

Statistical Appendix 1 for Chapter 2 of World Happiness Report 2018

March 1, 2018

1 Data Sources and Variable Definitions

- Happiness score or subjective well-being (variable name *ladder*): The survey measure of SWB is from the Dec 22, 2017 release of the Gallup World Poll (GWP), which covers the years from 2005 to 2017. Unless stated otherwise, it 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 also referred to as *Cantril life ladder*, or just *life ladder* in our analysis.
- Inequality/distribution statistics of happiness scores by WP5-year (variables names *giniLadder* and more) from the GWP release. WP5 is GWP’s coding of countries, including some sub-country territories such as Hong Kong. The statistics are named *giniLadder*, *p95Ladder*, *p90Ladder*, *p75Ladder*, *p50Ladder*, *p25Ladder*, *p10Ladder*, *p05Ladder*, *maxLadder*, *minLadder*, respectively the gini score, the various percentiles, the maximum and the minimum. They are all derived from the STATA command *ineqdec0* using observations in an individual country/territory in a given survey year with sample weights. According to Stephen P. Jenkins (May 2008, STATA Help), the command *ineqdec0* “estimate[s] a range of inequality and related indices” using unit record or ‘micro’ level data, and that the calculations do not exclude observations whose value is equal to zero.
- Alternative measures of inequality in happiness scores by wp5-year (variable names *sdLadder* and *cvLadder*). These extra measures are *sdLadder* “Standard deviation of ladder by country-year” and *cvLadder* “Standard deviation/Mean of ladder by country-year”.
- The statistics of GDP per capita (variable name *gdp*) in purchasing power parity (PPP) at constant 2011 international dollar prices are from the September 15,

2017 update of the World Development Indicators (WDI). The GDP figures for Taiwan, up to 2010, are from the Penn World Table 7.1. A few countries are missing the GDP numbers in the WDI release but were present in earlier releases. We use the numbers from the earlier release, after adjusting their levels by a factor of 1.17 to take into account changes in the implied prices when switching from the PPP 2005 prices used in the earlier release to the PPP 2011 prices used in the latest release. The factor of 1.17 is the average ratio derived by dividing the US GDP per capita under the 2011 prices with their counterparts under the 2005 prices. The same 1.17 is used to adjust the Taiwanese numbers, which are originally PPP dollars at 2005 constant prices and are based on the Penn World Table.

- GDP per capita in 2017 are not yet available as of December 2017. We extend the GDP-per-capita time series from 2016 to 2017 using country-specific forecasts of real GDP growth in 2017 first from the OECD Economic Outlook No 102 (Edition November 2017) and then, if missing, forecasts from World Bank’s Global Economic Prospects (Last Updated: 06/04/2017). The GDP growth forecasts are adjusted for population growth with the subtraction of 2015-16 population growth as the projected 2016-17 growth.
- Healthy Life Expectancy (HLE). The time series of healthy life expectancy at birth are calculated by the authors based on data from the World Health Organization (WHO), the World Development Indicators (WDI), and statistics published in journal articles. Healthy life expectancy, unlike the simple life expectancy, is not widely available as time series. In our effort to derive the time series of healthy life expectancy for our sample period (2005 to 2017), we use WDI’s non-health adjusted life expectancy, which is available as time series up to the year 2015, as the basis of our calculation. Using country-specific ratios of healthy life expectancy to total life expectancy in 2012 (roughly the middle of our sample period), available from the WHO’s Global Health Observatory Data Repository, we adjust the time series of total life expectancy to healthy life expectancy by simple multiplication, assuming that the ratio remains constant within each country over the sample period. For Hong Kong, we calculate the health life-to-life expectancy ratio using estimates reported in “Healthy life expectancy in Hong Kong Special Administrative Region of China,” by C.K. Law, & P.S.F. Yip, published at the *Bulletin of the World Health Organization*, 2003, 81 (1). For Kosovo, we set its health life-to-life expectancy ratio to the world average. The estimated life expectancy for Taiwan and the Palestinian Territories are from “Healthy life expectancy for 187 countries, 1990 - 2010: a systematic analysis for the Global Burden Disease Study 2010,” by Joshua A Salomon et al, *The Lancet*, Volume 380, Issue 9859. Once we have the data, we use interpolation and extrapolation to fill in the missing values (when necessary) and to extend the period to 2017. Not all the countries/territories mentioned above are necessarily included in the most recent happiness ranking. The HLE is

constructed regardless of a country/territory's presence in a particular ranking.

- Social support (or having someone to count on in times of trouble) is the national average of the binary responses (either 0 or 1) to the GWP question “If you were in trouble, do you have relatives or friends you can count on to help you whenever you need them, or not?”
- Freedom to make life choices is the national average of responses to the GWP question “Are you satisfied or dissatisfied with your freedom to choose what you do with your life?”
- Generosity is the residual of regressing national average of response to the GWP question “Have you donated money to a charity in the past month?” on GDP per capita.
- Corruption Perception: The measure is the national average of the survey responses to two questions in the GWP: “Is corruption widespread throughout the government or not” and “Is corruption widespread within businesses or not?” The overall perception is just the average of the two 0-or-1 responses. In case the perception of government corruption is missing, we use the perception of business corruption as the overall perception. The corruption perception at the national level is just the average response of the overall perception at the individual level.
- Positive affect is defined as the average of three positive affect measures in GWP: happiness, laugh and enjoyment in the Gallup World Poll waves 3-7. These measures are the responses to the following three questions, respectively: “Did you experience the following feelings during A LOT OF THE DAY yesterday? How about Happiness?”, “Did you smile or laugh a lot yesterday?”, and “Did you experience the following feelings during A LOT OF THE DAY yesterday? How about Enjoyment?” Waves 3-7 cover years 2008 to 2012 and a small number of countries in 2013. For waves 1-2 and those from wave 8 on, positive affect is defined as the average of laugh and enjoyment only, due to the limited availability of happiness.
- Negative affect is defined as the average of three negative affect measures in GWP. They are worry, sadness and anger, respectively the responses to “Did you experience the following feelings during A LOT OF THE DAY yesterday? How about Worry?”, “Did you experience the following feelings during A LOT OF THE DAY yesterday? How about Sadness?”, and “Did you experience the following feelings during A LOT OF THE DAY yesterday? How about Anger?”
- The Migrant Acceptance Index is a proprietary index developed by Gallup, based on items it asks in its Gallup World Poll surveys. A link to Gallup's initial analysis can be found at <http://news.gallup.com/poll/216377/new-index-shows-least-accepting-countries-migrants.aspx>.

- Gini of household income reported in the GWP (variable name *giniIncGallup*). The income variable is described in Gallup’s “WORLDWIDE RESEARCH METHODOLOGY AND CODEBOOK” (Updated July 2015) as “Household Income International Dollars [...] To calculate income, respondents are asked to report their household income in local currency. Those respondents who have difficulty answering the question are presented a set of ranges in local currency and are asked which group they fall into. Income variables are created by converting local currency to International Dollars (ID) using purchasing power parity (PPP) ratios.” The gini measure is generated using STATA command *ineqdec0* by WP5-year with sample weights.
- GINI index from the World Bank (variable name *giniIncWB* and *giniIncWBavg*) from the World Development Indicators (Last Updated: September 15, 2017). The variable labeled at the source as “GINI index (World Bank estimate)”, series code “SI.POV.GINI”. According to the source, the data source is “World Bank, Development Research Group. Data are based on primary household survey data obtained from government statistical agencies and World Bank country departments.” The variable *giniIncWB* is an unbalanced panel of yearly index. The data availability is patchy at the yearly frequency. The variable *giniIncWBavg* is the average of *giniIncWB* in the period 2000-2015. The average does not imply that a country has the gini index in all years in that period. In fact, most do not.
- Variables in the expanded data set: Confidence in national government from the GWP. The English wording of the question is “Do you have confidence in each of the following, or not? How about the national government? (WP139)”.
- Variables in the expanded data set: “Most people can be trusted” from the GWP. The question’s English wording is “Generally speaking, would you say that most people can be trusted or that you have to be careful in dealing with people?” This indicator has a limited coverage.
- Variables in the expanded data set: “Most people can be trusted” from the 6-wave World Value Surveys. The question’s English wording is “Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?” The measure is defined as the percentage of respondents saying that most people can be trusted, excluding those who did not provide an answer.
- Variables in the expanded data set: Democratic and delivery quality measures of governance are based on Worldwide Governance Indicators (WGI) project (Kaufmann, Kraay and Mastruzzi) updated 29-Sep-2017, covering the years up to 2016. The original data have six dimensions: 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. We reduce the number

of dimensions to two using 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).

2 Coverage, Summary Statistics and Regression Tables

WP5 is GWP’s coding of countries including some sub-country territories such as Hong Kong. Not all the countries and territories appear in all the years. Our analysis does not cover all of the country/territories that have valid happiness scores. Tables 1-3 show the WP5-year pairs that are covered.

The 2015-2017 ranking of happiness scores includes 152 countries/territories that have the happiness scores in the 2015-2017 period, plus 4 country/territory that has the happiness score in 2014 but not in 2015-17; a later table has the list of the country/countries.

To appear in regression analysis that uses data from outside the GWP survey, a WP5-year needs to have the necessary external information (GDP, healthy life expectancy, etc). The regression analysis thus does not necessarily cover all of the countries/territories in the GWP. Nor does it necessarily cover all the countries/territories that are ranked by their happiness scores in this report. The underlying principle is that we always use the largest available sample. For different kind of analysis/ranking, the largest available samples can be different.

Regions: Some of the analysis includes dummy indicator for regions, namely Western Europe, Central and Eastern Europe, Commonwealth of Independent States, Southeast Asia, South Asia, East Asia, Latin America and Caribbean, North America and ANZ, Middle East and North Africa, and Sub-Saharan Africa. A later set of tables list individual countries by their region grouping.

3 Imputed Missing Values in Our Exercise of Explaining Ladder Scores with Six Factors

We do not make use of any imputed missing values in any of our headline results including the happiness rankings and all the regression outputs. The only place where we make use of imputation is when we try to decompose a country’s average ladder score into components explained by six hypothesized underlying determinants (GDP per person, healthy life expectancy, social support, perceived freedom to make life choice, generosity and perception of corruption). A small number of countries have missing values in one or more of these factors. The most prominent is about the perception of corruption in businesses and governments. In several countries, the relevant questions were not asked in the Gallup World Poll. For these countries we impute the missing values using the “control of corruption” indicator from the Worldwide Governance Indicators (WGI) project (Kaufmann, Kraay and Mastruzzi).

Specifically, the imputed value is calculated as the predicted value using estimates from a model that regresses Gallup World Poll's perception of corruption on WGI's control of corruption. In all, 8 countries have the measure of corruption perception imputed in this way. In a few cases, countries are missing one or more of these factors over the survey period 2015-2017, but the information can be found for earlier years. In this case we use those earlier information as if they are the 2015-2017 information. There is a limit of 3 years for how far back we go in search of those missing values. After these imputations, Somalia and Taiwan are still missing GDP per capita for the period 2015-2017; we use the most recent PPP statistics of GDP per capita from *The World Factbook*. Northern Cyprus is missing GDP per capita and healthy life expectancy; we use the statistics of Cyprus instead.

Table 1: Number of ladder (WP16) observations for WP5-years - Part 1

Country/territory (wp5 ID)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
United States (1)		1001	1225	1004	1003	1005	1008	2094	1005	2048	1019	1032	1013
Egypt (2)	999		1024	1105	2112	2053	5296	4186	1149	1000	1000	1000	1000
Morocco (3)						1006	1001	3000	1007		2050	1008	1006
Lebanon (4)	996	1000		1000	2010	2027	2007	2013	1000	1000	1000	1000	1000
Saudi Arabia (5)	1004		1006	1150	2052	2038	2022	1077	2036	2035	1012	1000	1002
Jordan (6)	1000		1016	1007	2016	2000	2000	2000	1000	1000	1000	1000	1012
Syria (7)				1209	2100	2035	2041	2043	1022		1002		
Turkey (8)	995		1001	1004	999	1000	1001	2000	1000	2003	1002	1001	1000
Pakistan (9)	1001		1502	2484	3122	1030	1000	3012	1000	1000	1000	1000	1600
Indonesia (10)		1180	1000	1050	1080	1080	1000	3000	1000	1000	1000	1000	1000
Bangladesh (11)		1048	1200	1000	1000	1000	1000	3000	1000	1000	1000	1000	1000
United Kingdom (12)	1037		1204	1001	1002	1000	9239	13408	750	2000	1000	1000	1000
France (13)	1002	1220		1006	1000	1004	1001	2005	751	2000	1000	1000	1000
Germany (14)	1001		1221	3016	2010	1007	9105	13269	751	2014	1000	2000	1000
Netherlands (15)	1000		1000	1000		1001	1000	1000	751	2002	1003	1000	1001
Belgium (16)	1003		1022	1002		1003	1002	1001	1006	2004	1037	1000	1001
Spain (17)	1000		1004	1009	1005	1000	1006	2003	1004	2000	1000	1000	1000
Italy (18)	1002		1008	1008	1005	1000	1005	2007	1004	2000	1000	1000	1000
Poland (19)	1000		1000		1000	2000	1029	1000	1000	1000	1000	1000	1000
Hungary (20)	1025		1010		1008	1008	1014	1004	1019	1003	1000	1000	1000
Czech Republic (21)	1001		1072			2082	1000	1005	1001	1008	1000	1000	1000
Romania (22)	1022		1000		1000	1000	1008	1000	1000	998	1001	1001	1001
Sweden (23)	1000		1001	1000	1002	1002	1006	1000	750	2001	1000	1000	1000
Greece (24)	1002		1000		1000	1000	1000	1000	1003	1000	1000	1000	1000
Denmark (25)	1004		1009	1001	1000	1000	1005	1001	753	2002	1005	1000	1000
Iran (26)	1300		1004	1040			1003	3507	1000	2009	1001	1000	1000
Hong Kong S.A.R. of China (27)	800		751	755	756	1028	1006			2017		1005	1007
Singapore (28)		1095	1000	2551	1005	1001	1000		1000	1000	1000	1000	1000
Japan (29)	1000		1150	3000	1000	1000	1000	2000	1001	2006	1003	1003	1002
China (30)		3730	3733	3712	3833	4151	4220	9413	4244	4696	4265	4373	4141
India (31)		2100	3186	2000	3010	6000	3518	10086	5540	3000	3000	3000	3000
Venezuela (32)	1000	1000		1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Brazil (33)	1029		1038	1032	1031	1043	1042	1002	2006	1007	1004	1001	1000
Mexico (34)	1007		999	1000	1000	1000	1000	2000	1000	1017	1031	1000	1000
Nigeria (35)		1000	1000	1000	1000	1000		2000	1002		1000	1000	1000
Kenya (36)		1000	1000	2200	1000	1000	1000	1000	1000	1000	1000	1000	1000
Tanzania (37)		1000	1000	1000	1000	1000	1000	1000	1008	1008	1000	1000	1000
Israel (38)		1002	1001	1001	1000	1000	1000	1000	1000	1000	1000	1000	1000
Palestinian Territories (39)		1000	1000	1000	2014	2000	2000	2000	1000	1000	1000	1000	1000
Ghana (40)		1000	1000	1000	1000	1000	1000	1000	1008	1000	1000	1000	1000
Uganda (41)		1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Benin (42)		1000		1000			1000	1000	1000	1000	1000	1000	1000
Madagascar (43)		1000		1000			1000	1000	1008	1008	1000	1000	1000
Malawi (44)		1000	1000		1000		1000	1000	1000	1000	1000	1000	1000
South Africa (45)		1001	1000	1000	1000	1000	1000	2000	1000	1000	1000	1000	1000
Canada (46)	1355		1010	1005	1011	1007	1013	2003	1021	2025	1011	1016	
Australia (47)	1000		1205	1005		1000	1010	1002	1002	2002	1001	1004	1003
Philippines (48)		1200	1000	1000	1000	1000	1000	2000	1000	1000	1000	1000	1000
Sri Lanka (49)		1033	1000	1000	1000	1030	1000	2031	1030	1062	1062		1104
Vietnam (50)		1023	1015	1016	1008	1000	1000	2000	1017	1000	1000	1039	1002
Thailand (51)		1410	1006	1038	1019	1000	1000	2000	1000	1000	1000	1000	1000
Cambodia (52)		1000	1000	1024	1000	1000	1000	1000	1000	1000	1000	1000	1600
Laos (53)		1001	1000	1000			1000	1000					1000
Myanmar (54)								1020	1020	1020	1020	1020	1600
New Zealand (55)		1028	750	750		750	1000	1008	500	2001	1007	1004	1001

Table 3: Number of ladder (WP16) observations for WP5-years - Part 3

Country/territory (wp5 ID)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Guinea (125)							1000	1000	1008	1000	1000	1000	1000
Guyana (127)			501										
Haiti (128)	505			500		504	504	504	504	504	504	504	504
Honduras (129)	1000	1000	1000	1000	1002	1000	1002	1000	1000	1000	1000	1000	1000
Iceland (130)				502				1002	502		596	529	500
Iraq (131)				990	2001	2000	2000	2000	1003	2010	1009	1011	1000
Ireland (132)	1000			1001	500	1001	1000	1000	1000	2000	1000	1000	1000
Ivory Coast (134)					1000				1008	1000	1000	1000	1000
Jamaica (135)	543						506		504	504			504
Kuwait (137)	1000				2002	2004	2000	1000	1008	1013	2000	1000	1000
Latvia (138)	1000	1017	513	515			1006	1001	1000	1002	1001	1019	1002
Lesotho (139)							1000					1000	
Liberia (140)			1000	1000		1000				1000	1000	1000	1000
Libya (141)								1002			1006	1001	1007
Lithuania (143)	1015	1007	506	500	1001	1000	1000	1000	1000	1000	1000	1000	1000
Luxembourg (144)				500	1002	1000	1001	500	2000	1000	1000	1000	1000
Macedonia (145)			1042		1008	1000	1018	1025	1020	1000	1024	1024	1008
Malaysia (146)	1012	1233	1000	1011	1000	1000	1000	1000	1000	2008	1002		
Malta (148)				508	1008	1004	1004	500	2013	1002	1011	1004	
Mauritius (150)							1000		1000		1000	1000	1000
Mongolia (153)			1000	1000		1000	1000	1000	1000	1000	1000	1000	1000
Montenegro (154)			834		1003	1000	1000	1000	1000	1000	1000	1000	1000
Namibia (155)			1000							1000			1000
Nepal (157)	1002	1000	1003	1002	1000	1000	2000	1050	1050	1000	1000	1000	1000
Nicaragua (158)	1001	1000	1000	1012	1000	1003	1000	1000	1000	1000	1000	1000	1000
Norway (160)	1001		1000					1004		2000	1005	2000	1000
Oman (161)							2016						
Panama (163)	1005	1000	1004	1018	1000	1000	1001	1000	1000	1000	1000	1000	1000
Paraguay (164)	1001	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
Peru (165)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Portugal (166)	1007		1002		2002	1000	1001	1001	2020	1021	1008	1000	
Puerto Rico (167)	500								500				
Qatar (168)					2028	1000	1032	2000			1000		
Serbia (173)			1556		1008	1000	1001	1023	1030	1000	1000	1000	1000
Slovakia (175)	1018					1007	1012	1007	1004	1000	1000	1000	1000
Slovenia (176)	1009			500	1002	1001	1000	1001	2020	1002	1000	1000	1000
Somalia (178)										1000	1000	1191	
Sudan (181)					1784	1808	2000	1000		1000			
Suriname (182)								504					
Swaziland (183)							1000						
Switzerland (184)	1000				1003			1000		2010	501	1000	1000
Tajikistan (185)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Togo (187)	1000		1000				1000			1000	1000	1000	1000
Trinidad & Tobago (189)	508		502				504		504				504
Tunisia (190)					1006	2085	2034	2053	1053	1056	1000	1001	1001
Turkmenistan (191)					1000		1000	1000	1000	1000	1000	1000	1000
United Arab Emirates (193)	1013				2054	2066	2036	2016	1000	1002	2903	1855	1850
Uruguay (194)	1004	1004	1005	1000	1000	1000	1000	1009	1000	1000	1000	1000	1000
Uzbekistan (195)	1000		1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Yemen (197)			1000		2000	2000	2000	2000	1000	1000	1000	1000	1000
Kosovo (198)			1046	1047	1000	1017	1047	1024	1000	1001	1000	1000	1000
Somaliland region (199)					2000	2000	2000	1000					
Northern Cyprus (202)					9				500	502	2004	1000	1000
South Sudan (205)											1000	1000	1000

Figure 1: County-by-country trajectory plots - part 1

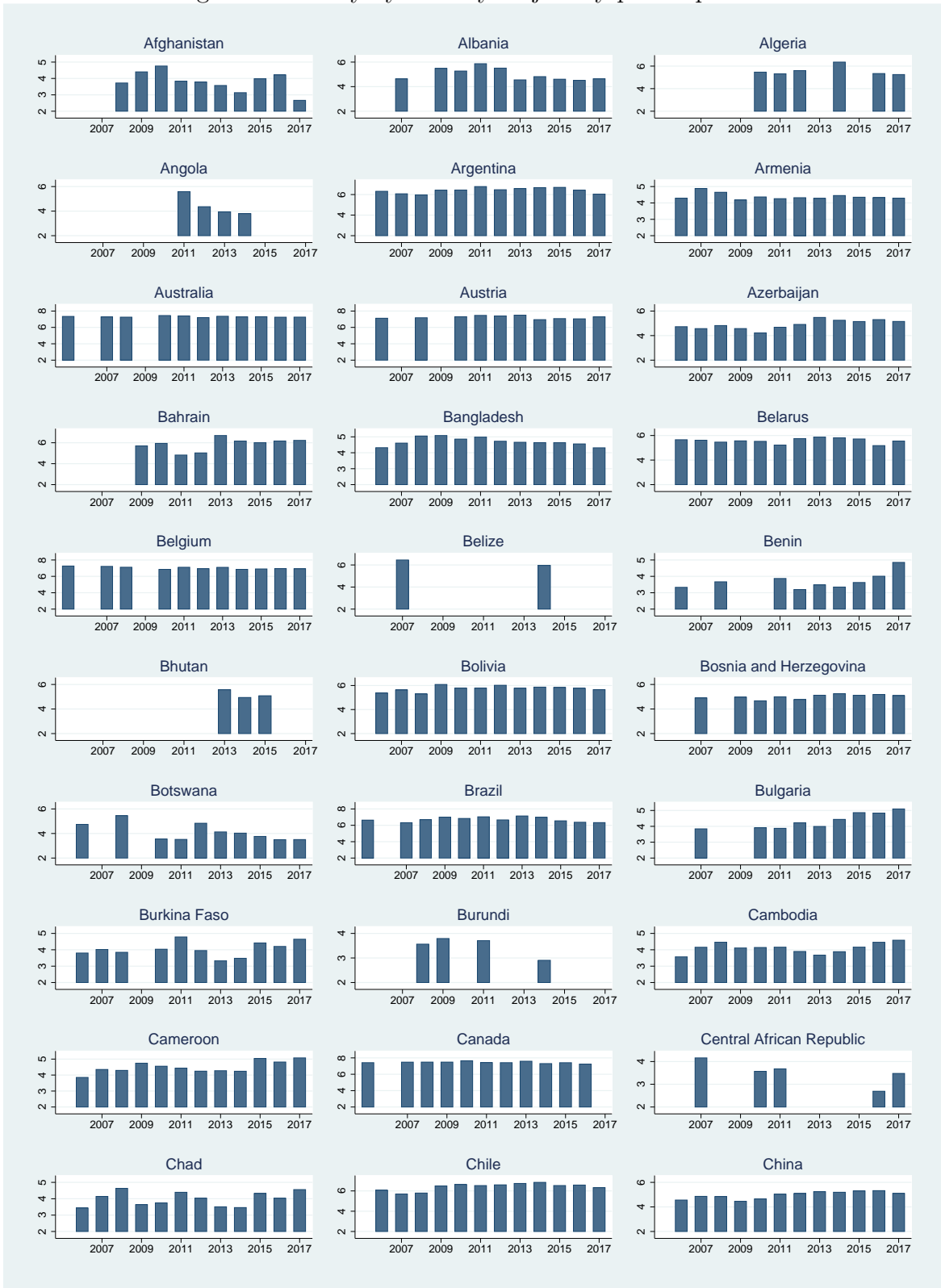


Figure 2: County-by-country trajectory plots - part 2



Figure 3: County-by-country trajectory plots - part 3

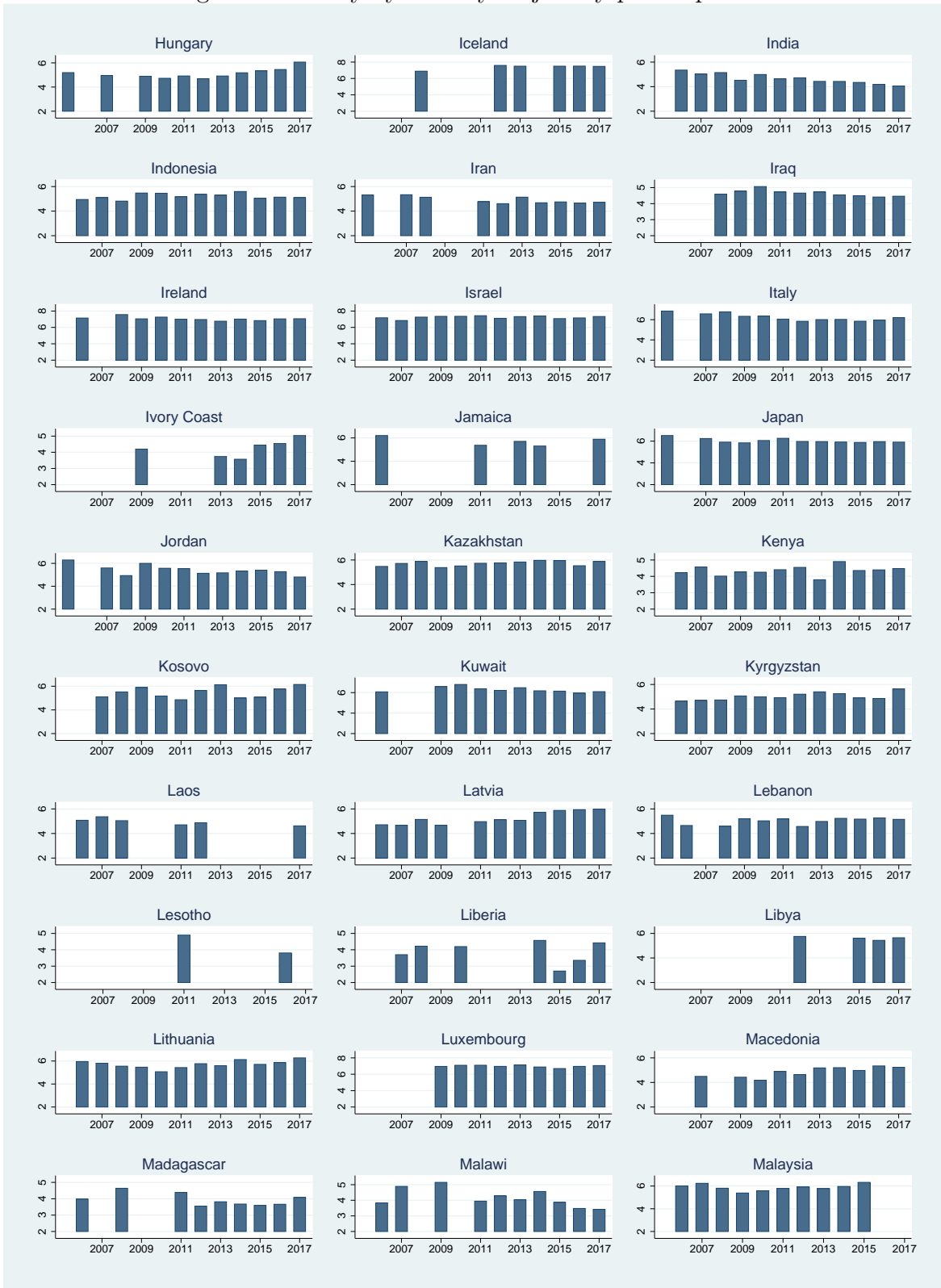


Figure 4: County-by-country trajectory plots - part 4



Figure 5: County-by-country trajectory plots - part 5

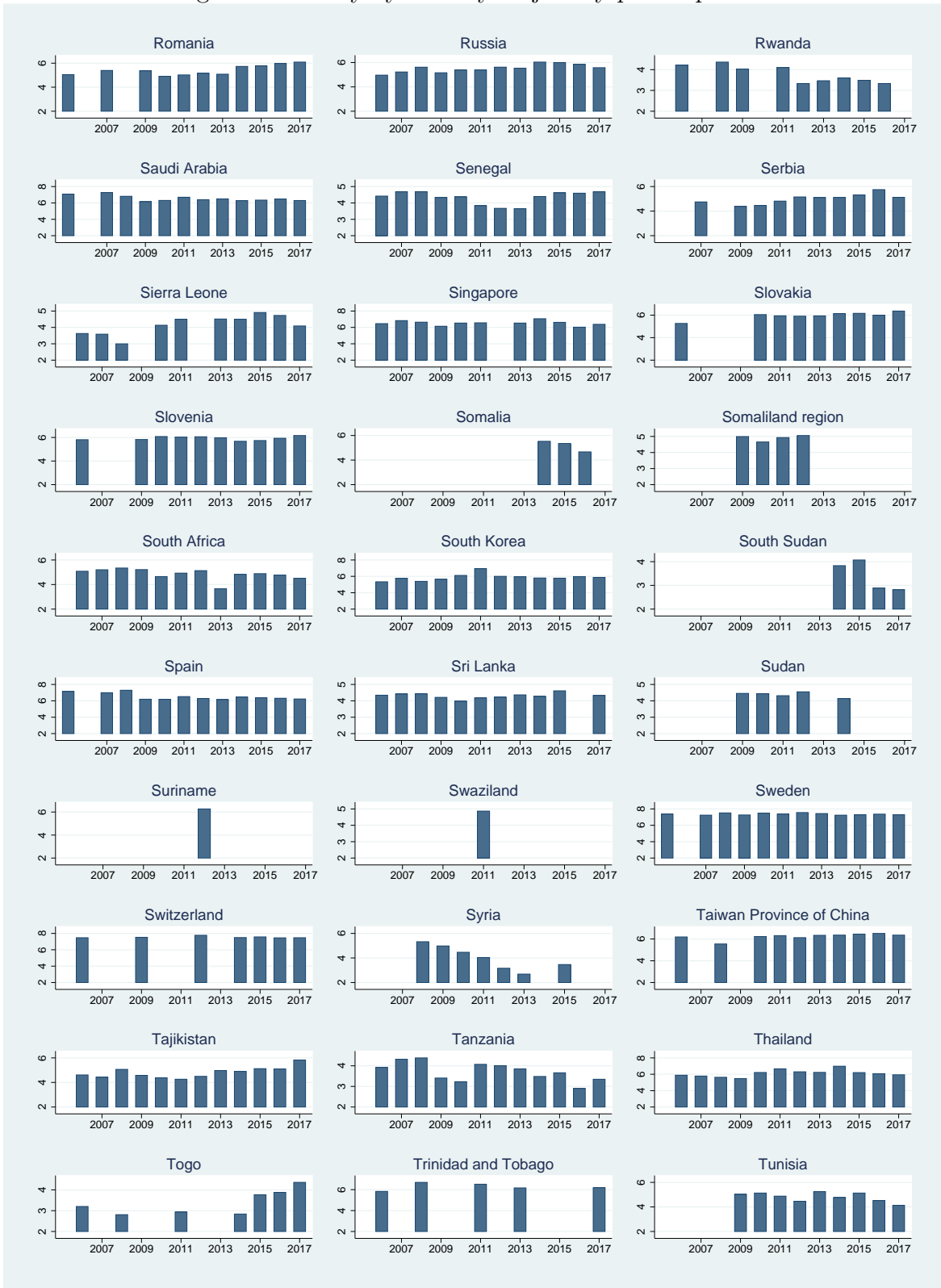


Figure 6: County-by-country trajectory plots - part 6



Table 4: Summary statistics for country-year observations with valid happiness scores
- Fullest sample

Variable	Mean	Std. Dev.	Min.	Max.	N
Life Ladder	5.43	1.12	2.66	8.02	1562
Positive affect	0.71	0.11	0.36	0.94	1544
Negative affect	0.26	0.08	0.08	0.70	1550
Log GDP per capita	9.22	1.18	6.38	11.77	1535
Social support	0.81	0.12	0.29	0.99	1549
Healthy life expectancy at birth	62.25	7.96	37.77	76.54	1553
Freedom to make life choices	0.73	0.15	0.26	0.99	1533
Generosity	0	0.16	-0.32	0.68	1482
Perceptions of corruption	0.75	0.19	0.04	0.98	1472

Table 5: Summary statistics for country-year observations with valid happiness scores
- Period from 2005 to 2007

Variable	Mean	Std. Dev.	Min.	Max.	N
Life Ladder	5.46	1.12	3.2	8.02	218
Positive affect	0.72	0.1	0.43	0.89	216
Negative affect	0.25	0.07	0.09	0.47	216
Log GDP per capita	9.13	1.19	6.49	11.47	218
Social support	0.83	0.11	0.44	0.98	216
Healthy life expectancy at birth	60.85	8.67	37.77	74.28	218
Freedom to make life choices	0.72	0.15	0.28	0.97	212
Generosity	0.01	0.17	-0.32	0.49	184
Perceptions of corruption	0.77	0.18	0.06	0.98	206

Table 6: Summary statistics for country-year observations with valid happiness scores
- Period from 2008 to 2010

Variable	Mean	Std. Dev.	Min.	Max.	N
Life Ladder	5.46	1.11	2.81	7.97	348
Positive affect	0.71	0.11	0.36	0.9	341
Negative affect	0.24	0.08	0.08	0.47	343
Log GDP per capita	9.16	1.2	6.38	11.74	346
Social support	0.81	0.12	0.29	0.98	343
Healthy life expectancy at birth	61.65	8.17	39.35	74.83	346
Freedom to make life choices	0.70	0.15	0.26	0.97	341
Generosity	0	0.16	-0.32	0.53	345
Perceptions of corruption	0.76	0.19	0.04	0.98	337

Table 7: Summary statistics for country-year observations with valid happiness scores
- Period from 2015 to 2017

Variable	Mean	Std. Dev.	Min.	Max.	N
Life Ladder	5.43	1.12	2.66	7.79	426
Positive affect	0.71	0.1	0.37	0.92	424
Negative affect	0.29	0.09	0.1	0.64	424
Log GDP per capita	9.30	1.2	6.47	11.69	412
Social support	0.81	0.12	0.29	0.99	424
Healthy life expectancy at birth	63.17	7.67	43.59	76.54	424
Freedom to make life choices	0.76	0.13	0.3	0.99	420
Generosity	0	0.16	-0.3	0.67	409
Perceptions of corruption	0.74	0.19	0.05	0.97	393

Table 8: Regression reported in Table 2.1 of WHR 2017, and replication using updated data

	WHR2017	Current
	(1)	(2)
lngdp	0.341 (0.06)***	0.311 (0.064)***
countOnFriends	2.332 (0.407)***	2.447 (0.39)***
Health life expectancy	0.029 (0.008)***	0.032 (0.009)***
freedom	1.098 (0.31)***	1.189 (0.302)***
Generosity	0.842 (0.273)***	0.644 (0.274)**
corrupt	-.533 (0.287)*	-.542 (0.284)*
Year 2005	0.422 (0.096)***	0.458 (0.094)***
Year 2006	-.035 (0.06)	-.030 (0.061)
Year 2007	0.224 (0.06)***	0.239 (0.06)***
Year 2008	0.3 (0.058)***	0.319 (0.059)***
Year 2009	0.213 (0.058)***	0.22 (0.058)***
Year 2010	0.129 (0.046)***	0.138 (0.046)***
Year 2011	0.153 (0.048)***	0.147 (0.047)***
Year 2012	0.123 (0.041)***	0.127 (0.041)***
Year 2013	0.067 (0.039)*	0.06 (0.04)
Year 2015	0.021 (0.041)	0.012 (0.041)
Year 2016	-.019 (0.049)	-.034 (0.048)
Year 2017		0.058 (0.057)
Obs.	1249	1394
e(N-clust)	155	157
e(r2-a)	0.746	0.742

Notes: 1) Column 1 reports estimates from a pooled OLS regression based on data used in the WHR 2017 (sample period 2005-2016). Column 2 replicates the regression with updated data that include observations from the year 2017. 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. The row “e(N-clust)” indicates the number of countries. 3). See section “Data Sources and Variable Definitions” for more information.

Table 9: (Table 2.1 in WHR 2017 Updated With the Most Recent Data, with year fixed effects): Regressions to Explain Average Happiness across Countries (Pooled OLS)

	Ladder (1)	PosAffect (2)	NegAffect (3)	LadderAgain (4)
Log GDP per capita	0.311 (0.064)***	-.003 (0.009)	0.011 (0.009)	0.316 (0.063)***
Social support	2.447 (0.39)***	0.26 (0.049)***	-.289 (0.051)***	1.933 (0.395)***
Healthy life expectancy at birth	0.032 (0.009)***	0.0002 (0.001)	0.001 (0.001)	0.031 (0.009)***
Freedom to make life choices	1.189 (0.302)***	0.343 (0.038)***	-.071 (0.042)*	0.451 (0.29)
Generosity	0.644 (0.274)**	0.145 (0.03)***	0.001 (0.028)	0.323 (0.272)
Perceptions of corruption	-.542 (0.284)*	0.03 (0.027)	0.098 (0.025)***	-.626 (0.271)**
Positive affect				2.211 (0.396)***
Negative affect				0.204 (0.442)
Year 2005	0.458 (0.094)***	-.007 (0.009)	0.018 (0.008)**	0.471 (0.09)***
Year 2006	-.030 (0.061)	0.009 (0.009)	-.006 (0.008)	-.038 (0.06)
Year 2007	0.239 (0.06)***	0.015 (0.009)*	-.030 (0.007)***	0.219 (0.059)***
Year 2008	0.319 (0.059)***	0.02 (0.007)***	-.040 (0.007)***	0.289 (0.063)***
Year 2009	0.22 (0.058)***	0.015 (0.008)*	-.027 (0.007)***	0.197 (0.058)***
Year 2010	0.138 (0.046)***	0.01 (0.007)	-.032 (0.006)***	0.124 (0.048)***
Year 2011	0.147 (0.047)***	0.001 (0.008)	-.025 (0.006)***	0.152 (0.048)***
Year 2012	0.127 (0.041)***	0.011 (0.006)*	-.019 (0.006)***	0.109 (0.043)**
Year 2013	0.06 (0.04)	0.013 (0.005)**	-.011 (0.005)**	0.038 (0.04)
Year 2015	0.012 (0.041)	0.0004 (0.005)	0.0001 (0.004)	0.014 (0.04)
Year 2016	-.034 (0.048)	-.004 (0.005)	0.015 (0.005)***	-.025 (0.046)
Year 2017	0.058 (0.057)	-.015 (0.006)**	0.017 (0.006)***	0.091 (0.055)*
Obs.	1394	1391	1393	1390
e(N-clust)	157	157	157	157
e(r2-a)	0.742	0.48	0.251	0.764

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. The row “e(N-clust)” indicates the number of countries. 2). See section “Data Sources and Variable Definitions” for more information.

Table 10: Robustness test - With respondents in a survey (by country-year) randomly divided into two groups. One group's average social support, sense of freedom, generosity and perception of corruption are then used to predict another group's average ladder, positive affect and negative affect. Else the same as in the preceding table. Note that the sample size is doubled compared to the earlier table, because each country-year now has two group averages and therefore two observations in this table's regressions. But the amount of variations in the data is not inflated, because the standard errors are always cluster-adjusted by country to allows for intra-cluster correlations

	Ladder	PosAffect	NegAffect	LadderAgain
	(1)	(2)	(3)	(4)
Log GDP per capita	0.317 (0.063)***	-0.003 (0.009)	0.01 (0.009)	0.321 (0.063)***
Social support	2.367 (0.377)***	0.252 (0.048)***	-.279 (0.049)***	1.852 (0.376)***
Healthy life expectancy at birth	0.032 (0.009)***	0.0002 (0.001)	0.001 (0.001)	0.031 (0.009)***
Freedom to make life choices	1.180 (0.295)***	0.337 (0.038)***	-.071 (0.041)*	0.453 (0.278)
Generosity	0.643 (0.269)**	0.144 (0.03)***	4.50e-06 (0.027)	0.324 (0.267)
Perceptions of corruption	-.537 (0.281)*	0.029 (0.027)	0.097 (0.025)***	-.611 (0.268)**
Positive affect				2.209 (0.379)***
Negative affect				0.143 (0.425)
Year 2005	0.465 (0.094)***	-.005 (0.009)	0.017 (0.008)**	0.477 (0.09)***
Year 2006	-.026 (0.06)	0.009 (0.009)	-.006 (0.008)	-.036 (0.059)
Year 2007	0.239 (0.06)***	0.015 (0.008)*	-.030 (0.007)***	0.218 (0.059)***
Year 2008	0.317 (0.059)***	0.02 (0.007)***	-.040 (0.007)***	0.286 (0.062)***
Year 2009	0.221 (0.058)***	0.014 (0.008)*	-.027 (0.007)***	0.196 (0.057)***
Year 2010	0.139 (0.046)***	0.011 (0.007)	-.032 (0.006)***	0.123 (0.047)***
Year 2011	0.147 (0.046)***	0.001 (0.008)	-.025 (0.006)***	0.15 (0.048)***
Year 2012	0.127 (0.041)***	0.011 (0.006)*	-.019 (0.006)***	0.107 (0.043)**
Year 2013	0.06 (0.039)	0.012 (0.005)**	-.011 (0.005)**	0.037 (0.04)
Year 2015	0.011 (0.041)	0.0004 (0.005)	0.0002 (0.004)	0.013 (0.04)
Year 2016	-.034 (0.048)	-.004 (0.005)	0.015 (0.005)***	-.025 (0.046)
Year 2017	0.058 (0.057)	-.015 (0.006)**	0.017 (0.006)***	0.091 (0.054)*
Obs.	2788	2782	2786	2780
e(N-clust)	157	157	157	157
e(r2-a)	0.737	0.467	0.244	0.761

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. The row “e(N-clust)” indicates the number of countries. 2). See section “Data Sources and Variable Definitions” for more information.

Table 11: Same robustness test - But using only half the sample

	Ladder	PosAffect	NegAffect	LadderAgain
	(1)	(2)	(3)	(4)
Log GDP per capita	0.313 (0.065)***	-0.004 (0.01)	0.011 (0.009)	0.32 (0.064)***
Social support	2.393 (0.382)***	0.27 (0.05)***	-0.280 (0.05)***	1.866 (0.381)***
Healthy life expectancy at birth	0.032 (0.009)***	0.0003 (0.001)	0.001 (0.001)	0.031 (0.009)***
Freedom to make life choices	1.176 (0.299)***	0.329 (0.038)***	-0.071 (0.042)*	0.472 (0.285)*
Generosity	0.618 (0.272)**	0.139 (0.029)***	0.003 (0.028)	0.312 (0.268)
Perceptions of corruption	-0.538 (0.285)*	0.023 (0.027)	0.098 (0.024)***	-0.608 (0.273)**
Positive affect				2.191 (0.384)***
Negative affect				0.209 (0.431)
Year 2005	0.428 (0.095)***	-0.008 (0.009)	0.013 (0.008)	0.445 (0.091)***
Year 2006	-0.042 (0.06)	0.003 (0.01)	-0.005 (0.009)	-0.037 (0.058)
Year 2007	0.237 (0.062)***	0.012 (0.009)	-0.029 (0.007)***	0.226 (0.06)***
Year 2008	0.319 (0.06)***	0.021 (0.008)***	-0.040 (0.007)***	0.289 (0.062)***
Year 2009	0.22 (0.059)***	0.013 (0.009)	-0.026 (0.007)***	0.2 (0.058)***
Year 2010	0.134 (0.048)***	0.008 (0.007)	-0.032 (0.006)***	0.125 (0.048)***
Year 2011	0.153 (0.048)***	0.0003 (0.008)	-0.025 (0.006)***	0.161 (0.049)***
Year 2012	0.139 (0.042)***	0.011 (0.007)	-0.019 (0.006)***	0.122 (0.044)***
Year 2013	0.057 (0.041)	0.011 (0.005)**	-0.013 (0.005)**	0.038 (0.041)
Year 2015	0.014 (0.043)	-0.0003 (0.005)	0.0007 (0.004)	0.018 (0.041)
Year 2016	-0.039 (0.048)	-0.003 (0.005)	0.013 (0.005)**	-0.032 (0.047)
Year 2017	0.055 (0.06)	-0.016 (0.006)**	0.015 (0.006)**	0.09 (0.057)
Obs.	1394	1391	1393	1390
e(N-clust)	157	157	157	157
e(r2-a)	0.735	0.462	0.237	0.758

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. The row “e(N-clust)” indicates the number of countries. 2). See section “Data Sources and Variable Definitions” for more information.

Table 12: Robustness test - Using the other half the sample

	Ladder	PosAffect	NegAffect	LadderAgain
	(1)	(2)	(3)	(4)
Log GDP per capita	0.321 (0.062)***	-0.008 (0.009)	0.01 (0.009)	0.321 (0.062)***
Social support	2.343 (0.381)***	0.235 (0.047)***	-.277 (0.049)***	1.839 (0.38)***
Healthy life expectancy at birth	0.032 (0.009)***	0.0002 (0.001)	0.001 (0.001)	0.031 (0.009)***
Freedom to make life choices	1.186 (0.296)***	0.344 (0.038)***	-.071 (0.042)*	0.433 (0.277)
Generosity	0.668 (0.269)**	0.149 (0.03)***	-.003 (0.027)	0.336 (0.269)
Perceptions of corruption	-.535 (0.28)*	0.034 (0.028)	0.096 (0.025)***	-.615 (0.267)**
Positive affect				2.228 (0.384)***
Negative affect				0.079 (0.429)
Year 2005	0.502 (0.094)***	-.003 (0.009)	0.022 (0.009)**	0.509 (0.09)***
Year 2006	-.010 (0.064)	0.015 (0.009)*	-.007 (0.009)	-.034 (0.064)
Year 2007	0.241 (0.061)***	0.019 (0.009)**	-.030 (0.007)***	0.209 (0.06)***
Year 2008	0.316 (0.061)***	0.019 (0.007)**	-.040 (0.007)***	0.283 (0.066)***
Year 2009	0.222 (0.059)***	0.016 (0.008)*	-.027 (0.008)***	0.192 (0.059)***
Year 2010	0.143 (0.047)***	0.013 (0.007)*	-.032 (0.006)***	0.12 (0.049)**
Year 2011	0.141 (0.048)***	0.002 (0.008)	-.025 (0.006)***	0.139 (0.049)***
Year 2012	0.114 (0.043)***	0.011 (0.007)*	-.018 (0.006)***	0.093 (0.044)**
Year 2013	0.063 (0.042)	0.014 (0.006)**	-.010 (0.005)*	0.036 (0.042)
Year 2015	0.008 (0.043)	0.001 (0.005)	-.0003 (0.004)	0.008 (0.042)
Year 2016	-.030 (0.051)	-.005 (0.005)	0.017 (0.005)***	-.018 (0.049)
Year 2017	0.061 (0.058)	-.014 (0.006)**	0.018 (0.006)***	0.092 (0.055)*
Obs.	1394	1391	1393	1390
e(N-clust)	157	157	157	157
e(r2-a)	0.736	0.466	0.241	0.76

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. The row “e(N-clust)” indicates the number of countries. 2). See section “Data Sources and Variable Definitions” for more information.

Table 13: Robustness test - Using lagged social support, sense of freedom, generosity and perception of corruption

	Ladder	PosAffect	NegAffect	LadderAgain
	(1)	(2)	(3)	(4)
lngdp	0.308 (0.068)***	-.010 (0.01)	0.01 (0.01)	0.333 (0.07)***
L.countOnFriends	2.328 (0.429)***	0.244 (0.053)***	-.256 (0.058)***	1.737 (0.427)***
adjusted-hle	0.037 (0.01)***	0.001 (0.001)	0.0009 (0.001)	0.035 (0.01)***
L.freedom	1.061 (0.339)***	0.339 (0.041)***	-.067 (0.048)	0.26 (0.335)
L.donation-net-n	0.673 (0.274)**	0.153 (0.031)***	-.004 (0.03)	0.303 (0.279)
L.corrupt	-.474 (0.3)	0.03 (0.03)	0.094 (0.027)***	-.545 (0.291)*
Positive affect				2.381 (0.399)***
Negative affect				-.040 (0.449)
Year 2005				
Year 2006				
Year 2007	0.102 (0.084)	0.007 (0.01)	-.020 (0.01)**	0.086 (0.081)
Year 2008	0.2 (0.069)***	0.003 (0.009)	-.021 (0.007)***	0.191 (0.069)***
Year 2009	0.296 (0.073)***	0.027 (0.01)***	-.036 (0.008)***	0.233 (0.067)***
Year 2010	0.15 (0.061)**	0.013 (0.008)	-.023 (0.007)***	0.123 (0.059)**
Year 2011	0.086 (0.057)	-.006 (0.008)	-.010 (0.007)	0.102 (0.056)*
Year 2012	0.0006 (0.043)	-.009 (0.007)	-.001 (0.006)	0.025 (0.042)
Year 2013	0.026 (0.04)	0.01 (0.005)**	-.003 (0.005)	0.006 (0.041)
Year 2015	-.054 (0.037)	-.009 (0.005)*	0.012 (0.005)**	-.031 (0.035)
Year 2016	-.024 (0.046)	-.005 (0.005)	0.02 (0.006)***	-.008 (0.042)
Year 2017	0.028 (0.061)	-.026 (0.006)***	0.024 (0.007)***	0.099 (0.056)*
Obs.	1148	1141	1145	1141
e(N-clust)	148	147	147	147
e(r2-a)	0.717	0.453	0.208	0.746

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. The row “e(N-clust)” indicates the number of countries. 2). See section “Data Sources and Variable Definitions” for more information.

Table 14: (Table 2.1 in WHR 2017 Updated With the Most Recent Data, without year fixed effects): Regressions to Explain Average Happiness across Countries (Pooled OLS)

	Ladder	PosAffect	NegAffect	LadderAgain
	(1)	(2)	(3)	(4)
Log GDP per capita	0.324 (0.063)***	-.002 (0.009)	0.009 (0.009)	0.329 (0.062)***
Social support	2.487 (0.382)***	0.27 (0.048)***	-.305 (0.051)***	1.871 (0.39)***
Healthy life expectancy at birth	0.03 (0.009)***	-.00003 (0.001)	0.002 (0.001)	0.03 (0.009)***
Freedom to make life choices	1.041 (0.286)***	0.326 (0.036)***	-.040 (0.04)	0.313 (0.274)
Generosity	0.695 (0.273)**	0.151 (0.029)***	-.008 (0.028)	0.358 (0.272)
Perceptions of corruption	-.551 (0.278)**	0.029 (0.027)	0.101 (0.025)***	-.610 (0.269)**
Positive affect				2.248 (0.406)***
Negative affect				-.039 (0.42)
year-1				
year-2				
year-3				
year-4				
year-5				
year-6				
year-7				
year-8				
year-9				
year-11				
year-12				
year-13				
Obs.	1394	1391	1393	1390
e(N-clust)	157	157	157	157
e(r2-a)	0.735	0.477	0.212	0.759

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. The row “e(N-clust)” indicates the number of countries. 2). See section “Data Sources and Variable Definitions” for more information.

Figure 7: Ranking of Happiness: 2015-17 (Part 1)

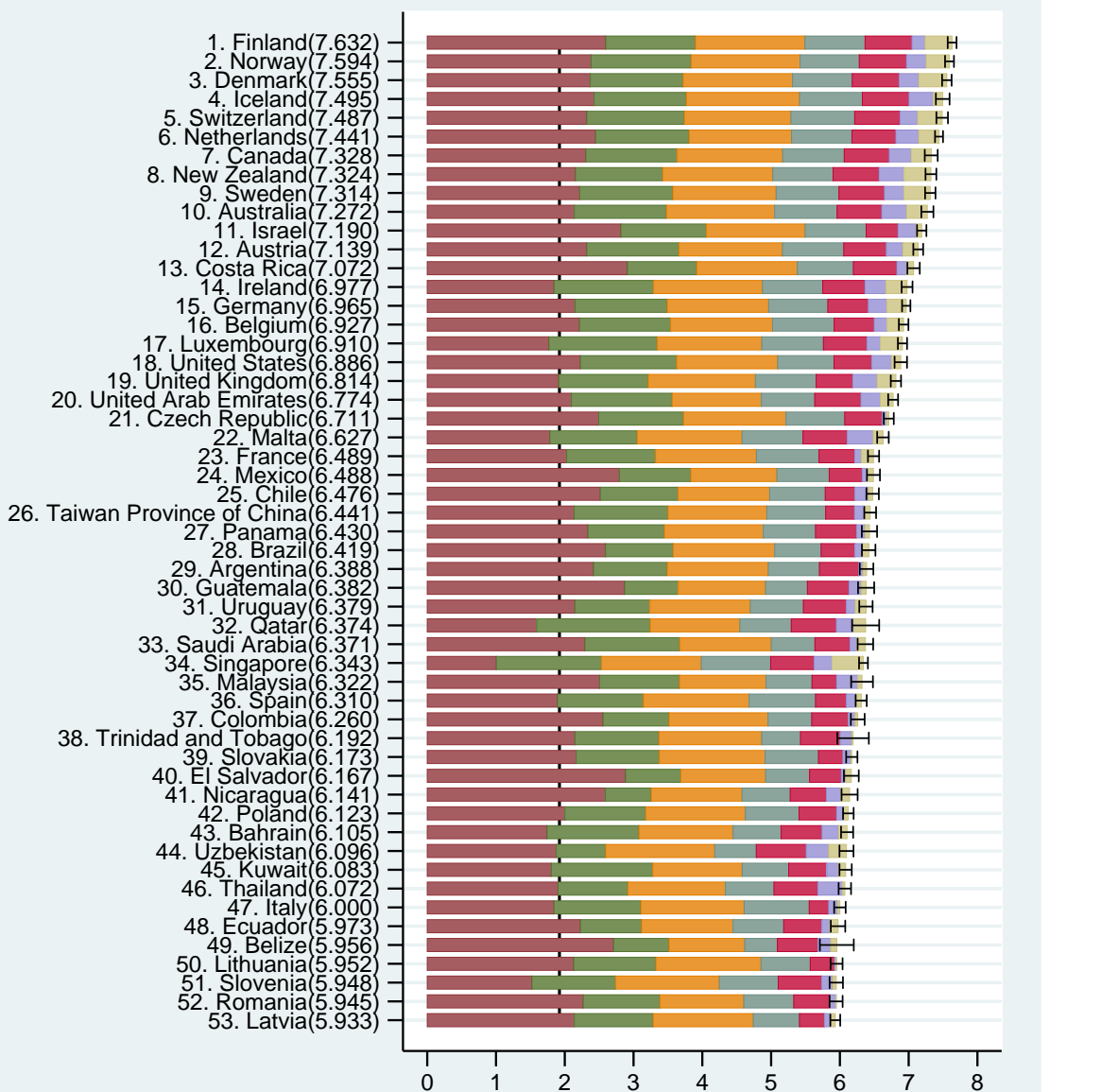


Figure 8: Ranking of Happiness: 2015-17 (Part 2)

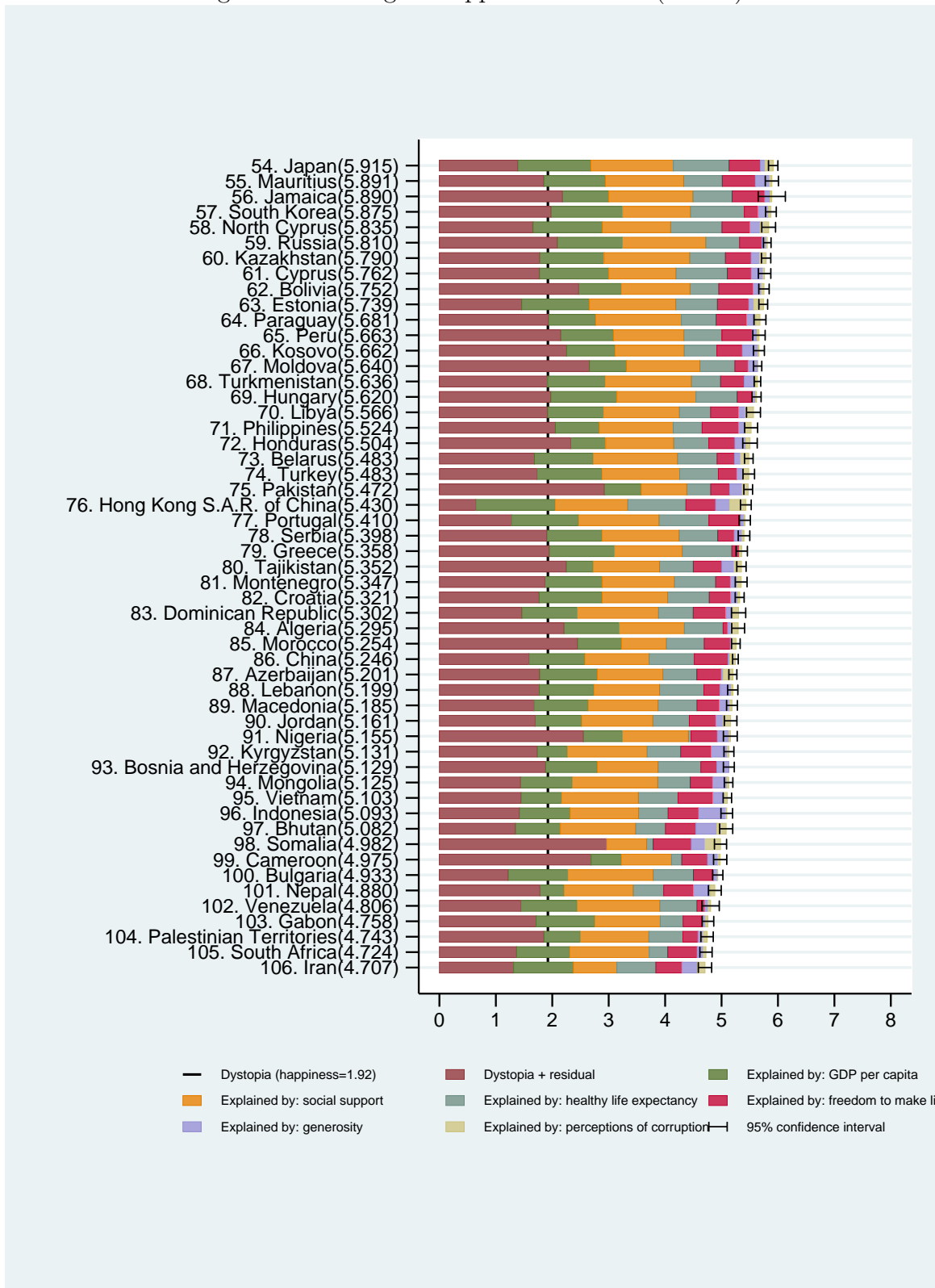


Figure 9: Ranking of Happiness: 2015-17 (Part 3)

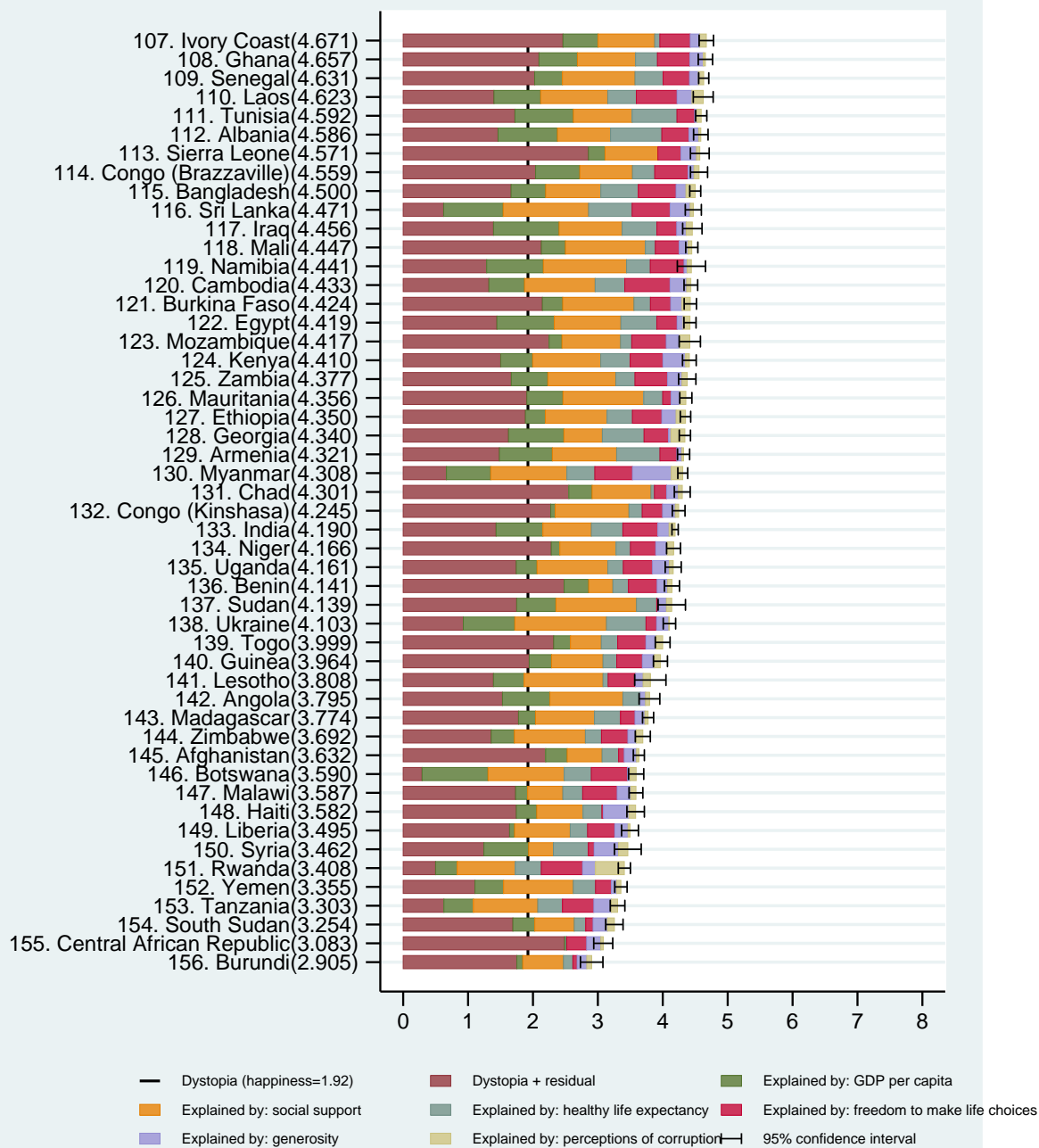


Figure 10: Ranking of Happiness: 2015-17 (Part 1)

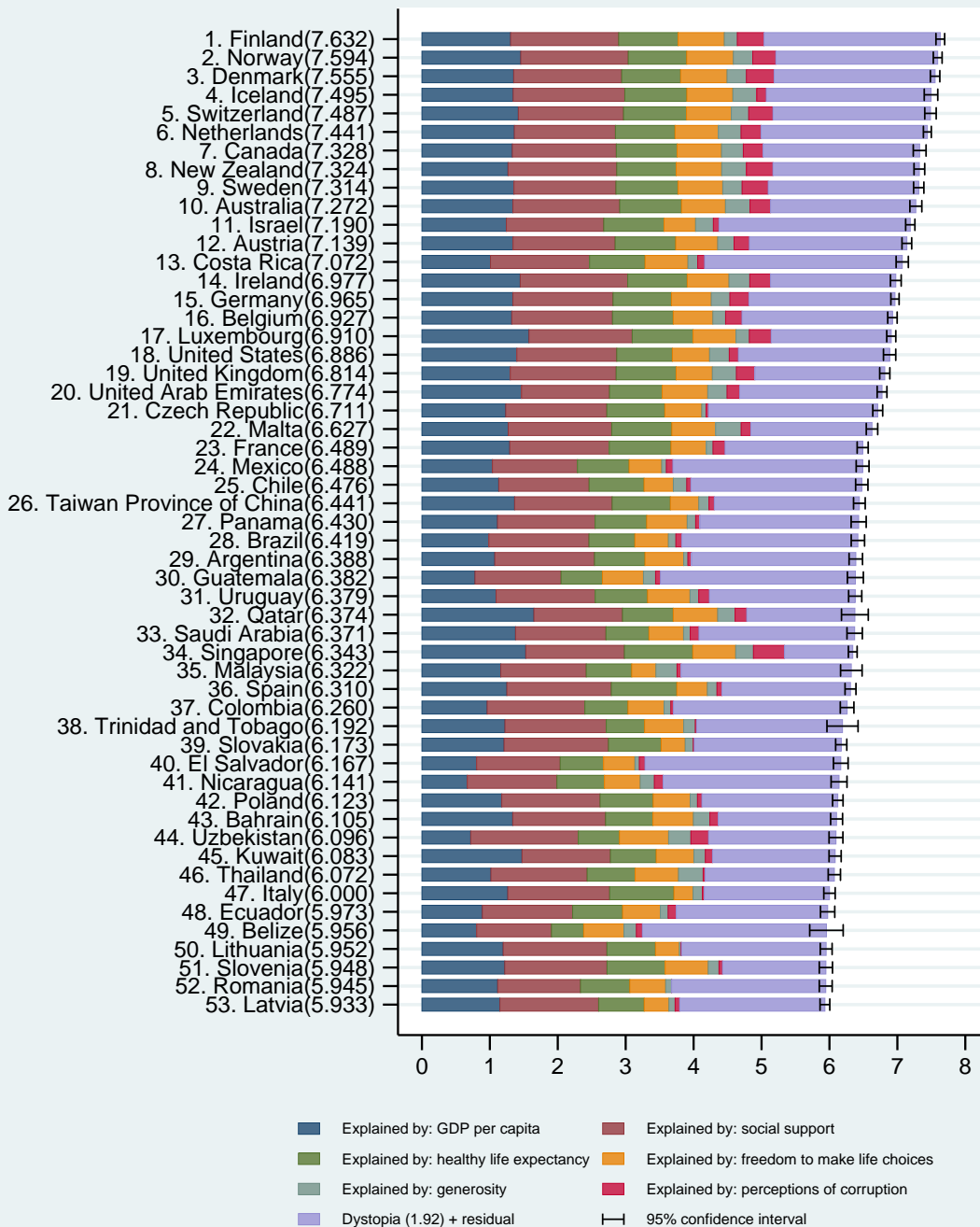


Figure 11: Ranking of Happiness: 2015-17 (Part 2)

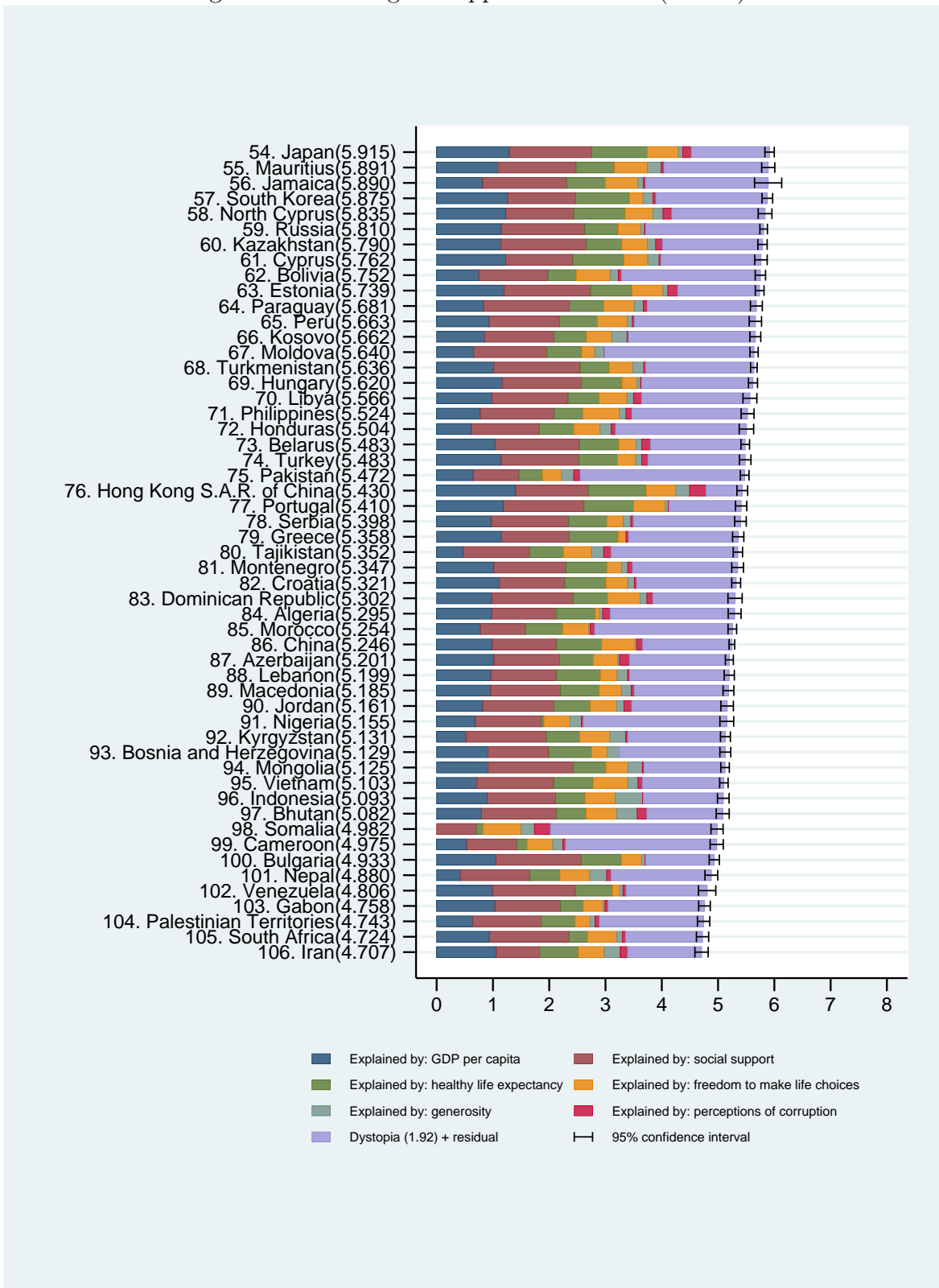


Figure 12: Ranking of Happiness: 2015-17 (Part 3)

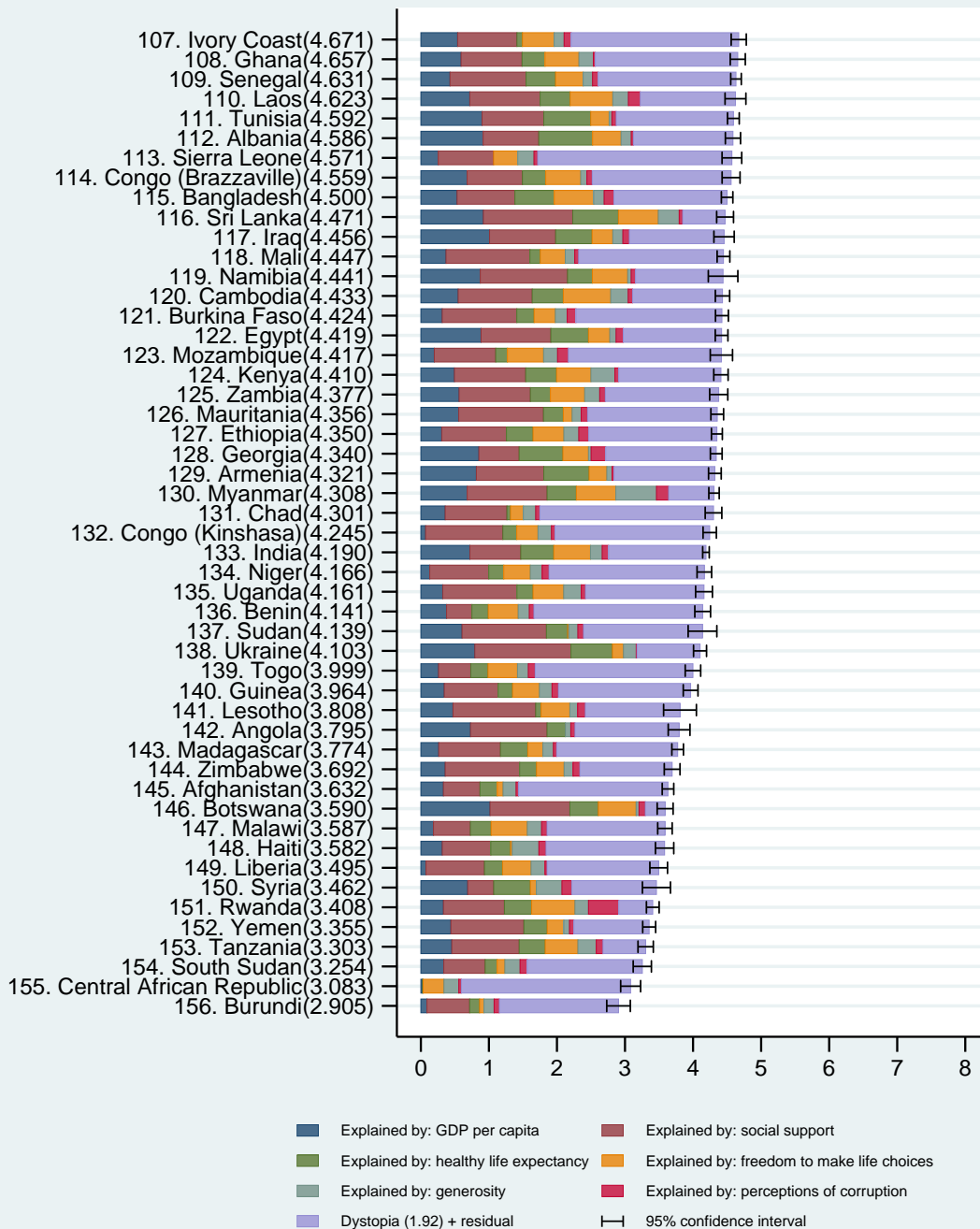


Table 15: Countries/territories that have valid happiness scores in 2014 but not in 2015-2017

	Sample size in 2014
Angola	973
Belize	501
Burundi	995
Sudan	989

Figure 13: Changes in Happiness: from 2008-10 to 2015-17 (Part 1)

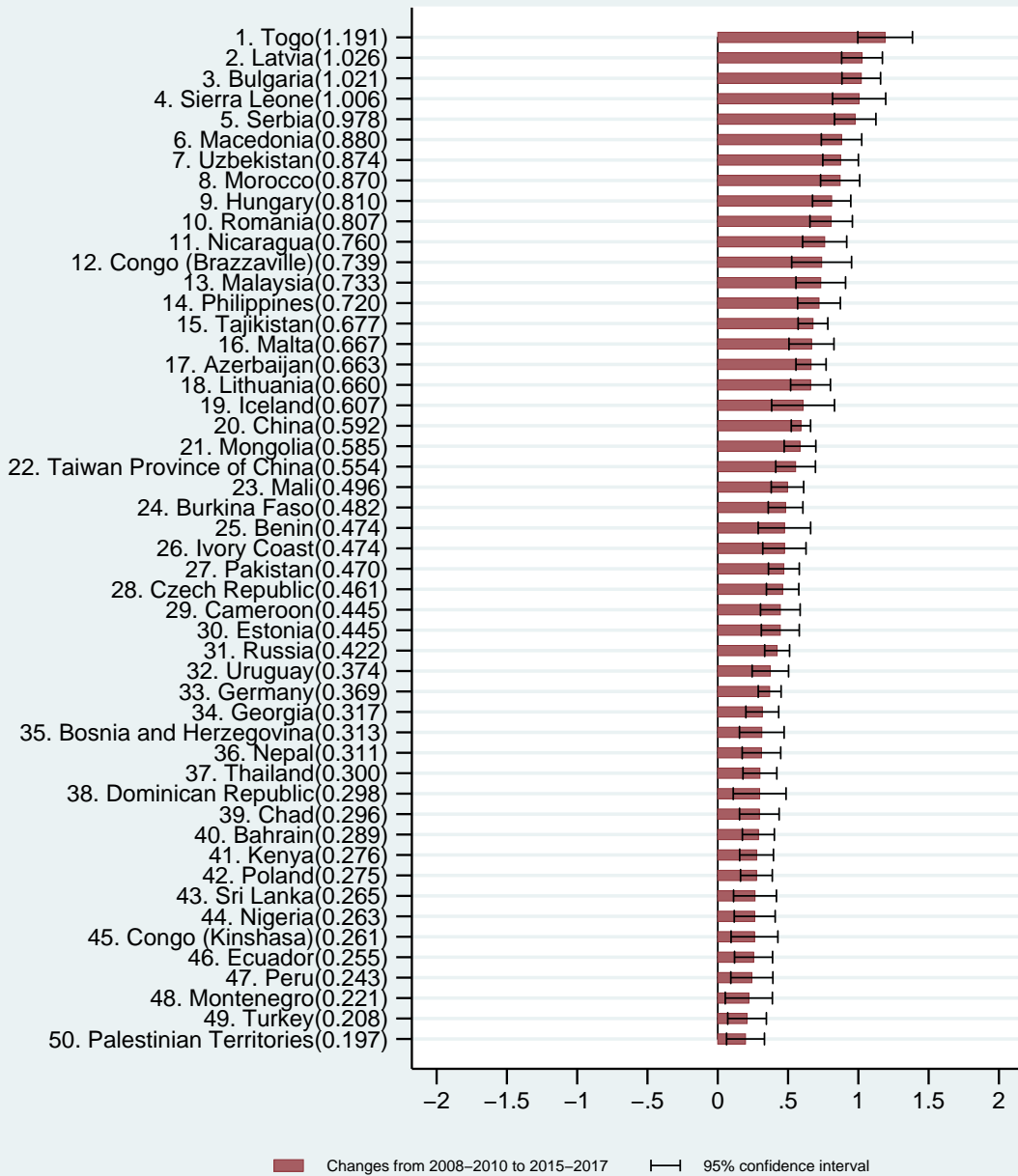


Figure 14: Changes in Happiness: from 2008-10 to 2015-17 (Part 2)

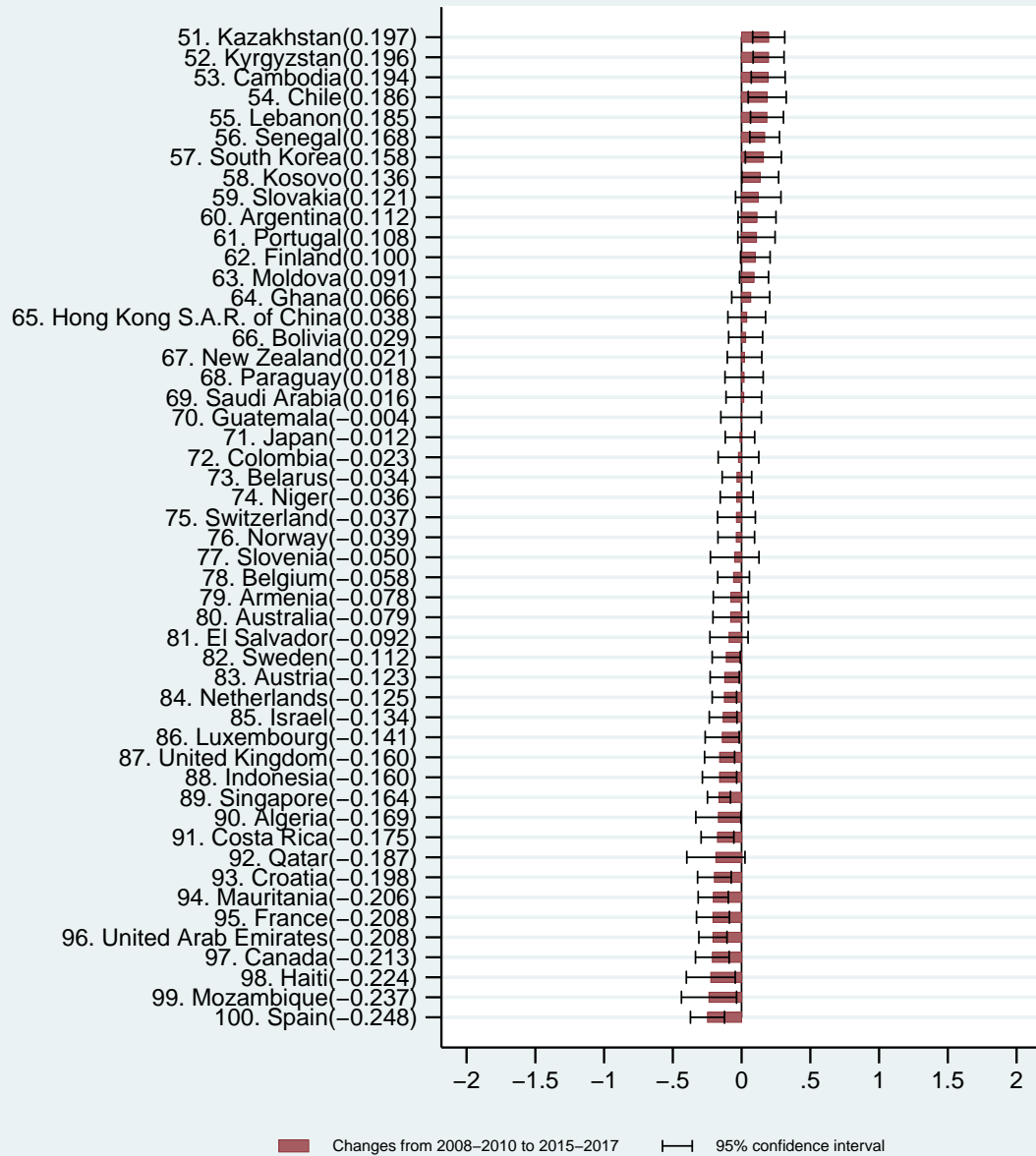


Figure 15: Changes in Happiness: from 2008-10 to 2015-17 (Part 3)

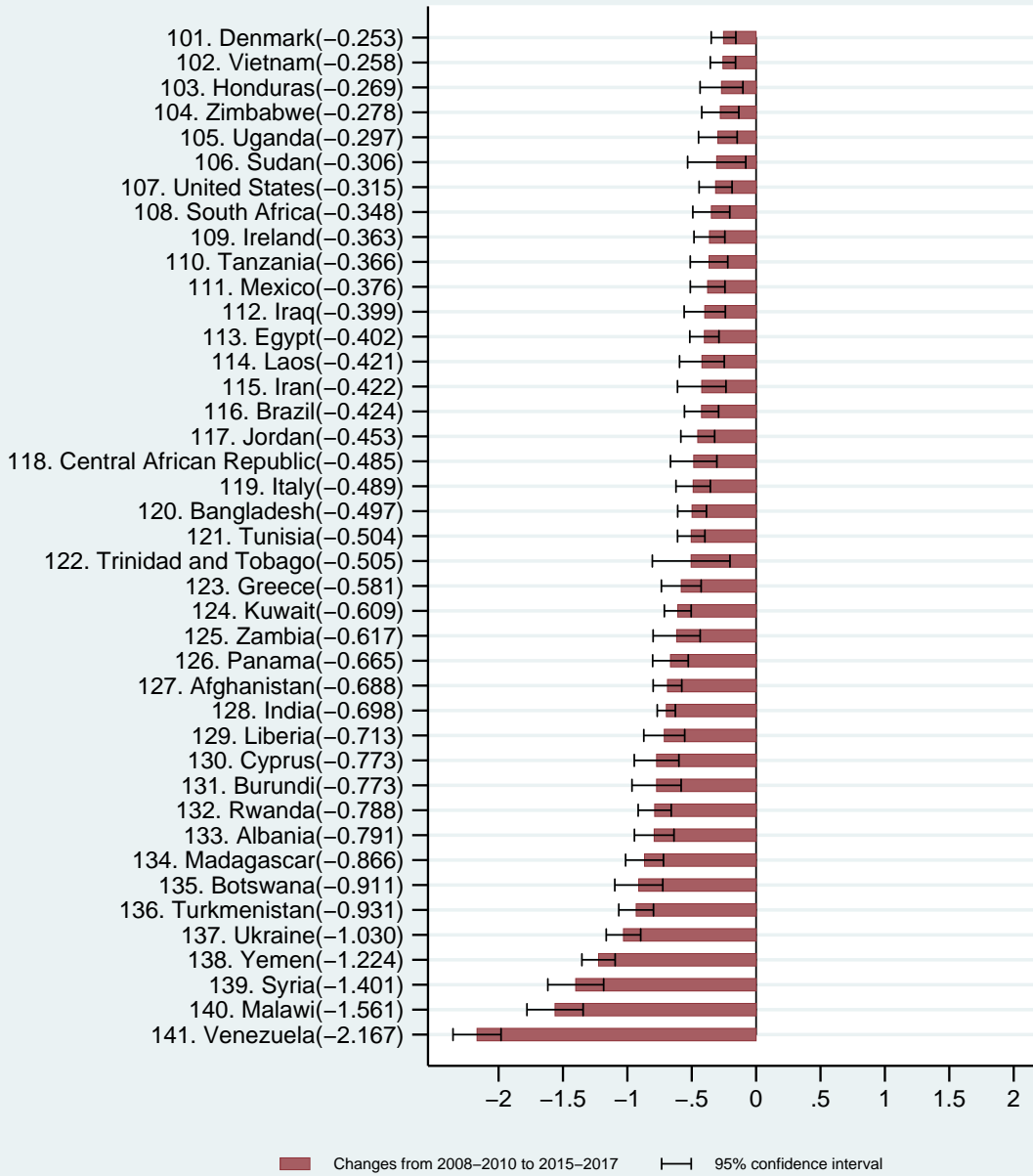


Table 16: Countries/territories that are in the 2015-2017 happiness ranking (including several that use 2014 survey), but do not have ladder observations in the 2008-2010 period

Angola
Belize
Bhutan
Ethiopia
Gabon
Guinea
Jamaica
Lesotho
Libya
Mauritius
Myanmar
Namibia
North Cyprus
Somalia
South Sudan

Table 17: Regressions with inequality measures

	c1	c2	c3	c4	c5	c6
	(1)	(2)	(3)	(4)	(5)	(6)
Log GDP per capita	0.412 (0.061)***	0.368 (0.062)***	0.323 (0.069)***	0.395 (0.07)***	0.33 (0.069)***	0.403 (0.07)***
Social support	1.891 (0.369)***	1.722 (0.332)***	1.905 (0.331)***	1.852 (0.342)***	1.788 (0.332)***	1.602 (0.338)***
Healthy life expectancy at birth	0.021 (0.008)**	0.015 (0.011)	0.016 (0.012)	0.013 (0.012)	0.017 (0.012)	0.015 (0.012)
Freedom to make life choices	0.868 (0.277)***	0.935 (0.272)***	0.976 (0.287)***	1.009 (0.282)***	1.027 (0.292)***	1.119 (0.279)***
Generosity	0.796 (0.268)***	0.622 (0.289)**	0.722 (0.317)**	0.6 (0.309)*	0.705 (0.313)**	0.595 (0.298)**
Perceptions of corruption	-0.548 (0.281)*	-0.250 (0.264)	-0.417 (0.263)	-0.398 (0.277)	-0.316 (0.269)	-0.241 (0.29)
Standard deviation of ladder by country-year	-0.254 (0.091)***	-0.254 (0.102)**			-0.146 (0.104)	-0.247 (0.108)**
gini of household income reported in Gallup, by wp5-year			-1.129 (0.364)***		-0.904 (0.37)**	
GINI index (World Bank estimate), average 2000-15				-1.646 (0.824)**		-1.433 (0.848)*
Central and Eastern Europe		-0.488 (0.158)***	-0.467 (0.162)***	-0.503 (0.168)***	-0.445 (0.161)***	-0.472 (0.165)***
Commonwealth of Independent States		-0.455 (0.198)**	-0.463 (0.201)**	-0.401 (0.221)*	-0.450 (0.199)**	-0.391 (0.214)*
Southeast Asia		-0.656 (0.155)***	-0.605 (0.172)***	-0.362 (0.204)*	-0.622 (0.17)***	-0.404 (0.199)**
South Asia		-0.460 (0.378)	-0.473 (0.379)	-0.302 (0.407)	-0.478 (0.378)	-0.316 (0.411)
East Asia		-0.781 (0.251)***	-0.628 (0.236)***	-0.577 (0.205)***	-0.629 (0.239)***	-0.571 (0.213)***
Latin America and Caribbean	0.652 (0.103)***	0.242 (0.177)	0.289 (0.18)	0.477 (0.243)**	0.342 (0.181)*	0.55 (0.234)**
North America and ANZ		0.219 (0.087)**	0.381 (0.153)**	0.278 (0.102)***	0.358 (0.139)**	0.283 (0.098)***
Middle East and North Africa		-0.406 (0.236)*	-0.446 (0.235)*	-0.341 (0.29)	-0.413 (0.234)*	-0.296 (0.275)
Sub-Saharan Africa		-0.569 (0.296)*	-0.511 (0.307)*	-0.327 (0.329)	-0.508 (0.303)*	-0.308 (0.319)
Obs.	1394	1394	1093	1295	1093	1295
e(N-clust)	157	157	155	138	155	138
e(r2-a)	0.771	0.793	0.796	0.79	0.797	0.795

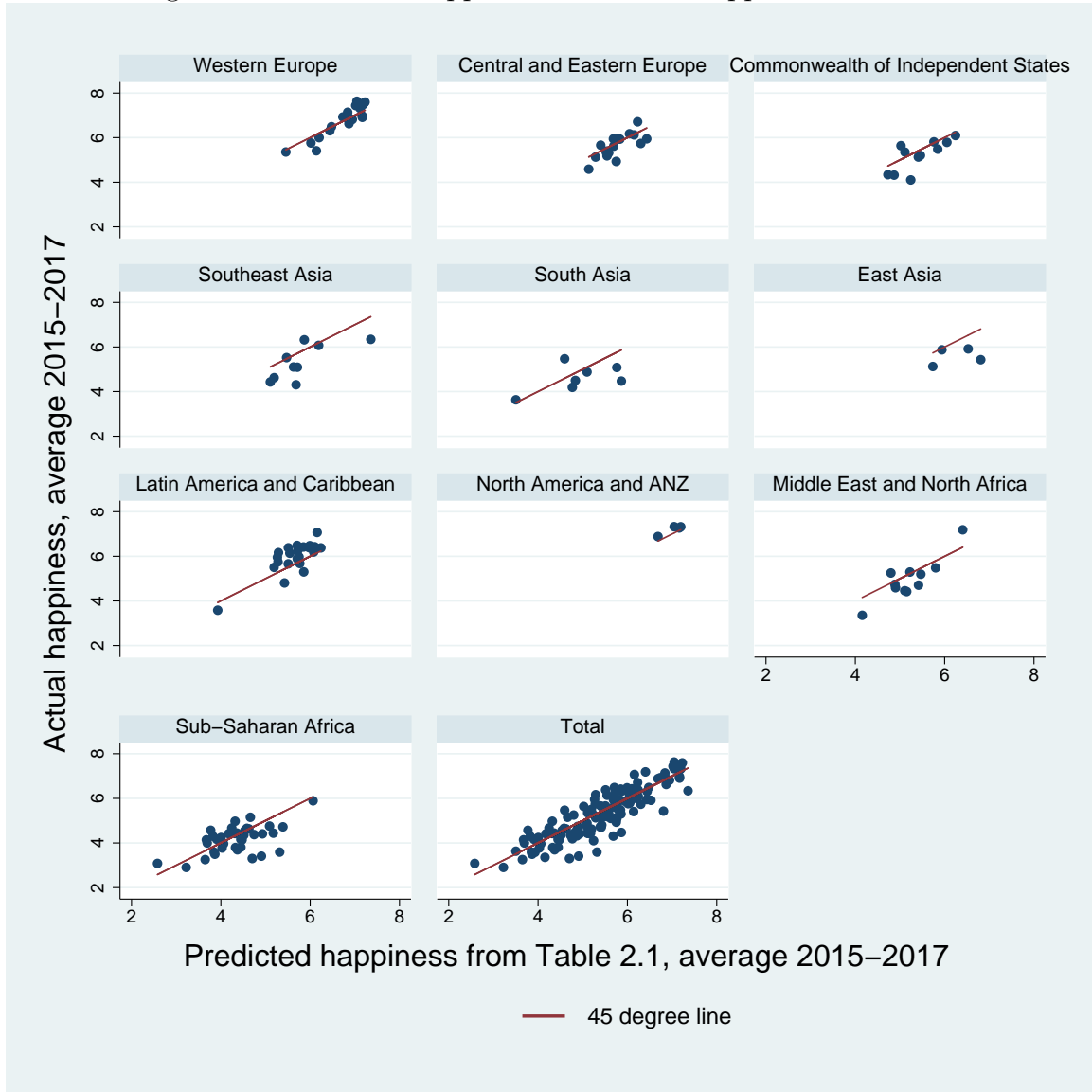
Notes: 1). Standard errors in parentheses. *, **, and *** indicate statistical significance at 10 percent, 5 percent and 1 percent levels. All standard errors are cluster-adjusted at the country level. The row “e(N-clust)” indicates the number of countries. 2). See section “Data Sources and Variable Definitions” for more information.

Table 18: Replicating regressions in “Good governance and national well-being: What are the linkages?” Helliwell et al (2014), OECD Working Papers on Public Governance, No. 25, with the expanded dataset

	c1 (1)	c2 (2)	c3 (3)	c4 (4)	c5 (5)	c6 (6)	c7 (7)	c8 (8)	c9 (9)
Democratic Quality	-0.009 (0.14)	0.08 (0.11)	-0.001 (0.1)	-0.07 (0.12)	-0.08 (0.1)	-0.13 (0.1)	0.19 (0.13)	0.11 (0.12)	0.08 (0.11)
Delivery Quality	0.81 (0.13)***	0.23 (0.13)*	0.07 (0.11)	0.65 (0.13)***	0.36 (0.13)***	0.29 (0.1)***	0.79 (0.2)***	0.51 (0.2)**	0.35 (0.17)**
Log GDP per capita		0.56 (0.06)***	0.33 (0.06)***		0.43 (0.08)***	0.32 (0.07)***		0.89 (0.23)***	0.88 (0.21)***
Healthy life expectancy at birth			0.03 (0.009)***			0.005 (0.01)			-0.05 (0.02)**
Freedom to make life choices			1.29 (0.31)***			0.88 (0.29)***			0.96 (0.23)***
Generosity			0.72 (0.26)***			0.53 (0.26)**			0.21 (0.18)
Social support			2.29 (0.37)***			1.98 (0.35)***			1.50 (0.3)***
Central and Eastern Europe				-0.80 (0.18)***	-0.78 (0.17)***	-0.51 (0.16)***			
Commonwealth of Independent States				-0.39 (0.33)	-0.35 (0.3)	-0.28 (0.22)			
Southeast Asia				-0.53 (0.22)**	-0.37 (0.21)*	-0.52 (0.16)***			
South Asia				-0.93 (0.26)***	-0.52 (0.29)*	-0.32 (0.38)			
East Asia				-0.79 (0.19)***	-0.84 (0.18)***	-0.75 (0.22)***			
Latin America and Caribbean				0.29 (0.22)	0.36 (0.21)*	0.32 (0.18)*			
North America and ANZ				0.31 (0.1)***	0.37 (0.12)***	0.22 (0.1)**			
Middle East and North Africa				-0.39 (0.24)	-0.53 (0.23)**	-0.34 (0.22)			
Sub-Saharan Africa				-1.29 (0.23)***	-0.72 (0.25)***	-0.56 (0.29)*			
Obs.	1391	1380	1304	1391	1380	1304	1391	1380	1304
e(N-clust)	160	159	157	160	159	157	160	159	157
R ²	0.51	0.64	0.74	0.71	0.76	0.8	0.09	0.11	0.19

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. For the last three 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.

Figure 16: Predicted happiness and actual happiness in 2015-17



Note: These average actual (predicted) happiness scores by country/territory for the 2015-2017 period are weighted averages of the yearly averages by county/territory used in (predicted by) column (1)'s regression in Table 14. The yearly weights are the sums of Gallup-assigned individual weights by country/territory in that year.

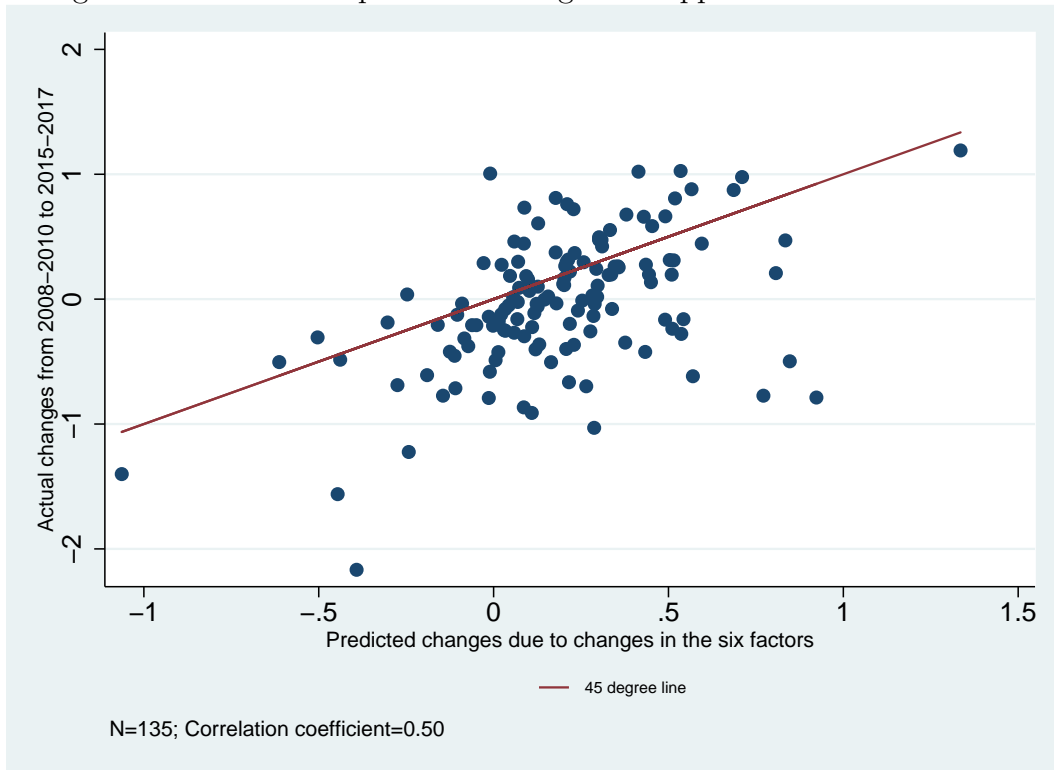
Table 19: Decomposing the happiness difference between a hypothetical average country and Dystopia

	Average country	Dystopia	Explained excess happiness over Dystopia due to	Share of explained excess happiness over Dystopia due to
Happiness	5.38	1.92		
Logged GDP per capita	9.25	6.4	.89	.26
Social support	.8	.31	1.22	.35
Healthy life expectancy	62.82	43.99	.6	.17
Freedom to make life choices	.76	.37	.46	.13
Generosity	0	-.28	.18	.05
Perceptions of corruption	.74	.95	.11	.03
Sum of explained excess over Dystopia			3.45	1

Table 20: Decomposing the happiness difference between the group of top 10 countries/territories and the group of bottom 10 countries/territories in the ranking of happiness scores

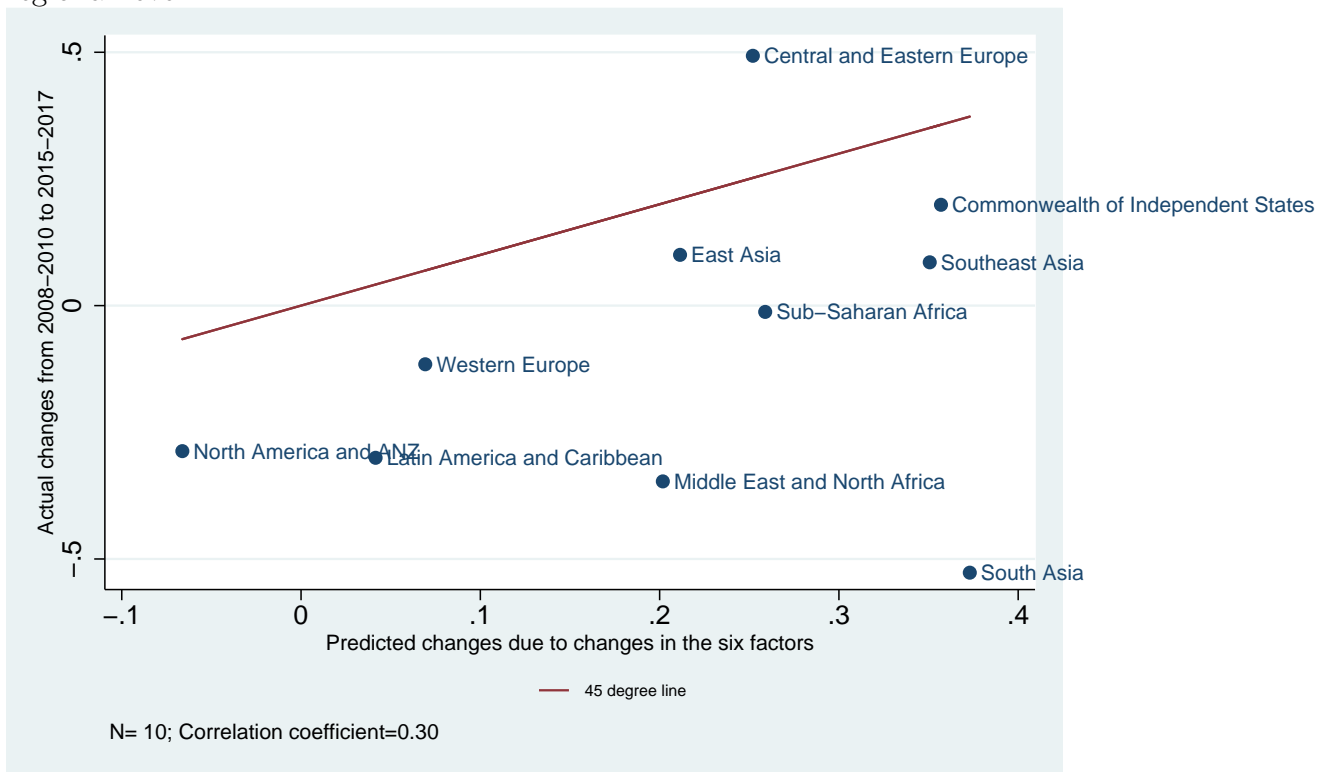
	Top 10	Bottom 10	Difference in happiness due to	Share of explained difference due to
Happiness	7.44	3.34		
Logged GDP per capita	10.74	7.34	1.06	.33
Social support	.95	.58	.9	.28
Healthy life expectancy	72.06	52.99	.61	.19
Freedom to make life choices	.93	.62	.37	.12
Generosity	.19	.08	.07	.02
Perceptions of corruption	.34	.73	.21	.07
Total explained difference in happiness			3.22	1
Total difference in happiness			4.1	

Figure 17: Actual and predicted changes in happiness from 2008-10 to 2015-17



Note: Defining predicted changes in happiness due to changes in the six factors: Step 1. Take periodical averages (2008-10 and 2015-17, respectively) of the six factors in the survey data. Step 2. Take difference between the two periods for each of the factors. Step 3. Multiply the differences with corresponding coefficients on the factors in Table 2.1. Step 4. Take the summation of the products from the previous step. The resulted sum is predicted change in ladder due to changes in the six factors.

Figure 18: Actual and predicted changes in happiness from 2008-10 to 2015-17 at the regional level



Note: This plot at the regional level shows weighted averages of the actual and predicted changes shown in figure 17. The weights for deriving the regional averages are average population from 2005 to 2016.

Table 21: Decomposing changes in happiness from 2008-2010 to 2015-2017, equal weight for each country/territory, for the full world sample

	Period 2015-2017	Period 2008-2010	Explained changes in happiness due to
Happiness	5.438	5.459	
Logged GDP per capita	9.304	9.176	.04
Social support	.808	.809	-.002
Healthy life expectancy	63.372	61.41	.062
Freedom to make life choices	.759	.695	.076
Generosity	.003	.003	0
Perceptions of corruption	.738	.76	.012
Sum of explained changes in happiness			.188
Total changes in happiness			-.021

Note:

Table 22: Decomposing changes in happiness from 2008-2010 to 2015-2017, equal weight for each country/territory, for the top 10 countries/territories in terms of happiness changes

	Period 2015-2017	Period 2008-2010	Explained changes in happiness due to
Happiness	5.382	4.447	
Logged GDP per capita	9.071	8.885	.058
Social support	.812	.752	.147
Healthy life expectancy	62.169	60.337	.058
Freedom to make life choices	.73	.572	.187
Generosity	-.041	-.079	.025
Perceptions of corruption	.811	.883	.039
Sum of explained changes in happiness			.514
Total changes in happiness			.935

Note: The following countries/territories are in this group: Bulgaria, Hungary, Latvia, Macedonia, Nicaragua, Romania, Serbia, Sierra Leone, Togo, Uzbekistan,

Table 23: Decomposing changes in happiness from 2008-2010 to 2015-2017, equal weight for each country/territory, for the bottom 10 countries/territories in terms of happiness changes

	Period 2015-2017	Period 2008-2010	Explained changes in happiness due to
Happiness	3.757	4.909	
Logged GDP per capita	8.235	8.239	-.001
Social support	.686	.732	-.113
Healthy life expectancy	58.499	55.821	.085
Freedom to make life choices	.631	.623	.01
Generosity	-.031	-.067	.024
Perceptions of corruption	.754	.749	-.002
Sum of explained changes in happiness			.002
Total changes in happiness			-1.151

Note: The following countries/territories are in this group: Albania, Botswana, Burundi, Madagascar, Malawi, Rwanda, Syria, Ukraine, Venezuela, Yemen,

Table 24: Decomposing changes in happiness from 2008-2010 to 2015-2017, equal weight for each country/territory, for Western Europe

	Period 2015-2017	Period 2008-2010	Explained changes in happiness due to
Happiness	6.82	6.953	
Logged GDP per capita	10.673	10.649	.008
Social support	.916	.925	-.021
Healthy life expectancy	72.203	70.742	.046
Freedom to make life choices	.844	.829	.018
Generosity	.062	.087	-.016
Perceptions of corruption	.526	.597	.038
Sum of explained changes in happiness			.073
Total changes in happiness			-.133

Note: The following countries/territories are in this group: Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom,

Table 25: Decomposing changes in happiness from 2008-2010 to 2015-2017, equal weight for each country/territory, for Central and Eastern Europe

	Period 2015-2017	Period 2008-2010	Explained changes in happiness due to
Happiness	5.63	5.211	
Logged GDP per capita	9.887	9.738	.047
Social support	.854	.84	.035
Healthy life expectancy	67.19	65.541	.052
Freedom to make life choices	.718	.58	.165
Generosity	-.094	-.121	.017
Perceptions of corruption	.869	.9	.017
Sum of explained changes in happiness			.332
Total changes in happiness			.419

Note: The following countries/territories are in this group: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Kosovo, Latvia, Lithuania, Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia,

Table 26: Decomposing changes in happiness from 2008-2010 to 2015-2017, equal weight for each country/territory, for Commonwealth of Independent States

	Period 2015-2017	Period 2008-2010	Explained changes in happiness due to
Happiness	5.206	4.997	
Logged GDP per capita	9.083	8.9	.057
Social support	.83	.801	.071
Healthy life expectancy	63.645	61.699	.062
Freedom to make life choices	.71	.64	.083
Generosity	-.049	-.144	.061
Perceptions of corruption	.752	.793	.022
Sum of explained changes in happiness			.356
Total changes in happiness			.209

Note: The following countries/territories are in this group: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Ukraine, Uzbekistan,

Table 27: Decomposing changes in happiness from 2008-2010 to 2015-2017, equal weight for each country/territory, for Southeast Asia

	Period 2015-2017	Period 2008-2010	Explained changes in happiness due to
Happiness	5.439	5.321	
Logged GDP per capita	9.353	9.055	.093
Social support	.824	.803	.05
Healthy life expectancy	63.737	62.15	.05
Freedom to make life choices	.873	.83	.051
Generosity	.148	.177	-.019
Perceptions of corruption	.719	.742	.013
Sum of explained changes in happiness			.238
Total changes in happiness			.118

Note: The following countries/territories are in this group: Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand, Vietnam,

Table 28: Decomposing changes in happiness from 2008-2010 to 2015-2017, equal weight for each country/territory, for South Asia

	Period 2015-2017	Period 2008-2010	Explained changes in happiness due to
Happiness	4.524	4.664	
Logged GDP per capita	8.314	8.055	.081
Social support	.679	.631	.119
Healthy life expectancy	59.483	57.582	.06
Freedom to make life choices	.746	.631	.136
Generosity	.067	.107	-.026
Perceptions of corruption	.788	.84	.028
Sum of explained changes in happiness			.399
Total changes in happiness			-.14

Note: The following countries/territories are in this group: Afghanistan, Bangladesh, India, Nepal, Pakistan, Sri Lanka,

Table 29: Decomposing changes in happiness from 2008-2010 to 2015-2017, equal weight for each country/territory, for East Asia

	Period 2015-2017	Period 2008-2010	Explained changes in happiness due to
Happiness	5.757	5.493	
Logged GDP per capita	10.408	10.191	.068
Social support	.87	.857	.032
Healthy life expectancy	71.723	70.019	.054
Freedom to make life choices	.733	.698	.042
Generosity	0	.019	-.012
Perceptions of corruption	.724	.715	-.005
Sum of explained changes in happiness			.178
Total changes in happiness			.265

Note: The following countries/territories are in this group: Hong Kong S.A.R. of China, Japan, Mongolia, South Korea, Taiwan Province of China,

Table 30: Decomposing changes in happiness from 2008-2010 to 2015-2017, equal weight for each country/territory, for Latin America and Caribbean

	Period 2015-2017	Period 2008-2010	Explained changes in happiness due to
Happiness	5.953	6.085	
Logged GDP per capita	9.32	9.182	.043
Social support	.853	.85	.008
Healthy life expectancy	64.761	63.405	.043
Freedom to make life choices	.793	.726	.08
Generosity	-.061	-.005	-.035
Perceptions of corruption	.802	.791	-.006
Sum of explained changes in happiness			.132
Total changes in happiness			-.132

Note: The following countries/territories are in this group: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, Uruguay, Venezuela,

Table 31: Decomposing changes in happiness from 2008-2010 to 2015-2017, equal weight for each country/territory, for North America and ANZ

	Period 2015-2017	Period 2008-2010	Explained changes in happiness due to
Happiness	7.203	7.349	
Logged GDP per capita	10.682	10.61	.022
Social support	.936	.947	-.025
Healthy life expectancy	71.545	70.726	.026
Freedom to make life choices	.903	.901	.002
Generosity	.239	.253	-.009
Perceptions of corruption	.432	.449	.009
Sum of explained changes in happiness			.026
Total changes in happiness			-.146

Note: The following countries/territories are in this group: Australia, Canada, New Zealand, United States,

Table 32: Decomposing changes in happiness from 2008-2010 to 2015-2017, equal weight for each country/territory, for Middle East and North Africa

	Period 2015-2017	Period 2008-2010	Explained changes in happiness due to
Happiness	5.28	5.595	
Logged GDP per capita	9.832	9.814	.005
Social support	.77	.816	-.111
Healthy life expectancy	64.631	63.767	.027
Freedom to make life choices	.714	.659	.066
Generosity	-.005	-.036	.021
Perceptions of corruption	.745	.699	-.025
Sum of explained changes in happiness			-.016
Total changes in happiness			-.315

Note: The following countries/territories are in this group: Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Palestinian Territories, Qatar, Saudi Arabia, Syria, Tunisia, Turkey, United Arab Emirates, Yemen,

Table 33: Decomposing changes in happiness from 2008-2010 to 2015-2017, equal weight for each country/territory, for Sub-Saharan Africa

	Period 2015-2017	Period 2008-2010	Explained changes in happiness due to
Happiness	4.131	4.231	
Logged GDP per capita	7.659	7.523	.043
Social support	.685	.696	-.027
Healthy life expectancy	51.729	47.909	.121
Freedom to make life choices	.703	.641	.074
Generosity	.004	-.001	.003
Perceptions of corruption	.788	.825	.02
Sum of explained changes in happiness			.234
Total changes in happiness			-.1

Note: The following countries/territories are in this group: Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo (Kinshasa), Ghana, Ivory Coast, Kenya, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Sudan, Tanzania, Togo, Uganda, Zambia, Zimbabwe,

Table 34: Decomposing changes in happiness from 2008-2010 to 2015-2017 by region, weighting countries/territories within a region with their population size

	Changes in average happi- ness	Total ex- plained changes due to the six factors	Changes due to: GDP per capita	Changes due to: Social support	Changes due to: Healthy life ex- pectancy	Changes due to: Free- dom to make life choices	Changes due to: Gen- erosity	Change due to: Percep- tions of corrup- tion
Western Europe	-.116	.069	.01	-.025	.047	.005	-.018	.05
Central and Eastern Europe	.493	.252	.051	.006	.058	.133	-.021	.025
Commonwealth of Independent States	.199	.357	.031	.052	.067	.088	.094	.026
Southeast Asia	.085	.351	.088	.093	.037	.088	.03	.015
South Asia	-.527	.373	.105	.033	.061	.133	-.013	.054
East Asia	.1	.211	.04	.033	.045	.057	.01	.027
Latin America and Caribbean	-.3	.042	.024	-.019	.044	.052	-.034	-.025
North America and ANZ	-.287	-.066	.024	-.053	.015	-.015	-.026	-.011
Middle East and North Africa	-.347	.202	.024	-.047	.041	.122	.034	.028
Sub-Saharan Africa	-.012	.259	.048	-.042	.115	.117	.005	.016

Table 35: Number of countries/territories that experienced statistically significant changes in happiness scores from 2008-2010 to 2015-2017

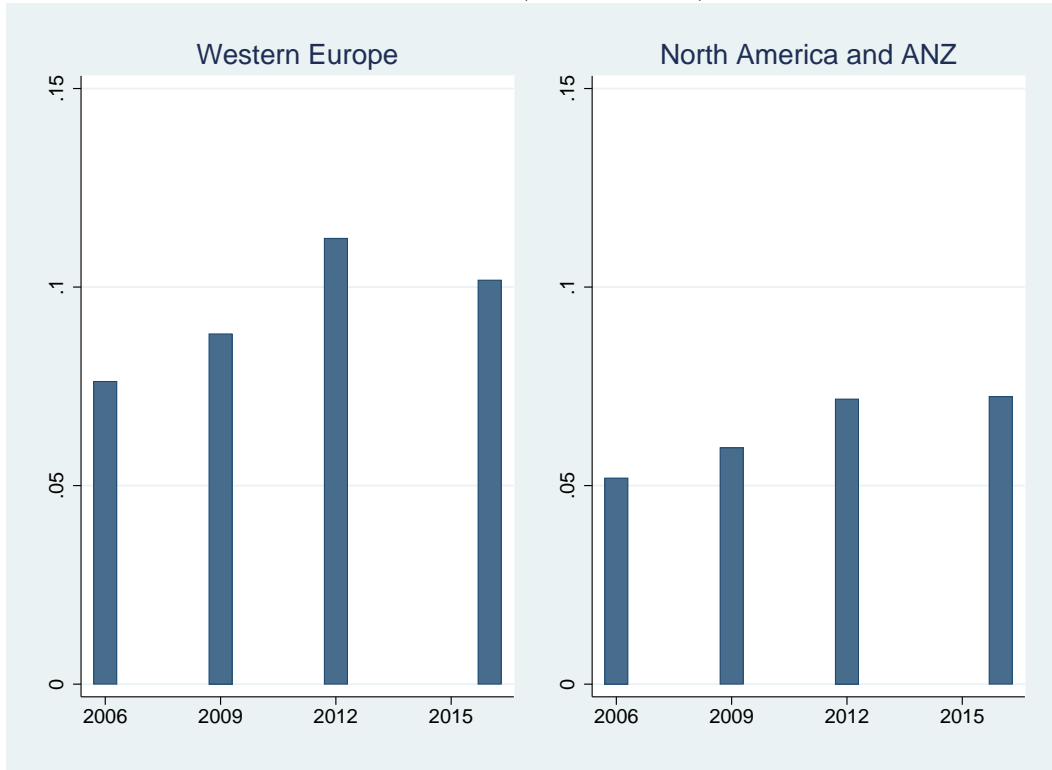
	Total number of coun- tries/territories in sample	Number of significant positive changes	Number of significant negative changes
Western Europe	20	3	12
Central and Eastern Europe	17	13	2
Commonwealth of Independent States	12	7	2
Southeast Asia	8	4	4
South Asia	6	3	3
East Asia	6	4	0
Latin America and Caribbean	20	6	8
North America and ANZ	4	0	2
Middle East and North Africa	18	5	11
Sub-Saharan Africa	30	13	15

Figure 19: Shares of respondents reporting low life ladder (ladder ≤ 4)



Note 1). These are 3 or 4-year averages around the year shown on the horizontal axis. For example, the value for 2016 is the average from 2015 to 2017, while the value for 2012 is the average from 2011 to 2014. 2). These regional averages are un-weighted averages of country-period averages, thus large and small countries have the same weight. 3). The difference from one period to another may be affected by survey coverage in the sense that some countries were surveyed during one period but not others. But this is unlikely a great issue because the coverage is quite stable from one 3-year period to another. Missed coverage is more likely to occur to developing countries than richer countries.

Figure 20: Separately for Western Europe, and North American and ANZ; Shares of respondents reporting low life ladder (ladder ≤ 4)



Note 1). These are 3 or 4-year averages around the year shown on the horizontal axis. For example, the value for 2016 is the average from 2015 to 2017, while the value for 2012 is the average from 2011 to 2014. 2). These regional averages are un-weighted averages of country-period averages, thus large and small countries have the same weight. 3). The difference from one period to another may be affected by survey coverage in the sense that some countries were surveyed during one period but not others. But this is unlikely a great issue because the coverage is quite stable from one 3-year period to another. Missed coverage is more likely to occur to developing countries than richer countries.

Table 36: Countries/territories by Region

Region indicator	
Western Europe	Austria
Western Europe	Belgium
Western Europe	Cyprus
Western Europe	Denmark
Western Europe	Finland
Western Europe	France
Western Europe	Germany
Western Europe	Greece
Western Europe	Iceland
Western Europe	Ireland
Western Europe	Italy
Western Europe	Luxembourg
Western Europe	Malta
Western Europe	Netherlands
Western Europe	North Cyprus
Western Europe	Norway
Western Europe	Portugal
Western Europe	Spain
Western Europe	Sweden
Western Europe	Switzerland
Western Europe	United Kingdom
Central and Eastern Europe	Albania
Central and Eastern Europe	Bosnia and Herzegovina
Central and Eastern Europe	Bulgaria
Central and Eastern Europe	Croatia
Central and Eastern Europe	Czech Republic
Central and Eastern Europe	Estonia
Central and Eastern Europe	Hungary
Central and Eastern Europe	Kosovo
Central and Eastern Europe	Latvia
Central and Eastern Europe	Lithuania
Central and Eastern Europe	Macedonia
Central and Eastern Europe	Montenegro
Central and Eastern Europe	Poland
Central and Eastern Europe	Romania
Central and Eastern Europe	Serbia
Central and Eastern Europe	Slovakia
Central and Eastern Europe	Slovenia
Commonwealth of Independent States	Armenia
Commonwealth of Independent States	Azerbaijan
Commonwealth of Independent States	Belarus
Commonwealth of Independent States	Georgia

Table 37: Countries/territories by Region

Region indicator	
Commonwealth of Independent States	Kazakhstan
Commonwealth of Independent States	Kyrgyzstan
Commonwealth of Independent States	Moldova
Commonwealth of Independent States	Russia
Commonwealth of Independent States	Tajikistan
Commonwealth of Independent States	Turkmenistan
Commonwealth of Independent States	Ukraine
Commonwealth of Independent States	Uzbekistan
Southeast Asia	Cambodia
Southeast Asia	Indonesia
Southeast Asia	Laos
Southeast Asia	Malaysia
Southeast Asia	Myanmar
Southeast Asia	Philippines
Southeast Asia	Singapore
Southeast Asia	Thailand
Southeast Asia	Vietnam
South Asia	Afghanistan
South Asia	Bangladesh
South Asia	Bhutan
South Asia	India
South Asia	Nepal
South Asia	Pakistan
South Asia	Sri Lanka
East Asia	China
East Asia	Hong Kong S.A.R. of China
East Asia	Japan
East Asia	Mongolia
East Asia	South Korea
East Asia	Taiwan Province of China
Latin America and Caribbean	Argentina
Latin America and Caribbean	Belize
Latin America and Caribbean	Bolivia
Latin America and Caribbean	Brazil
Latin America and Caribbean	Chile
Latin America and Caribbean	Colombia
Latin America and Caribbean	Costa Rica
Latin America and Caribbean	Cuba
Latin America and Caribbean	Dominican Republic
Latin America and Caribbean	Ecuador
Latin America and Caribbean	El Salvador
Latin America and Caribbean	Guatemala

Table 38: Countries/territories by Region

Region indicator	
Latin America and Caribbean	Guyana
Latin America and Caribbean	Haiti
Latin America and Caribbean	Honduras
Latin America and Caribbean	Jamaica
Latin America and Caribbean	Mexico
Latin America and Caribbean	Nicaragua
Latin America and Caribbean	Panama
Latin America and Caribbean	Paraguay
Latin America and Caribbean	Peru
Latin America and Caribbean	Suriname
Latin America and Caribbean	Trinidad and Tobago
Latin America and Caribbean	Uruguay
Latin America and Caribbean	Venezuela
North America and ANZ	Australia
North America and ANZ	Canada
North America and ANZ	New Zealand
North America and ANZ	United States
Middle East and North Africa	Algeria
Middle East and North Africa	Bahrain
Middle East and North Africa	Egypt
Middle East and North Africa	Iran
Middle East and North Africa	Iraq
Middle East and North Africa	Israel
Middle East and North Africa	Jordan
Middle East and North Africa	Kuwait
Middle East and North Africa	Lebanon
Middle East and North Africa	Libya
Middle East and North Africa	Morocco
Middle East and North Africa	Oman
Middle East and North Africa	Palestinian Territories
Middle East and North Africa	Qatar
Middle East and North Africa	Saudi Arabia
Middle East and North Africa	Syria
Middle East and North Africa	Tunisia
Middle East and North Africa	Turkey
Middle East and North Africa	United Arab Emirates
Middle East and North Africa	Yemen
Sub-Saharan Africa	Angola
Sub-Saharan Africa	Benin
Sub-Saharan Africa	Botswana
Sub-Saharan Africa	Burkina Faso
Sub-Saharan Africa	Burundi

Table 39: Countries/territories by Region

Region indicator	
Sub-Saharan Africa	Cameroon
Sub-Saharan Africa	Central African Republic
Sub-Saharan Africa	Chad
Sub-Saharan Africa	Comoros
Sub-Saharan Africa	Congo (Brazzaville)
Sub-Saharan Africa	Congo (Kinshasa)
Sub-Saharan Africa	Djibouti
Sub-Saharan Africa	Ethiopia
Sub-Saharan Africa	Gabon
Sub-Saharan Africa	Ghana
Sub-Saharan Africa	Guinea
Sub-Saharan Africa	Ivory Coast
Sub-Saharan Africa	Kenya
Sub-Saharan Africa	Lesotho
Sub-Saharan Africa	Liberia
Sub-Saharan Africa	Madagascar
Sub-Saharan Africa	Malawi
Sub-Saharan Africa	Mali
Sub-Saharan Africa	Mauritania
Sub-Saharan Africa	Mauritius
Sub-Saharan Africa	Mozambique
Sub-Saharan Africa	Namibia
Sub-Saharan Africa	Niger
Sub-Saharan Africa	Nigeria
Sub-Saharan Africa	Rwanda
Sub-Saharan Africa	Senegal
Sub-Saharan Africa	Sierra Leone
Sub-Saharan Africa	Somalia
Sub-Saharan Africa	Somaliland region
Sub-Saharan Africa	South Africa
Sub-Saharan Africa	South Sudan
Sub-Saharan Africa	Sudan
Sub-Saharan Africa	Swaziland
Sub-Saharan Africa	Tanzania
Sub-Saharan Africa	Togo
Sub-Saharan Africa	Uganda
Sub-Saharan Africa	Zambia
Sub-Saharan Africa	Zimbabwe

Ranking of the Six Factors Used to Explain Happiness Scores

The next set of figures are rankings of countries by the six underlying factors used to explain international differences in happiness scores, namely GDP per person, healthy life expectancy, social support, perceived freedom to make life choice, generosity and perception of corruption. The rankings are based on national averages over the period from 2015 to 2017. Four countries, namely Angola, Belize, Burundi and Sudan, were not surveyed in the 2015-2017 period. Their 2014 surveys are used for the rankings. The ranking figures do not show imputed data. As we explain on page 5 of this appendix, where we describe our imputation algorithm, we do not use the imputed values in any of our headline results including the happiness rankings. The only place where we use them is when we try to decompose a country's average happiness score into components explained by the six factors. The imputation involves only a small number of countries. Here, we avoid relying on the imputation to generate the rankings. If a country is missing the information about corruption perceptions, they won't show up in the corruption ranking, thus the ranking will cover a smaller number of countries.

Figure 21: Ranking of Natural Log of Per-Capita GDP: 2015-17; bars show natural logs, dollar values are shown on the Y axis after country names (Part 1)

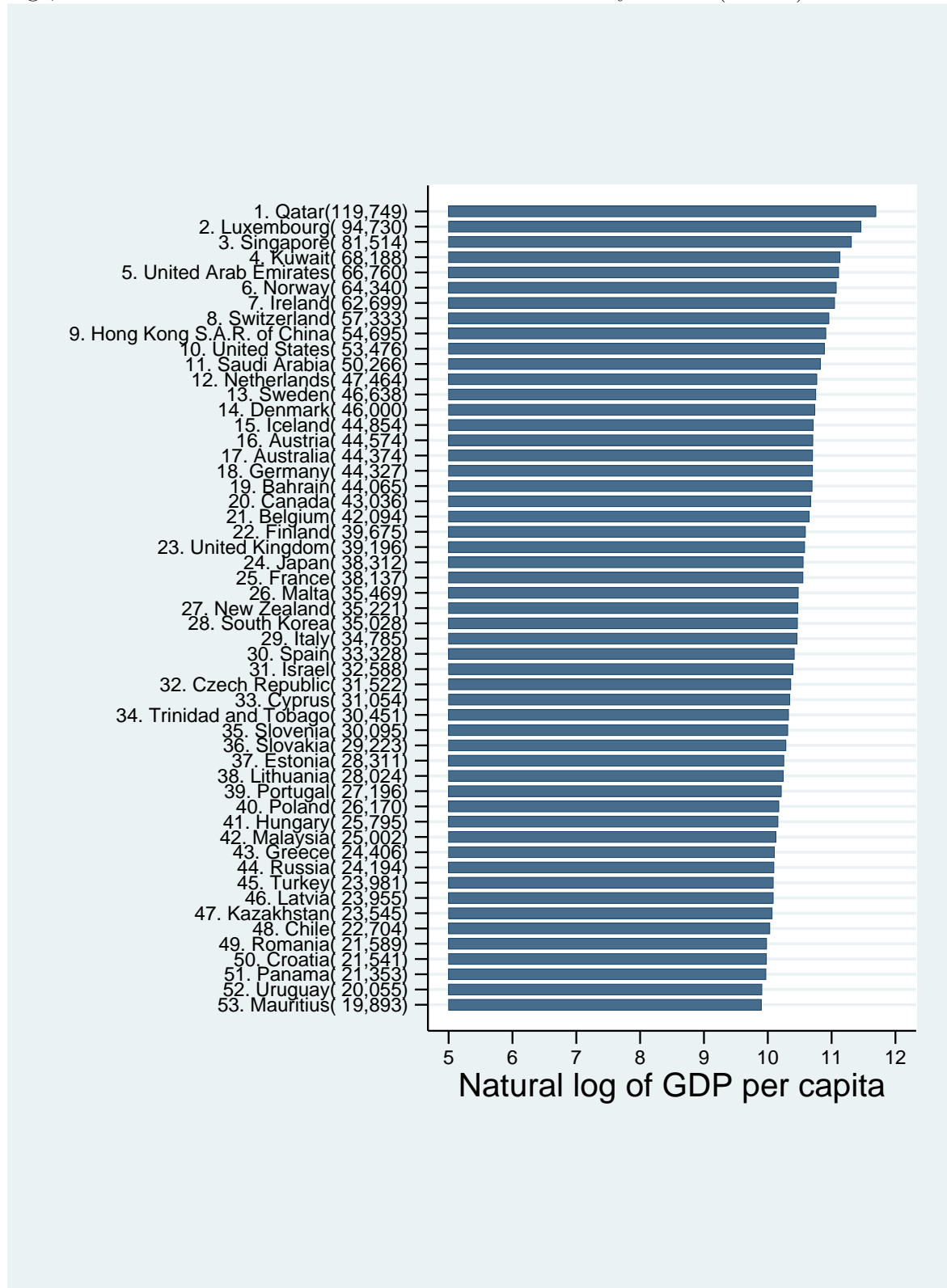


Figure 22: Ranking of Natural Log of Per-Capita GDP: 2015-17; bars show natural logs, dollar values are shown on the Y axis after country names (Part 2)

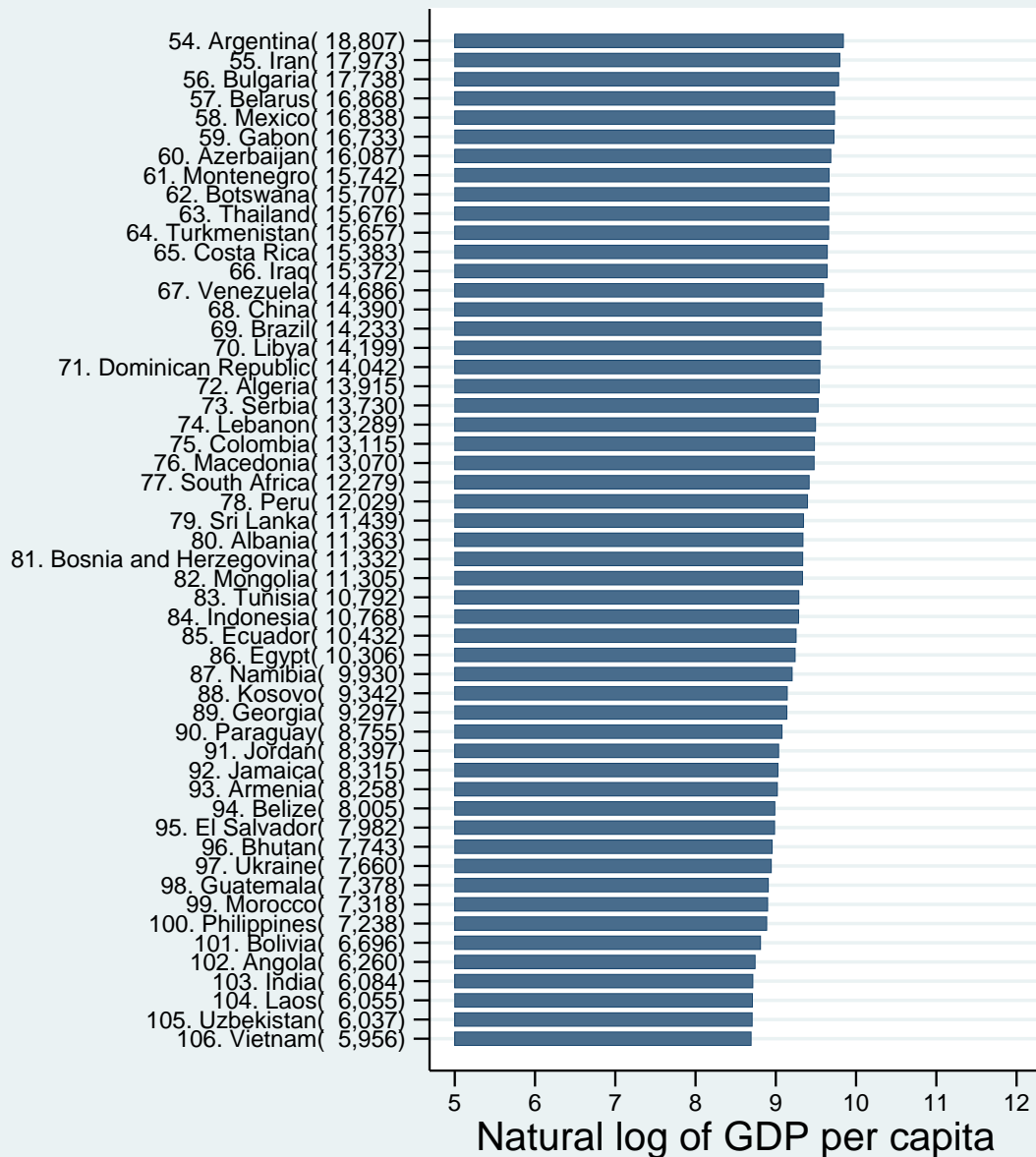


Figure 23: Ranking of Natural Log of Per-Capita GDP: 2015-17; bars show natural logs, dollar values are shown on the Y axis after country names (Part 3)

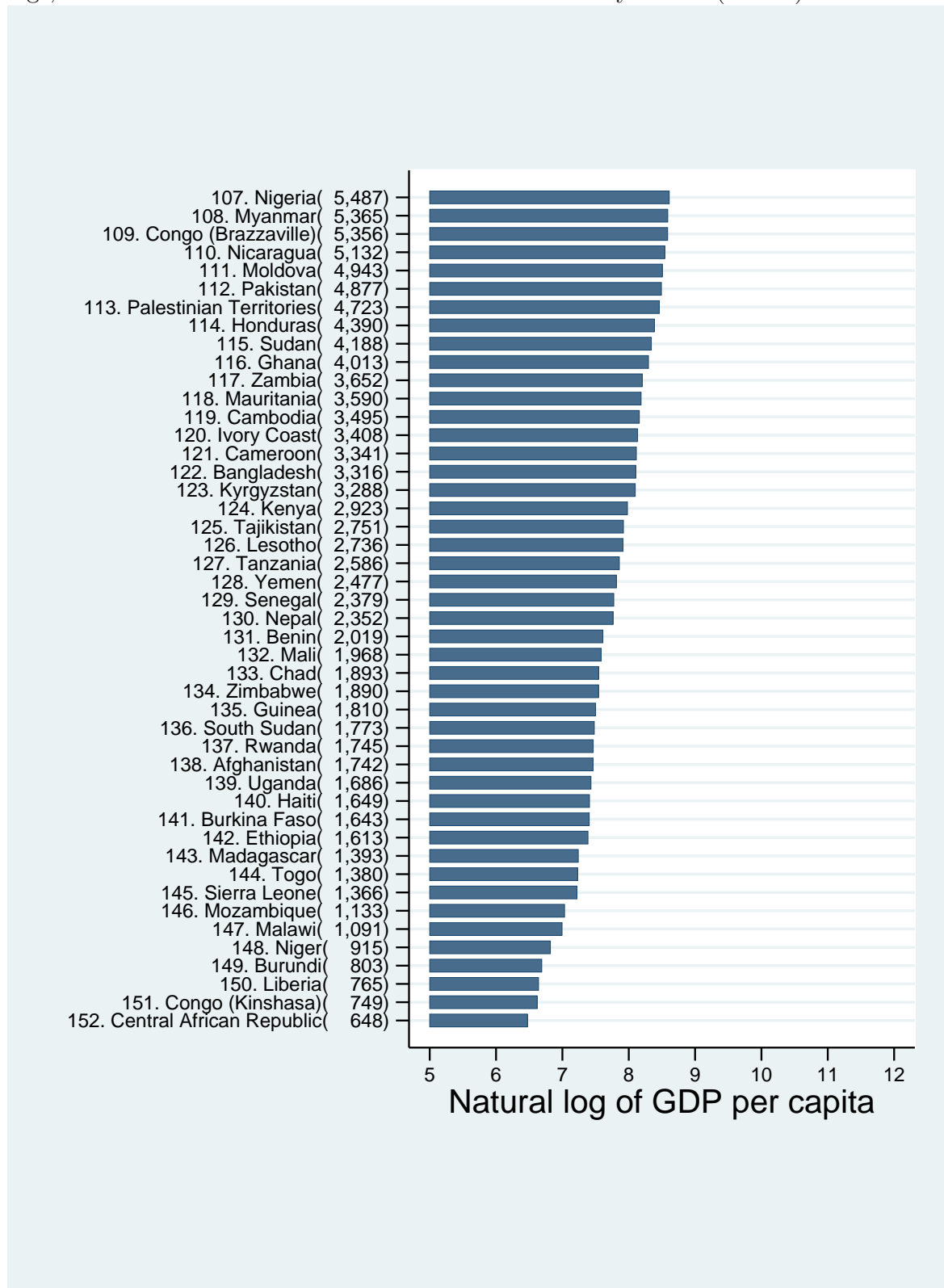


Figure 24: Ranking of Social Support: 2015-17 (Part 1)

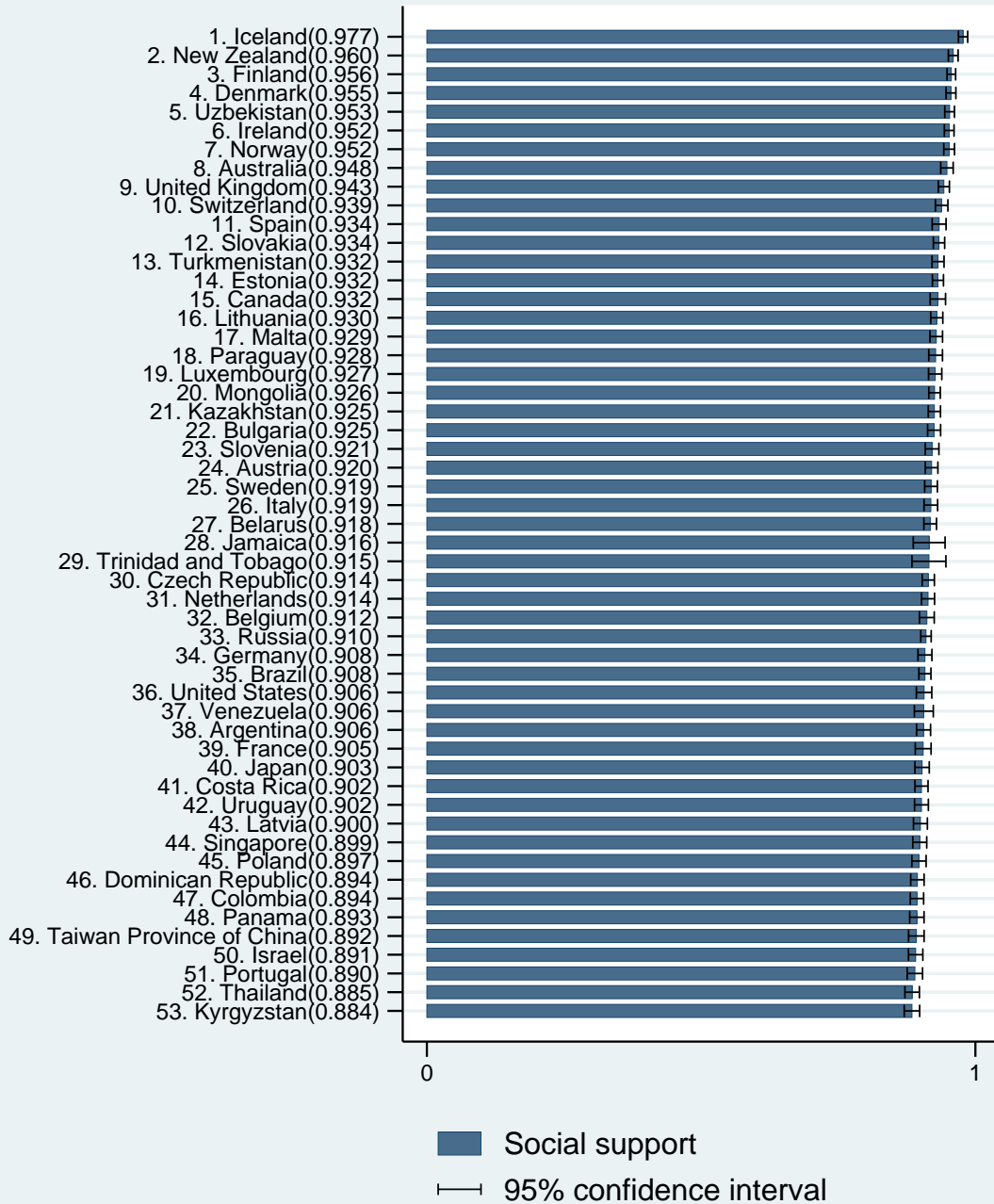


Figure 25: Ranking of Social Support: 2015-17 (Part 2)

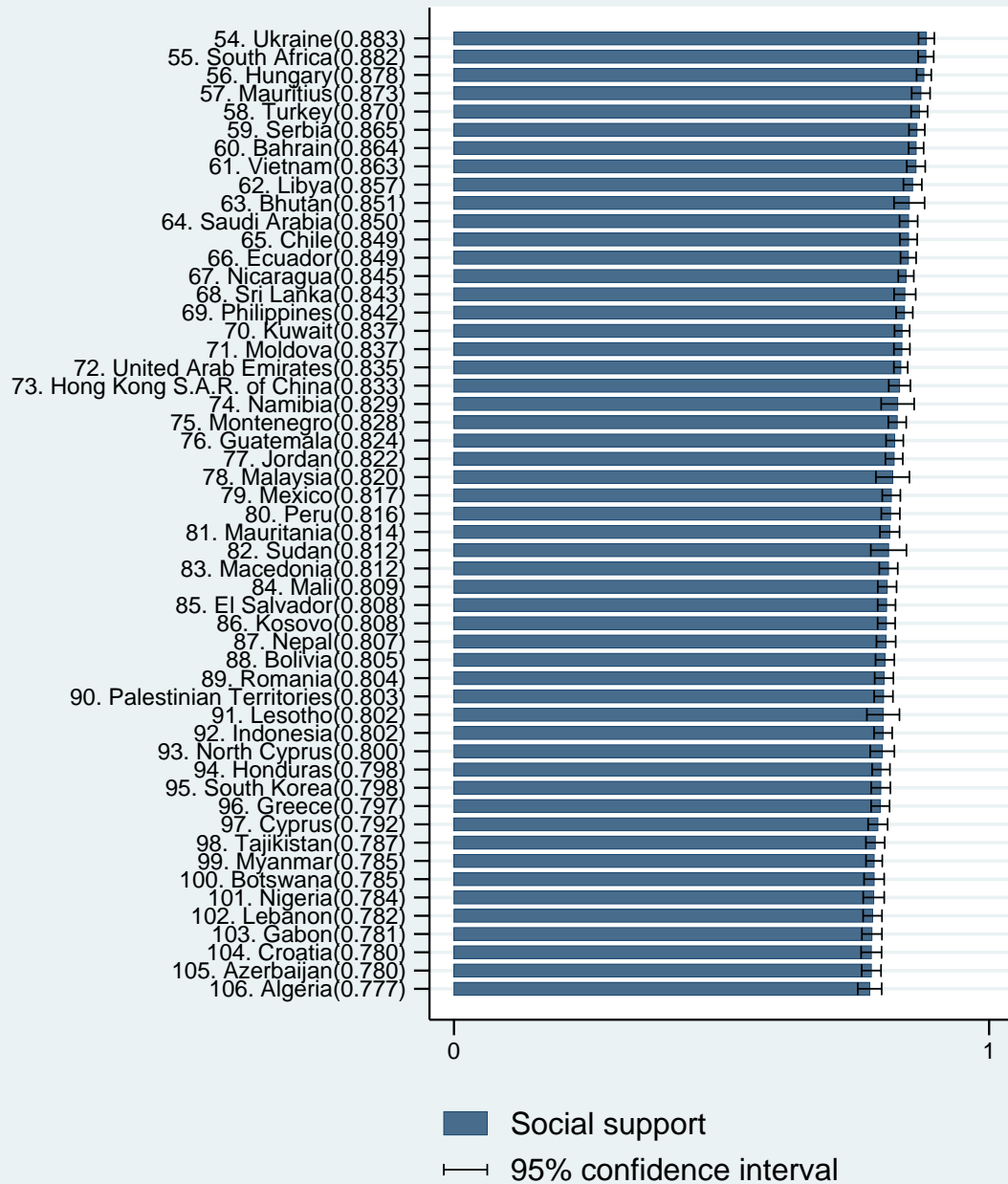


Figure 26: Ranking of Social Support: 2015-17 (Part 3)

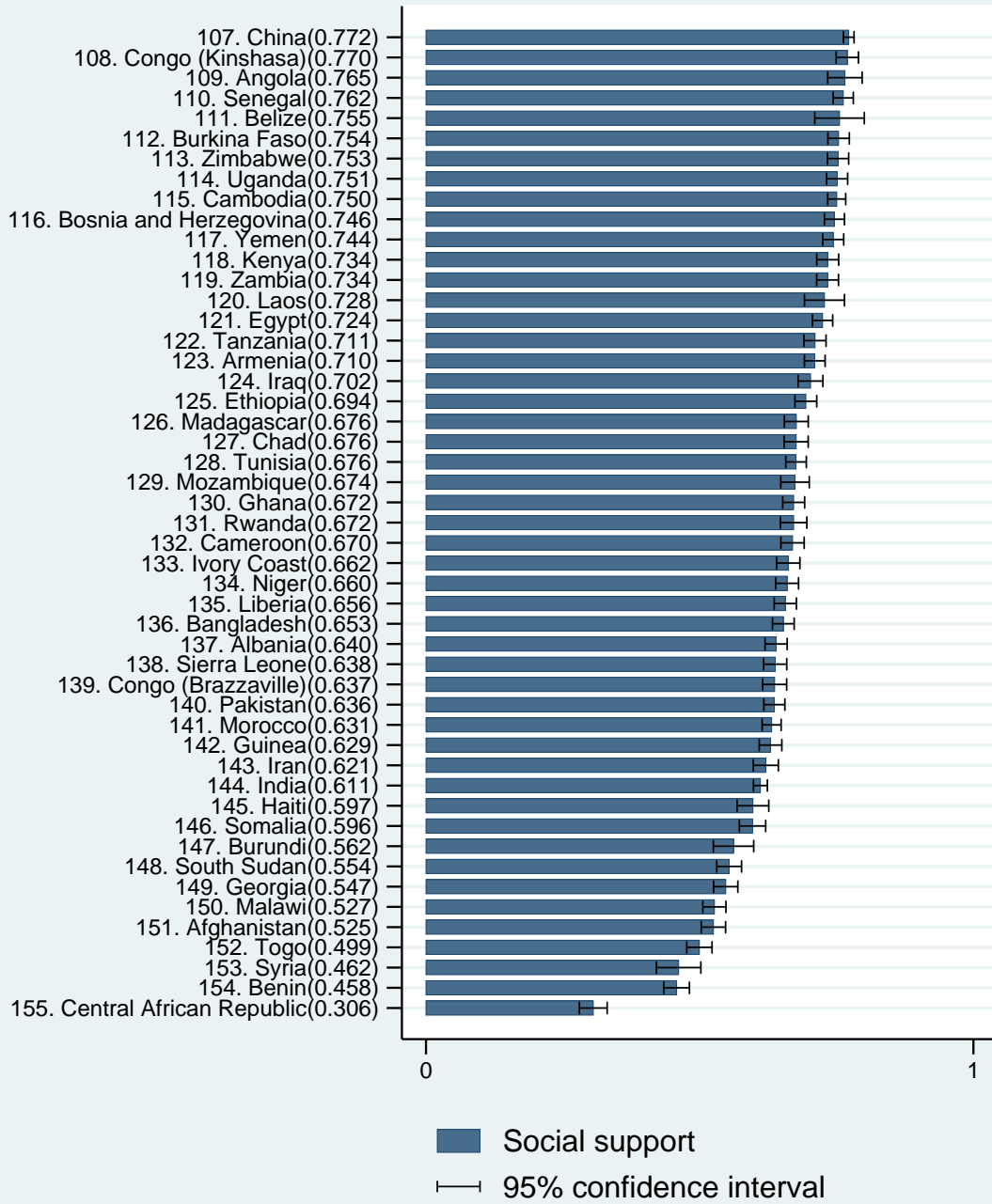


Figure 27: Ranking of Healthy Life Expectancy: 2015-17 (Part 1) - More specifically HLE= life expectancy*(healthy life expectancy in year 2012/life expectancy in year 2012)

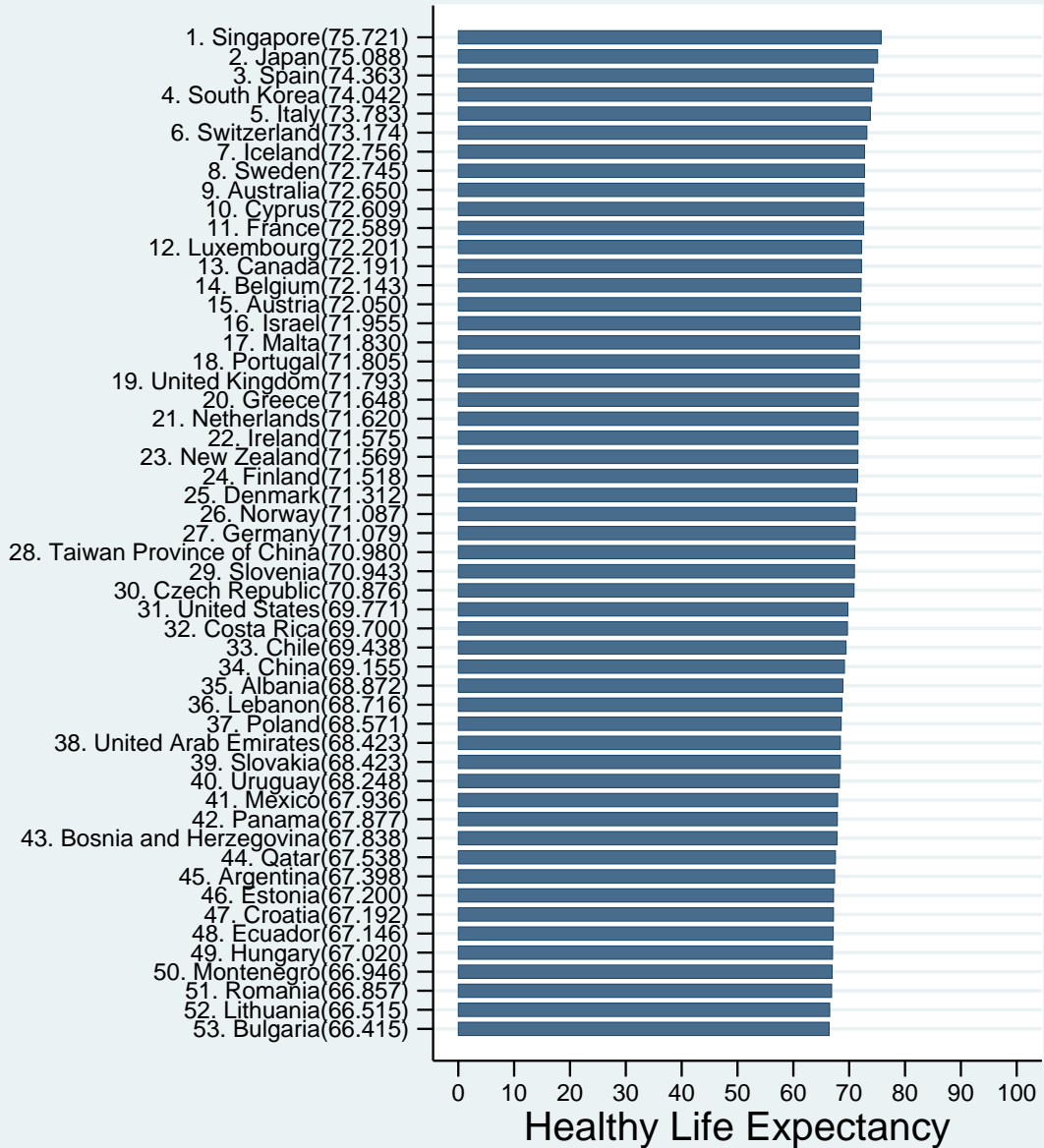


Figure 28: Ranking of Healthy Life Expectancy: 2015-17 (Part 2) - More specifically HLE= life expectancy*(healthy life expectancy in year 2012/life expectancy in year 2012)

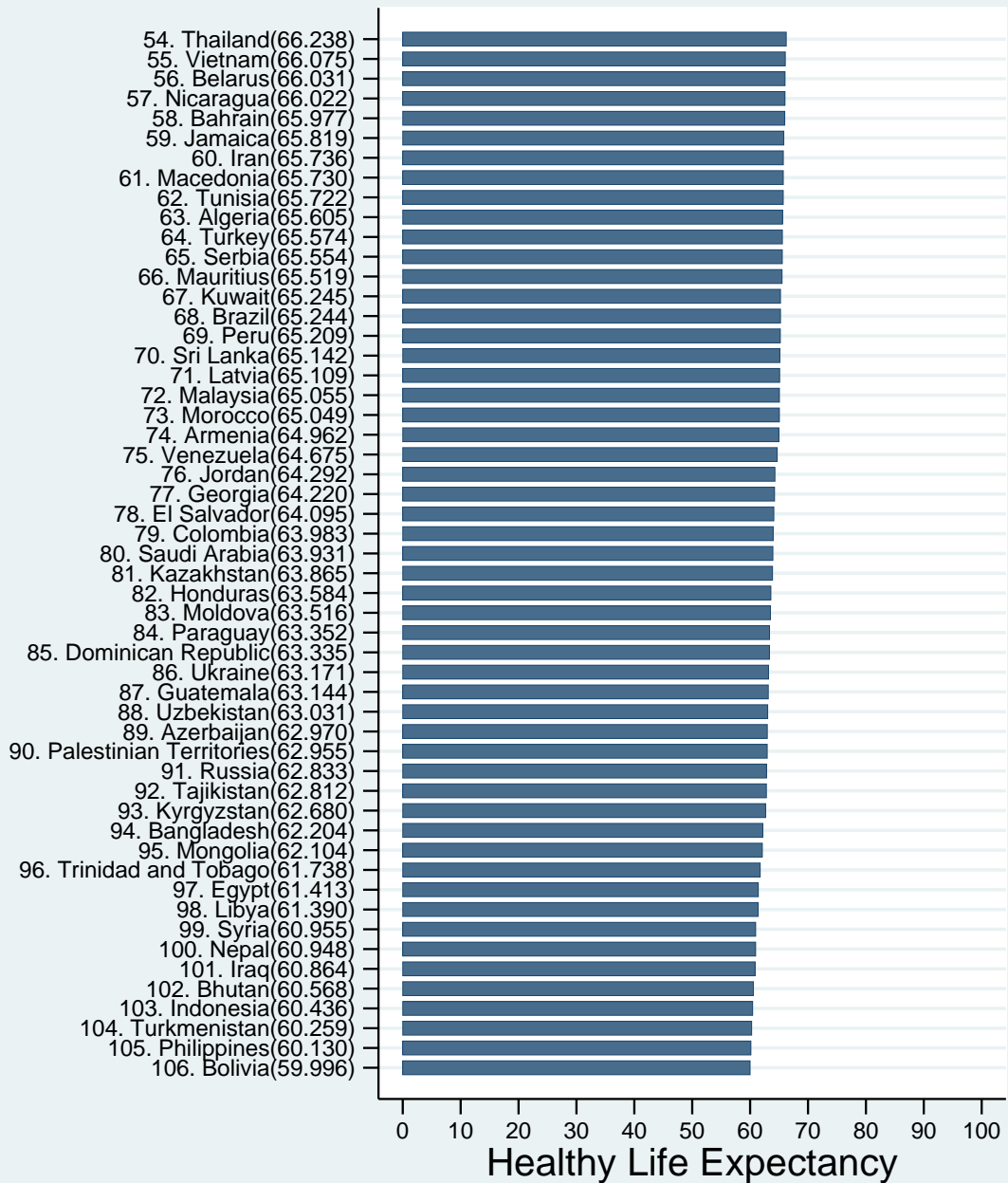


Figure 29: Ranking of Healthy Life Expectancy: 2015-17 (Part 3) - More specifically HLE= life expectancy*(healthy life expectancy in year 2012/life expectancy in year 2012)

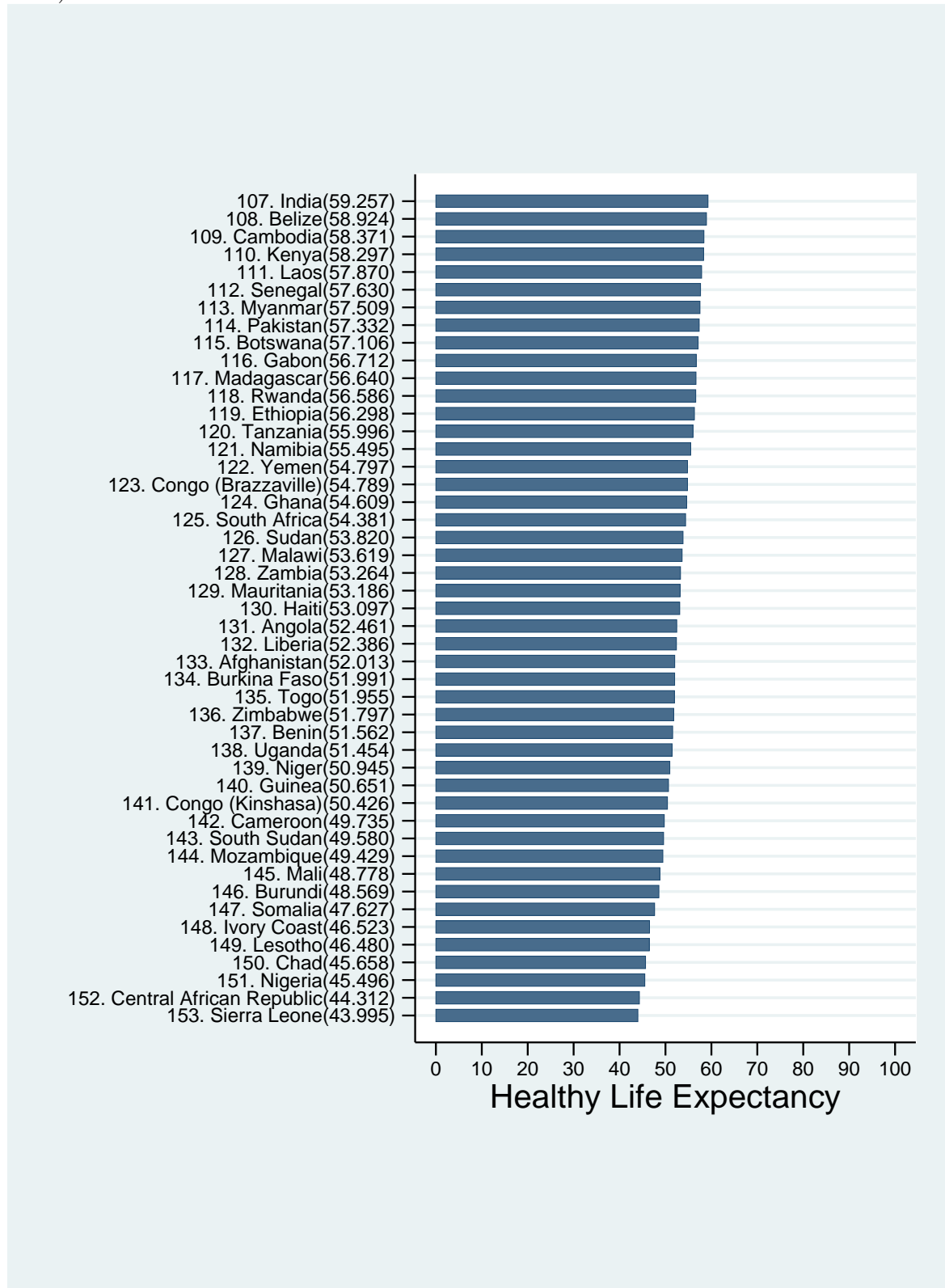


Figure 30: Ranking of Freedom to Make Life Choices: 2015-17 (Part 1)

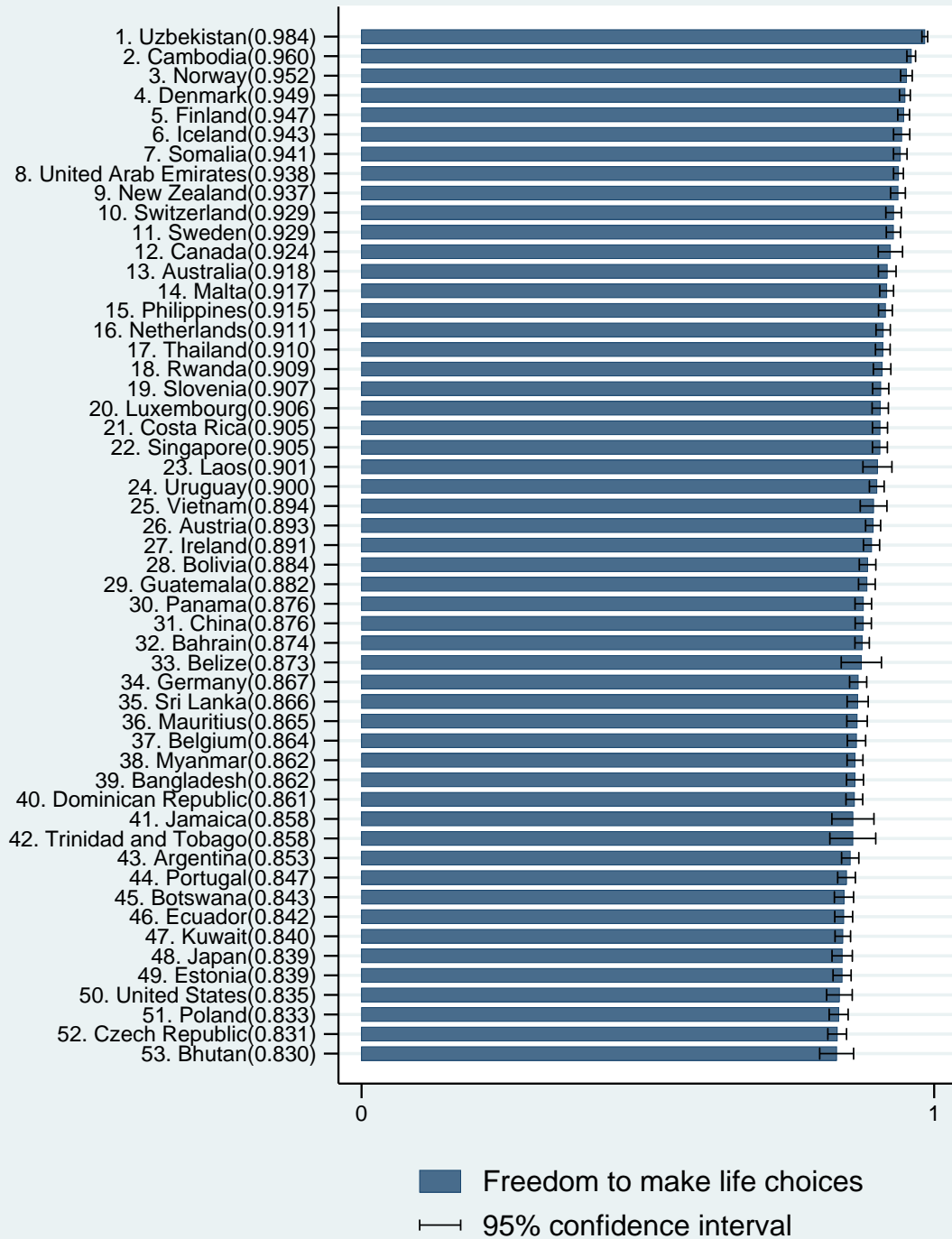


Figure 31: Ranking of Freedom to Make Life Choices: 2015-17 (Part 2)

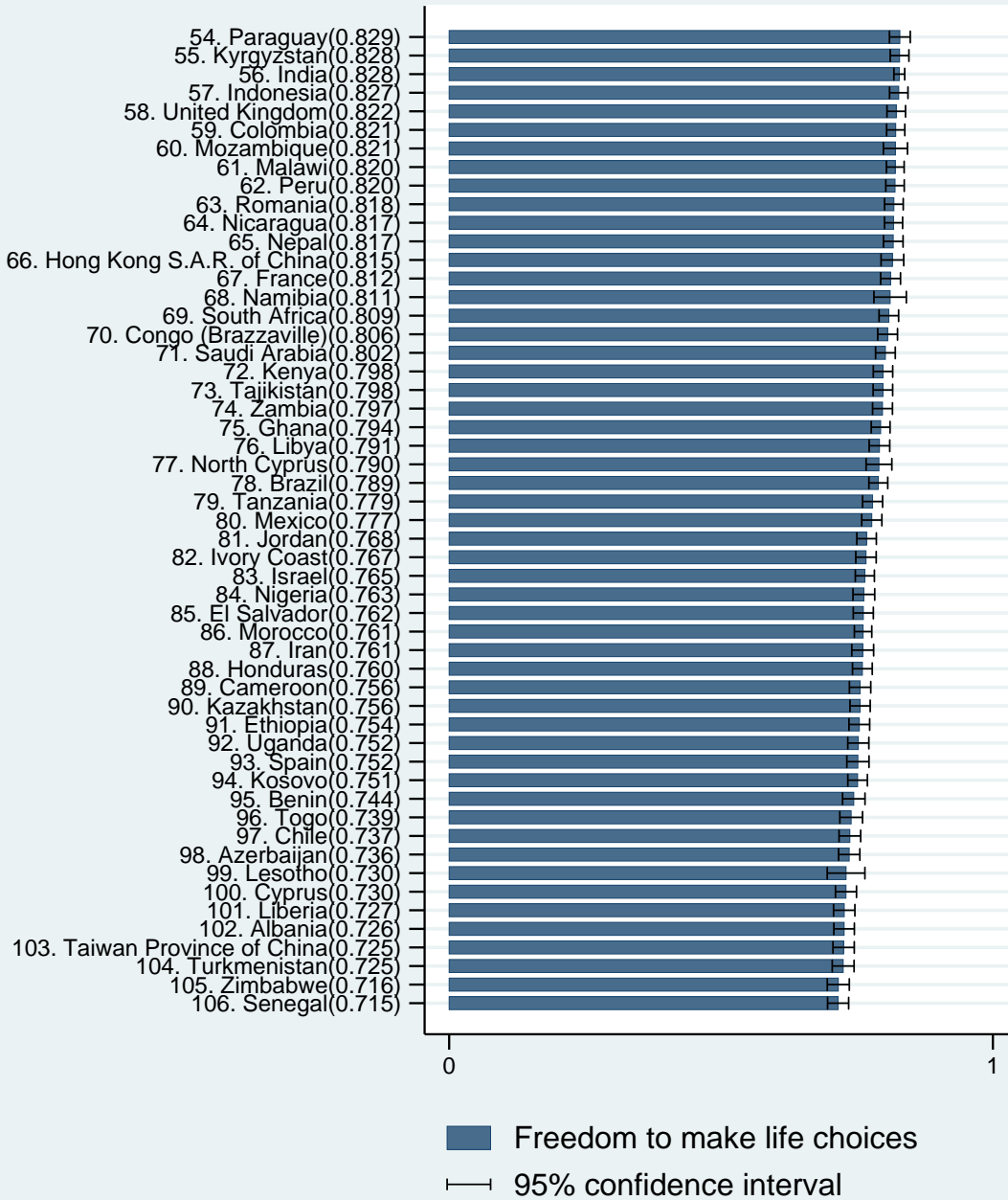


Figure 32: Ranking of Freedom to Make Life Choices: 2015-17 (Part 3)

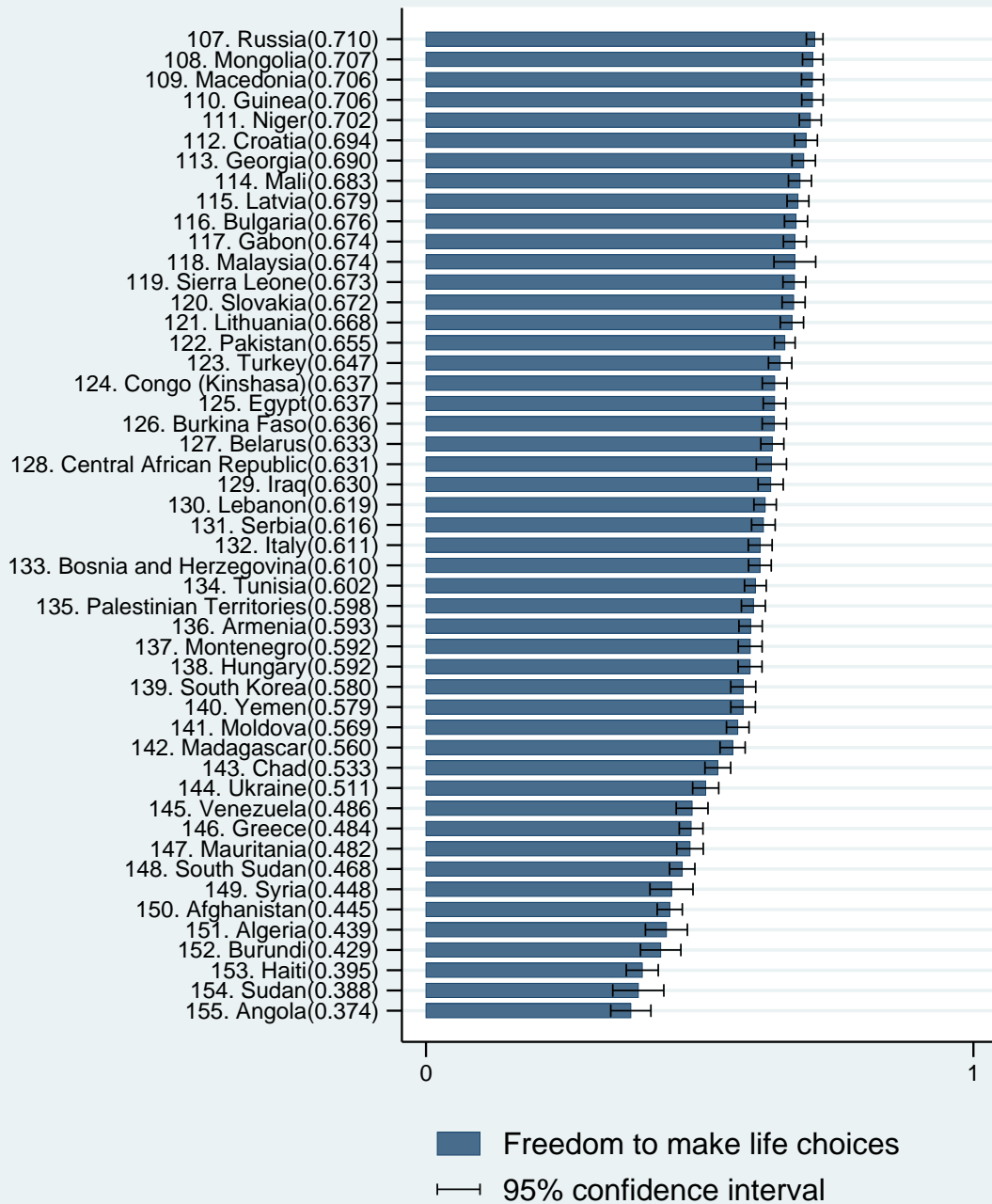


Figure 33: Ranking of Generosity: 2015-17 (Part 1)

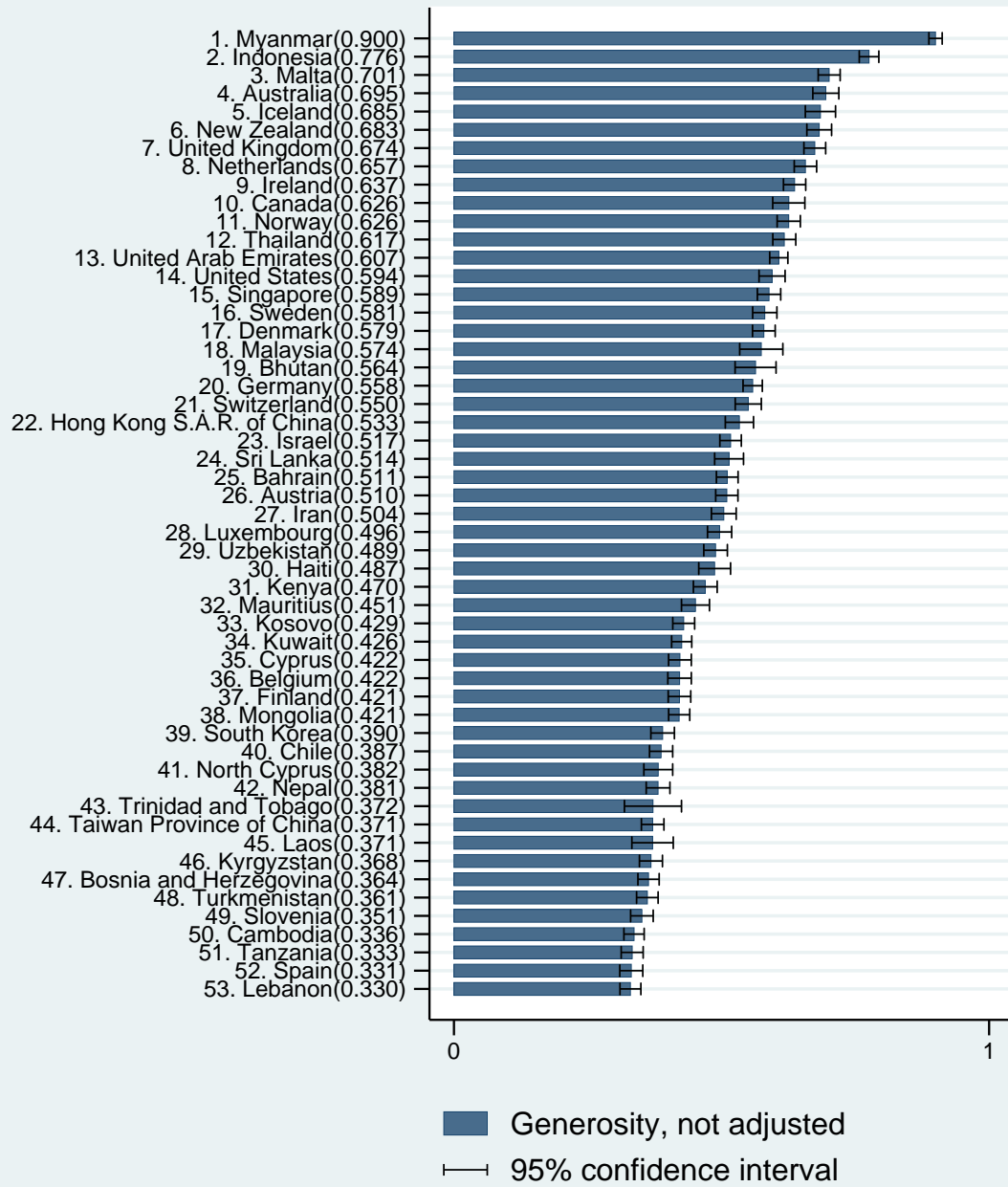


Figure 34: Ranking of Generosity: 2015-17 (Part 2)

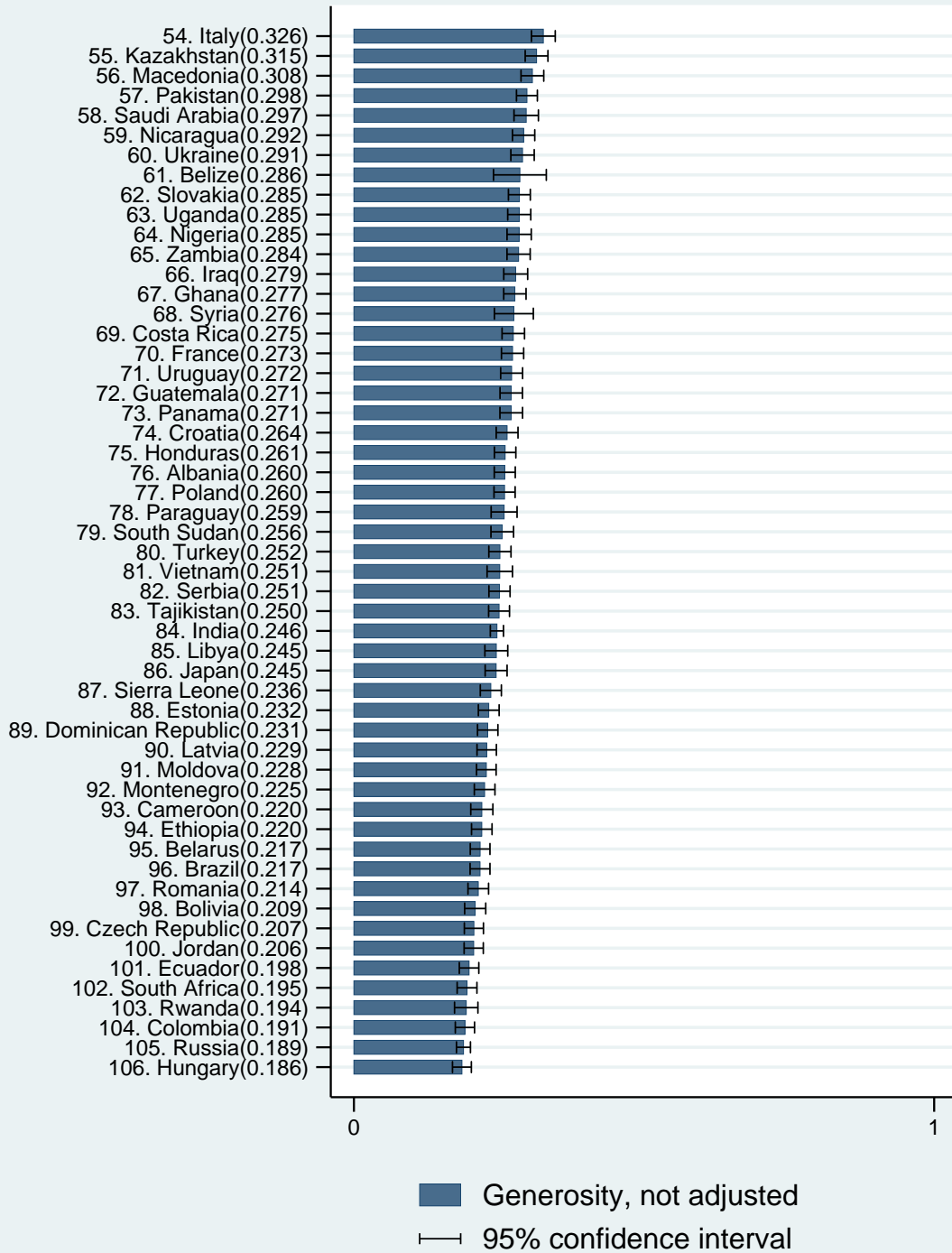


Figure 35: Ranking of Generosity: 2015-17 (Part 3)

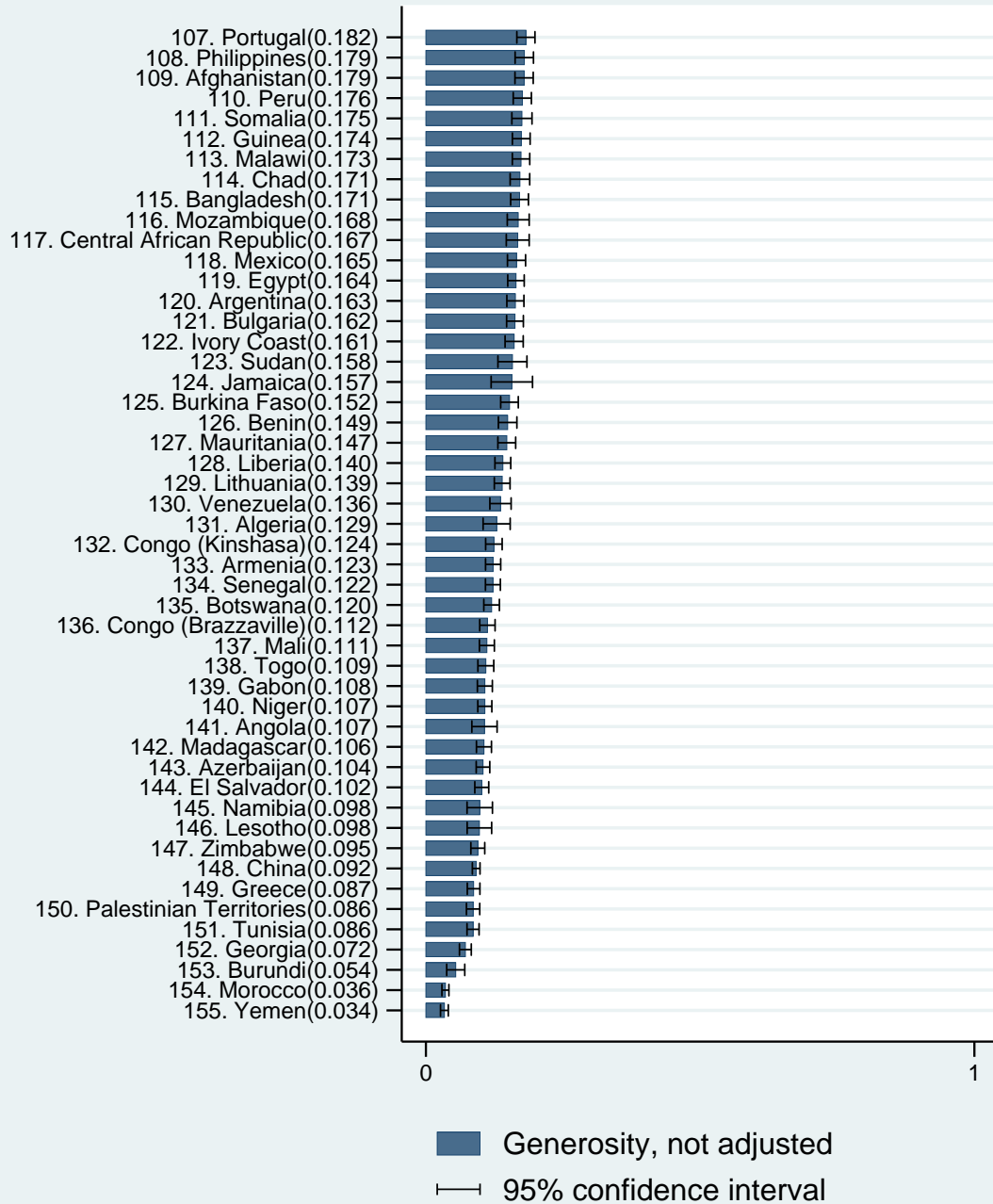


Figure 36: Ranking of Perceptions of Corruption: 2015-17 (Part 1)

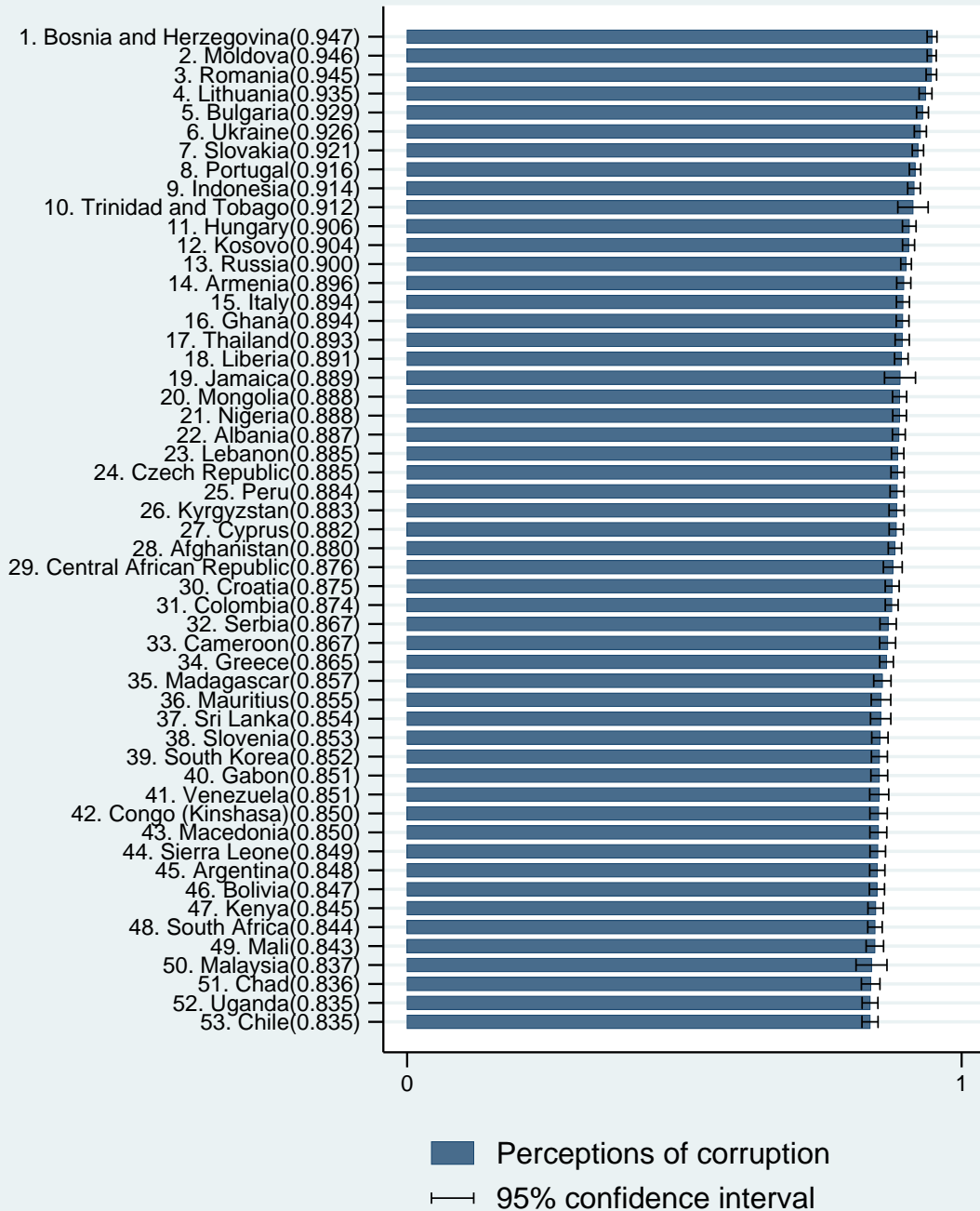


Figure 37: Ranking of Perceptions of Corruption: 2015-17 (Part 2)

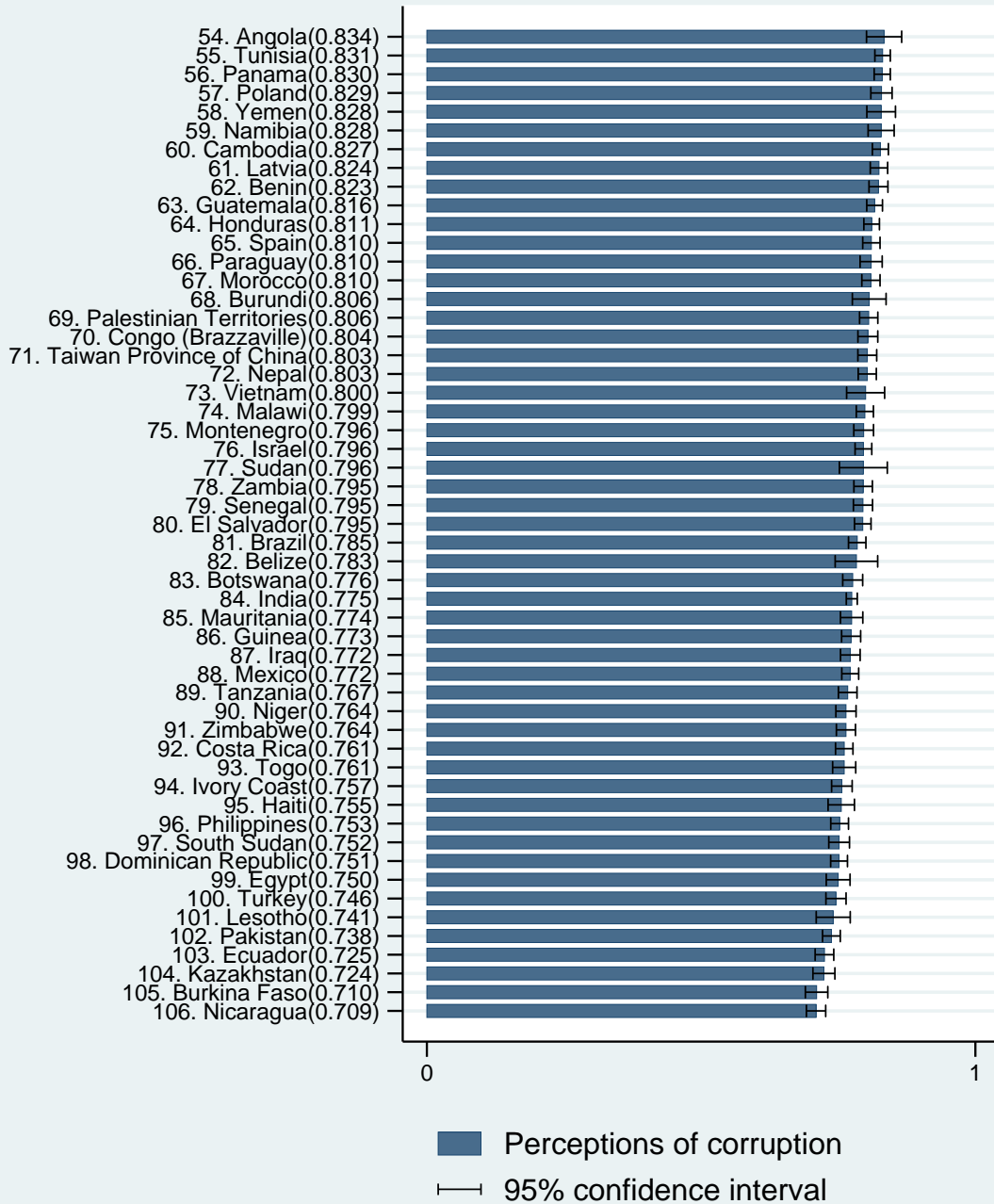


Figure 38: Ranking of Perceptions of Corruption: 2015-17 (Part 3)

