09	-.09		.09
Spain	.84	.75	-.1	-.09		-.79
Mauritania	.58	.49	-.1	-.09		.29
Hong Kong S.A.R. of China	.92	.82	-.1	-.09		.11
Yemen	.67	.56	-.11	-.1		-1.1
Greece	.65	.49	-.16	-.15		-1.04
Venezuela	.77	.57	-.2	-.19		-1.95
Afghanistan	.72	.44	-.28	-.26		-.53

Notes: 1) The column with the heading “2005-08 Avg.” shows the average value of the sense of freedom over the 2005-2008 period in the GWP sample matched with the governance measure. The column with “2016-18 Avg.” shows the 2016-18 average. The estimated effects of the change on changes in life ladder are shown in Table 10. There is no “high estimate” in this case. The “low estimate” is based on column (9), based on country fixed-effects regressions that include all the social variables, log of GDP, and changes in governance quality. 2). The correlation coefficient between the changes are shown in Table 3, which shows the correlation coefficients.

Table 25: Changes in Income-adjusted Generosity from the 2005-08 Period to the 2016-18 Period, and their Estimated Contribution to Life Ladder

	Income-adjusted Generosity			Contribution to Ladder		Actual $\Delta$ Ladder
	2005-08	2016-18	$\Delta$	Low Estimate	High Estimate	
Uzbekistan	-.07	.21	.28	.08		.9
Kenya	.02	.29	.27	.08		.24
Kyrgyzstan	-.09	.18	.26	.08		.57
Ukraine	-.23	0	.23	.07		-.74
Indonesia	.26	.49	.22	.06		.24
Kuwait	-.27	-.07	.2	.06		-.05
Kazakhstan	-.26	-.07	.19	.05		.11
United Arab Emirates	-.05	.12	.17	.05		.09
Russia	-.31	-.17	.14	.04		.38
Uganda	-.02	.1	.12	.04		-.07
Estonia	-.25	-.13	.11	.03		.51
Bosnia and Herzegovina	.01	.12	.11	.03		.49
Zambia	-.02	.09	.11	.03		-.41
Iran	.02	.13	.11	.03		-.71
Norway	.04	.14	.09	.03		.02
Belarus	-.24	-.15	.09	.03		-.26
Tajikistan	-.02	.06	.09	.03		.76
India	-.07	.02	.09	.03		-1.16
Serbia	-.17	-.08	.09	.02		.85
Tanzania	.06	.14	.07	.02		-.98
Moldova	-.09	-.01	.07	.02		.4
Armenia	-.22	-.15	.07	.02		-.05
Spain	-.13	-.06	.07	.02		-.79
Montenegro	-.13	-.07	.06	.02		.33
South Korea	-.08	-.02	.06	.02		.4
Lithuania	-.28	-.23	.05	.02		.38
Uruguay	-.15	-.1	.05	.01		.58
Cameroon	-.04	0	.04	.01		.88
Madagascar	-.07	-.03	.04	.01		-.37
Haiti	.33	.36	.03	.01		-.2
Iraq	-.1	-.06	.03	.01		-.15
South Africa	-.12	-.09	.03	.01		-.49
Rwanda	.02	.04	.02	.01		-.95
Latvia	-.2	-.18	.02	.01		1.1
Romania	-.19	-.17	.02	.01		.85
Turkey	-.19	-.17	.02	.01		.22
Mongolia	.05	.07	.02	.01		.73
Burkina Faso	-.04	-.02	.02	.01		.7
Togo	-.04	-.02	.02	0		1.08
Malaysia	.1	.11	.02	0		-.68
Kosovo	.11	.12	.01	0		.79

*Continued on next page...*

	Income-adjusted Generosity			Contribution to Ladder		Actual $\Delta$ Ladder
	2005-08	2016-18	$\Delta$	Low Estimate	High Estimate	
Georgia	-.23	-.23	.01	0		.67
Zimbabwe	-.06	-.06	0	0		.24
Congo (Brazzaville)	-.13	-.13	0	0		1.01
Chad	.01	.02	0	0		.29
Niger	0	0	0	0		.59
Albania	-.01	-.02	0	0		.08
Hungary	-.17	-.17	0	0		.68
Burundi	-.02	-.02	0	0		.21
Jordan	-.12	-.12	0	0		-.7
Sweden	.13	.12	-.01	0		-.03
Cyprus	.01	0	-.01	0		-.19
Iceland	.27	.26	-.01	0		.6
Ecuador	-.09	-.1	-.01	0		.92
Mali	-.04	-.06	-.02	0		.33
Croatia	-.09	-.11	-.02	0		-.39
Liberia	.09	.07	-.02	-.01		.01
Singapore	.15	.13	-.02	-.01		-.38
Sri Lanka	.11	.09	-.02	-.01		-.03
Central African Republic	.09	.07	-.02	-.01		-1.08
Portugal	-.2	-.22	-.02	-.01		.13
Pakistan	.08	.05	-.03	-.01		.51
Bulgaria	-.14	-.17	-.03	-.01		1.17
Mozambique	.05	.01	-.03	-.01		-.23
Benin	.02	-.02	-.04	-.01		1.39
Senegal	-.02	-.06	-.04	-.01		.09
Bolivia	-.04	-.08	-.04	-.01		.35
Venezuela	-.15	-.2	-.04	-.01		-1.95
Slovakia	-.06	-.11	-.05	-.01		.93
Palestinian Territories	-.08	-.13	-.05	-.02		.28
Argentina	-.14	-.19	-.05	-.02		-.03
China	-.15	-.2	-.05	-.02		.43
Germany	.16	.11	-.06	-.02		.5
Nigeria	.1	.04	-.06	-.02		.42
Poland	-.05	-.11	-.06	-.02		.44
Nicaragua	.08	.02	-.06	-.02		1.27
Israel	.18	.12	-.06	-.02		.05
Finland	.01	-.06	-.06	-.02		.1
Bangladesh	.03	-.04	-.06	-.02		-.2
Japan	-.12	-.19	-.06	-.02		-.34
Azerbaijan	-.18	-.24	-.06	-.02		.5
Mexico	-.11	-.18	-.07	-.02		-.05
Egypt	-.11	-.18	-.07	-.02		-.95
New Zealand	.29	.22	-.07	-.02		-.12
Botswana	-.19	-.26	-.07	-.02		-1.61
Sierra Leone	.17	.1	-.07	-.02		.97

*Continued on next page...*

	Income-adjusted Generosity			Contribution to Ladder		Actual $\Delta$ Ladder
	2005-08	2016-18	$\Delta$	Low Estimate	High Estimate	
United States	.22	.14	-.07	-.02		-.43
Cambodia	.14	.06	-.07	-.02		.66
Ghana	.16	.09	-.08	-.02		.09
United Kingdom	.33	.25	-.08	-.02		.13
Belgium	.03	-.04	-.08	-.02		-.28
Namibia	-.11	-.19	-.08	-.02		-.25
Peru	-.08	-.17	-.08	-.02		.65
Brazil	-.06	-.14	-.08	-.02		-.25
Macedonia	.08	-.01	-.09	-.02		.78
Lebanon	.05	-.04	-.09	-.02		.28
Australia	.32	.23	-.09	-.03		-.07
Canada	.25	.15	-.09	-.03		-.18
Honduras	.19	.09	-.1	-.03		.55
Trinidad and Tobago	.09	0	-.1	-.03		-.07
El Salvador	-.05	-.15	-.1	-.03		.86
Greece	-.19	-.3	-.1	-.03		-1.04
Mauritania	-.02	-.13	-.1	-.03		.29
Colombia	-.04	-.14	-.1	-.03		.01
Hong Kong S.A.R. of China	.22	.11	-.11	-.03		.11
Ireland	.28	.17	-.11	-.03		-.34
Thailand	.38	.27	-.11	-.03		.24
Slovenia	.04	-.07	-.11	-.03		.31
Dominican Republic	-.01	-.12	-.11	-.03		.42
Paraguay	.1	-.02	-.12	-.03		.57
Yemen	-.01	-.13	-.12	-.03		-1.1
Jamaica	0	-.13	-.13	-.04		-.32
Italy	.08	-.05	-.13	-.04		-.51
Netherlands	.35	.21	-.14	-.04		-.03
Saudi Arabia	-.03	-.17	-.14	-.04		-.68
Malawi	.19	.05	-.15	-.04		-.95
Philippines	.04	-.11	-.15	-.04		.85
Denmark	.25	.1	-.15	-.04		-.34
Costa Rica	.09	-.07	-.16	-.05		.05
Nepal	.31	.15	-.16	-.05		.33
Czech Republic	-.07	-.22	-.16	-.05		.38
Chile	.16	0	-.16	-.05		.6
France	.04	-.12	-.16	-.05		-.3
Switzerland	.29	.12	-.17	-.05		.01
Vietnam	.1	-.06	-.17	-.05		-.22
Panama	.04	-.13	-.17	-.05		-.33
Guatemala	.17	-.02	-.19	-.05		.22
Austria	.3	.09	-.21	-.06		.09
Afghanistan	.18	-.05	-.23	-.07		-.53
Laos	.45	.11	-.34	-.1		-.42

Notes: 1) The column with the heading “2005-08 Avg.” shows the average value of the

income-adjusted generosity (the residual from regression the unadjusted measure on per-capita GDP) over the 2005-2008 period in the GWP sample matched with the governance measure. The column with “2016-18 Avg.” shows the 2016-18 average. The estimated effects of the change on changes in life ladder are shown in Table 10. There is no “high estimate” in this case. The “low estimate” is based on column (9), based on country fixed-effects regressions that include all the social variables, log of GDP, and changes in governance quality. 2). The correlation coefficient between the changes are shown in Table 3, which shows the correlation coefficients.

Table 26: Changes in Social Support from the 2005-08 Period to the 2016-18 Period, and their Estimated Contribution to Life Ladder

	Social Support			Contribution to Ladder		Actual $\Delta$ Ladder
	2005-08	2016-18	$\Delta$	Low Estimate	High Estimate	
Burundi	.29	.48	.19	.31		.21
Pakistan	.48	.67	.19	.3		.51
Togo	.36	.54	.17	.28		1.08
Bangladesh	.55	.69	.14	.22		-.2
Turkey	.75	.87	.12	.19		.22
Mauritania	.68	.79	.11	.18		.29
Bulgaria	.83	.93	.1	.16		1.17
Palestinian Territories	.73	.82	.09	.14		.28
Indonesia	.72	.8	.08	.13		.24
Liberia	.61	.68	.08	.13		.01
Congo (Brazzaville)	.55	.63	.08	.12		1.01
Kyrgyzstan	.82	.9	.08	.12		.57
Cambodia	.7	.77	.07	.12		.66
Kazakhstan	.86	.93	.07	.11		.11
Afghanistan	.45	.52	.07	.11		-.53
Benin	.41	.48	.06	.1		1.39
Chile	.82	.87	.05	.08		.6
Latvia	.86	.91	.05	.08		1.1
Trinidad and Tobago	.87	.92	.04	.07		-.07
Tajikistan	.72	.76	.04	.07		.76
Philippines	.8	.84	.04	.07		.85
Bosnia and Herzegovina	.77	.81	.04	.07		.49
Sierra Leone	.61	.65	.04	.06		.97
Zambia	.7	.74	.04	.06		-.41
Paraguay	.88	.92	.04	.06		.57
Taiwan Province of China	.86	.89	.04	.06		.58
Uzbekistan	.9	.94	.04	.06		.9
Ukraine	.84	.88	.04	.06		-.74
Mongolia	.9	.94	.04	.06		.73
Montenegro	.83	.87	.04	.06		.33
El Salvador	.78	.82	.03	.06		.86
Serbia	.84	.88	.03	.05		.85
Estonia	.9	.94	.03	.05		.51
Macedonia	.81	.84	.03	.05		.78
Senegal	.75	.77	.03	.05		.09
Chad	.59	.62	.03	.04		.29
Romania	.79	.81	.03	.04		.85
South Africa	.84	.86	.03	.04		-.49
Moldova	.83	.85	.02	.04		.4
Armenia	.72	.74	.02	.04		-.05
Peru	.8	.83	.02	.04		.65

*Continued on next page...*

	Social Support			Contribution to Ladder		Actual $\Delta$ Ladder
	2005-08	2016-18	$\Delta$	Low Estimate	High Estimate	
Lebanon	.79	.81	.02	.04		.28
Uruguay	.89	.91	.02	.04		.58
Israel	.88	.91	.02	.03		.05
South Korea	.79	.81	.02	.03		.4
Namibia	.83	.85	.02	.03		-.25
Singapore	.89	.91	.02	.03		-.38
Russia	.89	.91	.02	.03		.38
Azerbaijan	.76	.78	.02	.03		.5
Belarus	.89	.91	.02	.03		-.26
Brazil	.88	.9	.02	.03		-.25
Nigeria	.74	.76	.02	.02		.42
Thailand	.87	.89	.01	.02		.24
Italy	.91	.92	.01	.02		-.51
Dominican Republic	.87	.88	.01	.02		.42
Norway	.95	.96	.01	.02		.02
Czech Republic	.91	.92	.01	.02		.38
Hong Kong S.A.R. of China	.83	.83	.01	.01		.11
Saudi Arabia	.86	.87	.01	.01		-.68
Vietnam	.85	.85	0	.01		-.22
Jamaica	.91	.91	0	.01		-.32
Lithuania	.93	.93	0	0		.38
Mali	.75	.76	0	0		.33
Finland	.96	.96	0	0		.1
Portugal	.9	.9	0	0		.13
Belgium	.93	.93	0	0		-.28
Argentina	.9	.9	0	0		-.03
Slovenia	.94	.93	0	0		.31
Iceland	.98	.98	0	0		.6
China	.77	.77	0	0		.43
Rwanda	.6	.6	0	0		-.95
New Zealand	.95	.95	0	-.01		-.12
Bolivia	.81	.8	0	-.01		.35
Denmark	.96	.95	-.01	-.01		-.34
Colombia	.89	.89	-.01	-.01		.01
Netherlands	.95	.93	-.01	-.02		-.03
Sweden	.93	.92	-.01	-.02		-.03
Ecuador	.86	.85	-.01	-.02		.92
Sri Lanka	.84	.83	-.01	-.02		-.03
Switzerland	.95	.94	-.02	-.02		.01
Australia	.96	.94	-.02	-.03		-.07
Poland	.92	.9	-.02	-.03		.44
Nicaragua	.87	.85	-.02	-.03		1.27
Nepal	.83	.81	-.02	-.03		.33
Georgia	.6	.58	-.02	-.03		.67
Austria	.94	.91	-.02	-.03		.09

*Continued on next page...*

	Social Support			Contribution to Ladder		Actual $\Delta$ Ladder
	2005-08	2016-18	$\Delta$	Low Estimate	High Estimate	
Egypt	.76	.74	-.02	-.04		-.95
Canada	.95	.93	-.02	-.04		-.18
Costa Rica	.92	.9	-.02	-.04		.05
Cameroon	.7	.68	-.02	-.04		.88
Slovakia	.95	.93	-.03	-.04		.93
Burkina Faso	.76	.74	-.03	-.04		.7
France	.94	.91	-.03	-.04		-.3
United Kingdom	.97	.94	-.03	-.04		.13
Guatemala	.85	.83	-.03	-.04		.22
Ireland	.97	.95	-.03	-.05		-.34
Japan	.92	.89	-.03	-.05		-.34
Jordan	.84	.81	-.03	-.05		-.7
Germany	.94	.91	-.03	-.05		.5
India	.65	.62	-.03	-.05		-1.16
Ghana	.69	.66	-.04	-.06		.09
Mexico	.89	.85	-.04	-.06		-.05
Spain	.96	.92	-.04	-.06		-.79
Panama	.94	.9	-.04	-.06		-.33
Iraq	.74	.71	-.04	-.06		-.15
Greece	.82	.78	-.04	-.06		-1.04
Yemen	.82	.78	-.04	-.06		-1.1
Malawi	.58	.54	-.04	-.07		-.95
Hungary	.93	.89	-.04	-.07		.68
Niger	.67	.63	-.04	-.07		.59
Honduras	.86	.81	-.05	-.07		.55
Venezuela	.94	.89	-.05	-.07		-1.95
United States	.96	.91	-.05	-.08		-.43
Kosovo	.87	.81	-.05	-.09		.79
Iran	.71	.65	-.05	-.09		-.71
Malaysia	.85	.79	-.06	-.09		-.68
United Arab Emirates	.9	.85	-.06	-.09		.09
Uganda	.81	.74	-.06	-.1		-.07
Madagascar	.74	.68	-.06	-.1		-.37
Zimbabwe	.83	.77	-.07	-.1		.24
Cyprus	.88	.81	-.07	-.11		-.19
Kuwait	.92	.85	-.07	-.11		-.05
Botswana	.86	.78	-.08	-.13		-1.61
Tanzania	.76	.67	-.08	-.13		-.98
Croatia	.91	.83	-.08	-.13		-.39
Mozambique	.79	.71	-.09	-.14		-.23
Laos	.8	.71	-.1	-.15		-.42
Haiti	.69	.59	-.1	-.16		-.2
Kenya	.86	.71	-.15	-.24		.24
Albania	.82	.65	-.17	-.27		.08
Central African Republic	.53	.3	-.23	-.37		-1.08

Notes: 1) The column with the heading “2005-08 Avg.” shows the average value of social support over the 2005-2008 period in the GWP sample matched with the governance measure. The column with “2016-18 Avg.” shows the 2016-18 average. The estimated effects of the change on changes in life ladder are shown in Table 10. There is no “high estimate” in this case. The “low estimate” is based on column (9), based on country fixed-effects regressions that include all the social variables, log of GDP, and changes in governance quality. 2). The correlation coefficient between the changes are shown in Table 3, which shows the correlation coefficients.