

Table C7. Data quality rating from 0 to 5 stars, maximum percent well certified per 5-year interval and percent well certified across time series for 204 countries, 1980-2019

Country	Data Quality Rating	1980-1984	1985-1989	1990-1994	1995-1999	2000-2004	2005-2009	2010-2019	1980-2019
Algeria	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Albania	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Algeria	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
American Samoa	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Andorra	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Angola	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Anguilla and Barbuda	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Argentina	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Armenia	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Australia	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Austria	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Azerbaijan	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bahrain	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bangladesh	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barbados	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Belarus	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Belgium	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Belize	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Benin	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bermuda	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bhutan	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bolivia	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bosnia and Herzegovina	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Botswana	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Brazil	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Brazil	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulgaria	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Burkina Faso	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Burundi	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cambodia	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cameroon	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Canada	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Central African Republic	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chad	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chile	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
China	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Colombia	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Comoros	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Congo (Brazzaville)	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Congo (Kinshasa)	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cook Islands	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Costa Rica	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Croatia	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cuba	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cyprus	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Czech Republic	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Czech Republic	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DRC Congo	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denmark	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Djibouti	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dominica	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dominican Republic	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ecuador	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Egypt	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
El Salvador	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Equatorial Guinea	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Eritrea	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Estonia	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ethiopia	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Federated States of Micronesia	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fiji	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Finland	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
France	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ghana	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Germany	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ghana	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Greece	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Greenland	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grenada	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Guam	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Guatemala	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Guinea	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Guinea-Bissau	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Guyana	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haiti	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Honduras	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hungary	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Iceland	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
India	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Indonesia	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Iran	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ireland	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Israel	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Italy	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jamaica	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Japan	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jordan	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kazakhstan	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kenya	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kiribati	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kosovo	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kyrgyzstan	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Laos	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Latvia	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lebanon	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lesotho	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lithuania	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Libya	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Liechtenstein	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Madagascar	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Malawi	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Malaysia	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maldives	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mali	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Malta	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Marshall Islands	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mauritania	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mauritius	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mexico	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mongolia	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table S7. Data quality rating from 0 to 5 stars, maximum percent well certified per 5-year interval and percent well certified across time series for 204 countries, 1980-2019.

	Country	Data Quality Rating	1980-1984	1985-1989	1990-1994	1995-1999	2000-2004	2005-2009	2010-2019	2020-2019
		2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.8
	Morocco	2	0.0	24.7	0.0	0.0	19.7	20.6	20.7	11.0
	Mozambique	2	0.0	0.0	0.0	0.3	14.9	63.3	0.0	11.7
	Myanmar	1	0.0	0.0	0.0	0.0	0.0	2.9	48.9	7.4
	Namibia	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Nepal	1	3.3	3.2	1.0	0.0	1.0	34.4	0.0	3.6
	Netherlands	5	88.8	88.0	86.5	84.2	84.5	84.2	84.2	86.0
	New Zealand	3	95.4	95.0	95.5	96.9	96.4	96.0	96.0	96.0
	Nicaragua	1	0.0	49.0	0.0	0.0	04.6	79.1	48.6	0.0
	Niger	1	0.0	0.0	0.0	0.0	0.0	42.6	6.1	6.1
	Nigeria	1	0.0	0.0	4.3	0.0	0.0	0.0	40.4	6.4
	North Atlantic Maritime Islands	2	0.0	0.0	0.0	29.2	34.2	44.9	34.2	34.2
	Norway	5	91.0	91.5	90.8	88.4	86.1	85.7	89.2	89.2
	Oman	2	0.0	0.0	0.0	0.0	0.0	63.3	32.4	13.7
	Pakistan	2	0.0	31.8	0.0	2.1	13.8	23.4	21.6	13.2
	Pakistan	2	0.0	0.0	0.0	24.7	21.6	13.8	21.6	13.2
	Paraguay	4	74.1	77.1	0.0	83.3	86.7	86.5	84.6	70.3
	Papua New Guinea	1	6.3	3.6	0.0	0.0	0.0	0.0	29.5	5.6
	Peru	3	61.3	34.3	0.0	43.3	47.2	47.2	47.2	47.2
	Peru	3	31.6	34.3	34.2	34.4	34.4	32.1	32.1	47.2
	Philippines	3	0.4	12.9	40.4	40.4	74.1	75.4	75.4	37.8
	Bolivia	1	0.0	0.0	0.0	0.0	12.4	0.0	0.0	1.8
	Poland	4	64.5	64.5	64.2	71.5	71.8	70.9	70.6	70.6
	Portugal	4	77.6	77.6	77.6	82.4	79.5	79.5	79.5	79.8
	Mexico	2	0.0	76.8	0.0	0.0	0.0	80.3	0.0	22.4
	Porto Rico	4	78.1	77.3	84.1	83.6	84.0	83.4	84.5	84.2
	Qatar	2	0.0	16.0	0.0	0.0	41.6	82.2	0.0	0.0
	Cape Verde	2	48.7	0.0	0.0	0.0	0.0	0.0	76.2	17.0
	Cote d'Ivoire	1	0.0	3.7	0.0	0.0	0.0	0.0	0.0	1.1
	South Korea	2	53.6	72.1	72.1	74.2	82.9	84.0	84.3	84.3
	Moldova	5	89.5	91.0	79.3	86.9	89.9	87.8	90.1	87.8
	Nauru	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Nor	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Nor	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
	San Marino	3	0.0	0.0	0.0	75.7	77.4	77.4	65.8	42.3
	The Gambia	1	3.9	3.5	3.4	2.8	2.5	2.2	0.0	2.6
	Guatemala	4	79.3	79.3	81.8	81.8	87.2	86.8	87.4	86.8
	Russia	5	92.5	90.2	87.4	87.4	86.9	86.9	86.7	86.7
	Rwanda	1	0.0	0.0	0.0	0.0	28.3	0.0	0.0	4.0
	San Kitts and Nevis	4	68.3	68.6	68.6	67.3	76.3	84.6	73.0	73.0
	San Lucia	4	68.3	68.6	67.3	73.0	84.6	76.3	76.3	76.3
	State Vincent and the Grenadines	4	68.3	68.6	67.3	73.0	84.6	76.3	76.3	76.3
	Samoa	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	San Tom and Principe	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Landi Arabia	2	0.0	0.0	0.0	19.2	20.7	21.8	20.6	11.8
	Senegal	1	2.8	3.4	3.5	3.5	5.9	0.0	0.0	1.9
	Senegal	3	0.0	0.0	0.0	77.9	77.7	81.4	45.4	45.4
	Sierra Leone	1	0.0	71.1	0.0	70.1	0.0	79.4	79.4	79.4
	Sierra Leone	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
	Singapore	5	91.1	91.6	91.6	92.3	93.4	92.2	93.8	92.2
	Slovakia	3	0.0	0.0	82.8	80.3	80.3	82.3	82.0	81.9
	Slovenia	4	85.4	85.4	80.0	82.5	86.1	86.1	73.0	73.0
	Vietnam	2	0.0	1.3	0.0	1.2	1.5	62.0	4.8	10.3
	Solomon Islands	1	0.0	0.0	0.0	0.0	0.0	36.0	0.0	3.4
	Somalia	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	South Africa	3	0.0	0.0	1.2	0.0	66.0	69.2	69.1	39.2
	South Sudan	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Spain	4	91.7	91.7	90.5	90.5	86.2	86.2	86.2	86.8
	Isl Landia	3	41.9	41.7	41.9	42.7	42.7	47.9	45.3	54.0
	Salon	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Switzerland	3	96.1	92.9	93.7	90.1	88.4	87.0	87.1	65.1
	Sweden	4	90.5	90.5	90.1	89.9	89.7	86.1	86.1	86.1
	Switzerland	4	76.0	76.0	87.3	87.3	87.4	87.4	82.3	82.3
	Spain	3	29.5	0.0	0.0	31.0	34.8	44.3	52.5	38.6
	Taiwan (province of China)	4	79.4	79.4	78.8	82.5	84.9	85.4	85.4	81.8
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0
	Thailand	3	24.6	31.3	32.4	42.4	41.4	41.6	44.4	44.4
	North Macedonia	3	0.0	0.0	75.9	75.9	71.9	68.8	68.8	52.7
	Togo	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Togo	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0
	Taiwan	4	79.4	79.4	78.8	82.5	84.9	85.4	85.4	81.8
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0
	Thailand	3	24.6	31.3	32.4	42.4	41.4	41.6	44.4	44.4
	North Macedonia	3	0.0	0.0	75.9	75.9	71.9	68.8	68.8	52.7
	Togo	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Togo	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0
	Taiwan	4	79.4	79.4	78.8	82.5	84.9	85.4	85.4	81.8
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0
	Thailand	3	24.6	31.3	32.4	42.4	41.4	41.6	44.4	44.4
	North Macedonia	3	0.0	0.0	75.9	75.9	71.9	68.8	68.8	52.7
	Togo	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Togo	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0
	Taiwan	4	79.4	79.4	78.8	82.5	84.9	85.4	85.4	81.8
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0
	Thailand	3	24.6	31.3	32.4	42.4	41.4	41.6	44.4	44.4
	North Macedonia	3	0.0	0.0	75.9	75.9	71.9	68.8	68.8	52.7
	Togo	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Togo	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0
	Taiwan	4	79.4	79.4	78.8	82.5	84.9	85.4	85.4	81.8
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0
	Thailand	3	24.6	31.3	32.4	42.4	41.4	41.6	44.4	44.4
	North Macedonia	3	0.0	0.0	75.9	75.9	71.9	68.8	68.8	52.7
	Togo	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Togo	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0
	Taiwan	4	79.4	79.4	78.8	82.5	84.9	85.4	85.4	81.8
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0
	Thailand	3	24.6	31.3	32.4	42.4	41.4	41.6	44.4	44.4
	North Macedonia	3	0.0	0.0	75.9	75.9	71.9	68.8	68.8	52.7
	Togo	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Togo	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0
	Taiwan	4	79.4	79.4	78.8	82.5	84.9	85.4	85.4	81.8
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0
	Thailand	3	24.6	31.3	32.4	42.4	41.4	41.6	44.4	44.4
	North Macedonia	3	0.0	0.0	75.9	75.9	71.9	68.8	68.8	52.7
	Togo	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Togo	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0
	Taiwan	4	79.4	79.4	78.8	82.5	84.9	85.4	85.4	81.8
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0
	Thailand	3	24.6	31.3	32.4	42.4	41.4	41.6	44.4	44.4
	North Macedonia	3	0.0	0.0	75.9	75.9	71.9	68.8	68.8	52.7
	Togo	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Togo	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0
	Taiwan	4	79.4	79.4	78.8	82.5	84.9	85.4	85.4	81.8
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0
	Thailand	3	24.6	31.3	32.4	42.4	41.4	41.6	44.4	44.4
	North Macedonia	3	0.0	0.0	75.9	75.9	71.9	68.8	68.8	52.7
	Togo	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Togo	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0
	Taiwan	4	79.4	79.4	78.8	82.5	84.9	85.4	85.4	81.8
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0
	Thailand	3	24.6	31.3	32.4	42.4	41.4	41.6	44.4	44.4
	North Macedonia	3	0.0	0.0	75.9	75.9	71.9	68.8	68.8	52.7
	Togo	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Togo	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0
	Taiwan	4	79.4	79.4	78.8	82.5	84.9	85.4	85.4	81.8
	Tajikistan	3	65.8	67.4	66.3	48.3	48.4	48.4	37.0	37.0