

# The Effect of Fertility Reduction on Global Maternal Mortality Reduction: 1990-2011

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## Abstract

**Background:** Significant progress has been made in reducing global maternal mortality by almost 50% from 546,000 in 1990 to 287,000 in 2010. The maternal mortality reduction is possible through two mechanisms: the improvement in maternal care, which reduces *risk per birth* and by reduction in the number of births, which reduces women's exposure to the incidence of pregnancies, reducing her vulnerability to unsafe abortions and risks associated with pregnancies. We examine the effect of the latter, that is, the effect of fertility decline between 1990 and 2011 on maternal mortality reduction during this period.

**Method:** This is an extension of our recent work published in the Lancet (Ahmed et al, 2012) which examined the effect of family planning on maternal mortality reduction. Using an innovative, simple formula we have decomposed the effect of fertility reduction and improvement in maternity care on maternal mortality reduction between 1990 and 2011 for 176 countries. To our knowledge, this is the first paper which examined the effect at the country level for all UN countries.

**Results:** We estimate that 45.1% reduction in global maternal deaths between 1990 and 2011 is attributable to fertility reduction. The country level estimates show the GFR reduction effect on maternal mortality was most pronounced in South Asian countries and least Sub-Saharan African countries.

**Conclusion:** Fertility reduction played a major role in the global maternal deaths reduction between 1990 and 2011. Contraceptive method use is the most effective method for reducing fertility and family planning should be considered as a key strategy for safe motherhood program along with the target of improving maternity care during antepartum, delivery, and postpartum period. Fertility levels are still high in many developing countries and women are repeatedly exposed to unwanted pregnancies with life threatening pregnancy complications which can be prevented with access to effective contraception.

**Table 1: Decomposition of the effect of fertility reduction on maternal mortality reduction: 1990-2011**

Country	Data Input						Log(ratios:2011/1990)			Contributed Percentage	
	MMR 1990	MMR 2011	MMRate 1990	MMRate 2011	GFR 1990	GFR 2011	Log(MMRate)	Log(MMR)	Log(GFR)	Care improvement	GFR reduction
Afghanistan	1046.8	880.8	281.4	181.6	268.9	206.2	-0.438	-0.173	-0.265	-39.41	-60.59
Albania	32.8	7.3	3.1	0.4	95.4	48	-2.189	-1.503	-0.687	-68.63	-31.37
Algeria	170.3	82.3	23.7	5.8	2	70.1	-1.413	-0.727	-0.686	-51.45	-48.55
Angola	534.1	334.8	127.9	61.9	5	8	-0.727	-0.467	-0.260	-64.28	-35.72
Argentina	61.7	61.8	5.6	4.2	91.3	68.3	-0.289	0.002	-0.291	0.55	-99.45
Armenia	36.3	25	3	1.4	82.7	55.9	-0.763	-0.373	-0.390	-48.86	-51.14
Australia	8.2	4.9	0.5	0.3	56.8	56	-0.529	-0.515	-0.014	-97.42	-2.58
Austria	10.7	4	0.5	0.1	43	36.8	-1.140	-0.984	-0.156	-86.32	-13.68
Azerbaijan	32	25.6	3.4	1.7	105	68.3	-0.654	-0.223	-0.430	-34.14	-65.86
Bahamas	48.2	48.4	4.3	3.1	88.9	63.8	-0.328	0.004	-0.332	1.23	-98.77
Bahrain	41.3	16.3	5.4	1.3	6	82.6	-1.379	-0.930	-0.450	-67.40	-32.60
Bangladesh	593.1	247	93.6	18	9	72.9	-1.648	-0.876	-0.772	-53.14	-46.86
Barbados	56.8	34.4	2.7	1.4	48.3	41.8	-0.644	-0.501	-0.143	-77.87	-22.13
Belarus	27.7	21.5	1.6	0.9	58.2	42.4	-0.569	-0.253	-0.316	-44.52	-55.48
Belgium	12.7	8.1	0.6	0.4	48.4	50.4	-0.409	-0.450	0.040	-91.79	8.21
Belize	55.8	62.3	9.1	6	1	95.7	-0.423	0.110	-0.533	17.13	-82.87
Benin	555.4	329	114.3	56.2	8	7	-0.711	-0.524	-0.187	-73.66	-26.34
Bhutan	535.2	189.9	89.2	14.9	6	78.3	-1.791	-1.036	-0.755	-57.84	-42.16
Bolivia (Plurinational State of)	407.7	235.4	62.2	24.8	5	3	-0.919	-0.549	-0.370	-59.74	-40.26
Bosnia and Herzegovina	27.8	15.8	1.5	0.5	53.4	32.1	-1.073	-0.565	-0.508	-52.64	-47.36
Botswana	327.1	514.6	48.7	46.2	8	89.7	-0.053	0.453	-0.506	47.25	-52.75
Brazil	85.9	65.5	8	3.6	93	55.1	-0.795	-0.271	-0.524	-34.11	-65.89
Brunei Darussalam	32.5	23.4	3.1	1.7	95.5	71.3	-0.621	-0.329	-0.292	-52.93	-47.07
Bulgaria	34.5	25.6	1.7	1.1	48.2	42	-0.436	-0.298	-0.137	-68.51	-31.49
Burkina Faso	457.2	353.6	96.3	66.7	7	5	-0.368	-0.257	-0.111	-69.80	-30.20
Burundi	854.3	894.2	164.5	117.4	6	3	-0.337	0.046	-0.383	10.65	-89.35
Cambodia	412.6	308.2	72.4	25	4	81.2	-1.061	-0.292	-0.770	-27.49	-72.51
Cameroon	488	531.2	93	80.2	5	151	-0.148	0.085	-0.233	26.73	-73.27
Canada	7.1	7.9	0.4	0.4	52.7	47.5	0.003	0.107	-0.104	50.77	-49.23
Cape Verde	218.7	127.1	39	9.8	5	76.9	-1.384	-0.543	-0.842	-39.20	-60.80
Central African Republic	1751	681.5	318.4	99.3	8	8	-1.165	-0.944	-0.221	-81.02	-18.98
Chad	611.4	608.3	132.1	122.9	216	202	-0.072	-0.005	-0.067	-7.07	-92.93
Chile	48.7	19.1	4.2	1	85.6	54	-1.397	-0.936	-0.461	-66.98	-33.02
China	88	26.5	7	1.2	79.6	45.1	-1.768	-1.200	-0.568	-67.89	-32.11
Colombia	68.2	48.2	7.1	3.5	104	72.4	-0.709	-0.347	-0.362	-48.98	-51.02

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Afghanistan	1046.8	880.8	281.4	181.6	268.9	206.2	-0.438	-0.173	-0.265	-39.41	-60.59
Albania	32.8	7.3	3.1	0.4	95.4	48.139.	-2.189	-1.503	-0.687	-68.63	-31.37
Algeria	170.3	82.3	23.7	5.8	2.239.	70.1184.	-1.413	-0.727	-0.686	-51.45	-48.55
Angola	534.1	334.8	127.9	61.9	5.170.	8.160.	-0.727	-0.467	-0.260	-64.28	-35.72
Comoros	395.3	270.9	67.3	43.5	2.168.	6.148.	-0.436	-0.378	-0.058	-86.65	-13.35
Congo	540.1	571.2	91.1	84.7	7.106.	2.	-0.073	0.056	-0.129	30.20	-69.80
Costa Rica	28.1	24.6	3	1.4	1.57.4	147.	-0.747	-0.133	-0.614	-17.81	-82.19
Côte d'Ivoire	477.7	452	93.7	66.7	196	6	-0.339	-0.055	-0.284	-16.31	-83.69
Croatia	15.3	13.9	0.7	0.6	47.8	42	-0.224	-0.096	-0.128	-42.88	-57.12
Cuba	48.2	40.2	2.9	1.5	60	36.7	-0.673	-0.181	-0.491	-26.97	-73.03
Cyprus	6	8.4	0.5	0.4	86.8	42	-0.390	0.336	-0.727	31.65	-68.35
Czech Republic	15.9	10.3	0.8	0.5	49.1	45.9	-0.500	-0.434	-0.066	-86.77	-13.23
Dem. People's Republic of Korea	46	53.6	3.5	2.9	76.1	53.6	-0.199	0.153	-0.351	30.32	-69.68
Democratic Republic of the Congo	453	480.6	105.4	94.1	6	7	-0.114	0.059	-0.173	25.50	-74.50
Denmark	8.8	5.3	0.5	0.2	52.1	45.172.	-0.655	-0.507	-0.148	-77.43	-22.57
Djibouti	381.6	365.2	66	40.7	9.120.	5.	-0.482	-0.044	-0.438	-9.11	-90.89
Dominican Republic	86.6	58.8	10.5	4.9	8.118.	83.5	-0.757	-0.387	-0.370	-51.15	-48.85
Ecuador	164	67.8	19.4	5.3	6.136.	78.4	-1.296	-0.883	-0.413	-68.13	-31.87
Egypt	232.6	69.5	31.7	6.2	4.132.	89.7	-1.627	-1.208	-0.419	-74.25	-25.75
El Salvador	137.9	49.5	18.2	3.6	2	73.2158.	-1.616	-1.025	-0.591	-63.41	-36.59
Equatorial Guinea	609.9	211.9	119.6	33.7	196	9.173.	-1.267	-1.057	-0.210	-83.44	-16.56
Eritrea	1229.6	1081.3	213.1	158.4	3	5	-0.297	-0.129	-0.168	-43.33	-56.67
Estonia	36.4	6.2	2.1	0.3	57.7	49.4212.	-1.924	-1.770	-0.154	-91.98	-8.02
Ethiopia	727.5	528.8	154.8	68.7	8.118.	9.	-0.813	-0.319	-0.494	-39.26	-60.74
Fiji	77.8	56.7	9.2	4.4	7	78.2	-0.734	-0.316	-0.418	-43.09	-56.91
Finland	7.5	5.3	0.4	0.3	53	48.4	-0.437	-0.347	-0.090	-79.45	-20.55
France	14.9	10	0.8	0.6	52.6	55.4171.	-0.346	-0.399	0.053	-88.32	11.68
Gabon	450.6	430.1	77.3	46.1	5.203.	1.155.	-0.518	-0.047	-0.471	-9.00	-91.00
Gambia	339.6	274.8	69	42.7	1	2	-0.481	-0.212	-0.269	-44.06	-55.94
Georgia	31.6	55.4	2.1	2.4	65.7	44	0.160	0.561	-0.402	58.28	-41.72
Germany	13.4	10.8	0.6	0.4	42.9	37.172.	-0.364	-0.216	-0.148	-59.23	-40.77
Ghana	394.3	328.3	68.2	42.9	9	6	-0.464	-0.183	-0.280	-39.51	-60.49
Greece	9.2	7.6	0.4	0.3	44.8	44.5140.	-0.198	-0.191	-0.006	-96.73	-3.27
Grenada	34.1	24.1	4.8	0	1.178.	0.133.		-0.347			
Guatemala	166.7	75.6	29.8	10.1	8.217.	1.171.	-1.086	-0.791	-0.295	-72.84	-27.16
Guinea	731	664.1	159.2	114.2	8.199.	9.162.	-0.333	-0.096	-0.237	-28.85	-71.15
Guinea-Bissau	806.2	844.1	160.9	137.1	6	4	-0.160	0.046	-0.206	18.25	-81.75

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Albania	32.8	7.3	3.1	0.4	95.4	48	-2.189	-1.503	-0.687	-68.63	-31.37
Algeria	170.3	82.3	23.7	5.8	2	70.1	-1.413	-0.727	-0.686	-51.45	-48.55
Angola	534.1	334.8	127.9	61.9	239.	184.	-0.727	-0.467	-0.260	-64.28	-35.72
Guyana	146.1	151.8	13.6	10.2	93.4	67.2	-0.291	0.038	-0.330	10.41	-89.59
Haiti	451.7	450.9	72.8	46.4	2	103	-0.450	-0.002	-0.448	-0.39	-99.61
Honduras	147.2	88.8	25.1	9.3	170.	104.	-0.997	-0.505	-0.492	-50.69	-49.31
Hungary	21.3	15.5	1.1	0.7	49.9	43.2	-0.461	-0.318	-0.143	-68.95	-31.05
Iceland	4.4	1.5	0	0	0	0			-1.076		
India	522.7	186.5	69.4	16.1	7	86.3	-1.461	-1.031	-0.430	-70.56	-29.44
Indonesia	404	244.7	41.3	15.7	102.	1	-0.965	-0.501	-0.464	-51.94	-48.06
Iran (Islamic Republic of)	56.8	16.4	8.6	0.9	151.	2	-2.227	-1.242	-0.984	-55.79	-44.21
Iraq	217	128.9	37.6	19.9	173.	154.	-0.637	-0.521	-0.116	-81.77	-18.23
Ireland	5.8	4.1	0.3	0.3	59.8	65	-0.264	-0.347	0.083	-80.76	19.24
Israel	11.1	6.5	1	0.6	90.4	87.2	-0.571	-0.535	-0.035	-93.80	-6.20
Italy	9.5	5.5	0.4	0.2	39.1	40.7	-0.505	-0.547	0.042	-92.90	7.10
Jamaica	82.2	50.5	8.4	3.5	102.	4	-0.887	-0.487	-0.400	-54.89	-45.11
Japan	12.5	9.5	0.5	0.4	41	39.8	-0.305	-0.274	-0.031	-89.95	-10.05
Jordan	200.3	56.4	36.1	5.6	180.	5	-1.864	-1.267	-0.597	-67.99	-32.01
Kazakhstan	63.4	38.8	5.7	3.1	90.3	80.1	-0.612	-0.491	-0.121	-80.27	-19.73
Kenya	383.7	294.2	74.6	46.9	194.	159.	-0.465	-0.266	-0.199	-57.15	-42.85
Kuwait	34.2	19.4	2.5	1.5	74.5	79.2	-0.505	-0.567	0.062	-90.20	9.80
Kyrgyzstan	60.3	70.7	8	6.2	133.	4	-0.254	0.159	-0.413	27.82	-72.18
Lao People's Democratic Republic	471.3	282.8	87.1	23.7	184.	8	-1.300	-0.511	-0.789	-39.30	-60.70
Latvia	38.1	12.6	2.1	0.5	56.4	42.2	-1.396	-1.107	-0.290	-79.24	-20.76
Lebanon	53.5	26.3	5.5	1.4	102.	2	-1.348	-0.710	-0.638	-52.69	-47.31
Lesotho	235.7	238.6	35.5	26	150.	7	-0.312	0.012	-0.324	3.64	-96.36
Liberia	538.3	906	109.2	152.4	202.	168.	0.333	0.521	-0.188	73.49	-26.51
Libyan Arab Jamahiriya	90.9	27.7	10.9	2.2	119.	8	-1.581	-1.188	-0.393	-75.14	-24.86
Lithuania	25.9	9.7	1.5	0.4	58.5	36.3	-1.460	-0.982	-0.478	-67.28	-32.72
Luxembourg	18.3	6.7	1	0	199.	0			-1.005		
Madagascar	441	424.4	87.9	64.8	4	8	-0.305	-0.038	-0.266	-12.60	-87.40
Malawi	606	421.6	119.7	87.3	197.	5	-0.316	-0.363	0.047	-88.59	11.41
Malaysia	83.2	48.2	9.2	3.8	111.	1	-0.899	-0.546	-0.353	-60.71	-39.29
Maldives	352.4	47.2	70.8	3.1	200.	9	-3.115	-2.010	-1.105	-64.53	-35.47
Mali	657.1	418.8	146.6	87.8	223.	209.	-0.513	-0.450	-0.062	-87.86	-12.14
Malta	17.1	12.1	1.1	0	61.9	0			-0.346		

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Angola	534.1	334.8	127.9	61.9	5.177.	8.137.	-0.727	-0.467	-0.260	-64.28	-35.72
Mauritania	874.2	550.1	155.1	75.8	4	8	-0.716	-0.463	-0.252	-64.73	-35.27
Mauritius	70.5	47.5	5.4	2.2	76.8	46.4	-0.899	-0.395	-0.504	-43.94	-56.06
Mexico	71.5	66.6	8.1	4.7	2.113.	71.2	-0.535	-0.071	-0.464	-13.27	-86.73
Micronesia (Fed. States of)	155.2	74.7	22.8	7.4	2.132.	98.6	-1.132	-0.731	-0.400	-64.63	-35.37
Mongolia	203.5	64.7	26.9	5.2	4	80.6	-1.642	-1.146	-0.496	-69.80	-30.20
Montenegro	33.7	15.7	1.3	0.6	39.4	40.7	-0.732	-0.764	0.032	-96.02	3.98
Morocco	401.8	75.3	48.6	5.2	121.195.	68.5159.	-2.243	-1.674	-0.568	-74.66	-25.34
Mozambique	537.7	509.8	105	81.3	3.105.	6	-0.255	-0.053	-0.202	-20.88	-79.12
Myanmar	912.3	464.3	96.5	27.7	7.158.	59.7102.	-1.247	-0.675	-0.571	-54.18	-45.82
Namibia	379.8	132.6	60.1	13.6	2.168.	3	-1.488	-1.052	-0.436	-70.71	-29.29
Nepal	455	315.9	76.8	29	7	91.8	-0.973	-0.365	-0.609	-37.48	-62.52
Netherlands	11.5	8.5	0.6	0.4	48.3	46	-0.353	-0.302	-0.050	-85.71	-14.29
New Zealand	12.5	8.6	0.8	0.6	62.2	64.4	-0.340	-0.374	0.034	-91.70	8.30
Nicaragua	88.1	86	14.6	7.7	5.246.	89.231.	-0.644	-0.024	-0.620	-3.74	-96.26
Niger	540.5	522.4	133.2	120.7	5.197.	1.177.	-0.099	-0.034	-0.065	-34.53	-65.47
Nigeria	393.4	487.1	77.7	86.4	4	4	0.106	0.214	-0.107	66.60	-33.40
Norway	5.9	5.6	0.3	0.3	48.2	47.3	-0.071	-0.052	-0.018	-73.92	-26.08
Occupied Palestinian Territory	67.6	43.6	14.1	6.1	5.208.	6.139.	-0.839	-0.439	-0.401	-52.25	-47.75
Oman	84.1	30.4	17.9	2.2	7.184.	73.8107.	-2.076	-1.018	-1.058	-49.02	-50.98
Pakistan	520.9	331.7	96.1	35.7	4.102.	5	-0.991	-0.451	-0.540	-45.53	-54.47
Panama	59.9	41.6	6.1	3.2	5	75.9123.	-0.665	-0.365	-0.301	-54.80	-45.20
Papua New Guinea	388.6	288.9	57.5	35.7	148.144.	7	-0.476	-0.296	-0.180	-62.26	-37.74
Paraguay	139.4	97.4	20.1	9.3	1.121.	95.2	-0.773	-0.359	-0.414	-46.40	-53.60
Peru	174.5	52.7	21.1	4	1.136.	76.7	-1.654	-1.197	-0.457	-72.39	-27.61
Philippines	189.3	86.4	25.8	8.5	1	98.2	-1.111	-0.784	-0.327	-70.60	-29.40
Poland	30.2	10.7	1.8	0.5	59.3	43.2	-1.355	-1.038	-0.317	-76.60	-23.40
Portugal	20.4	13.7	0.9	0.5	45.7	37.1	-0.607	-0.398	-0.209	-65.62	-34.38
Qatar	45	25.8	6.1	2.2	3.136.	84.1	-1.039	-0.556	-0.483	-53.54	-46.46
Republic of Korea	19.6	11.3	1.1	0.4	54.4	37.5	-0.922	-0.551	-0.371	-59.75	-40.25
Republic of Moldova	44.3	20.4	3.3	0.9	73.8	45.9	-1.251	-0.775	-0.475	-62.00	-38.00
Romania	109.8	24.9	6.3	1	57.1	40.9	-1.816	-1.484	-0.332	-81.73	-18.27
Russian Federation	51.8	46.3	2.9	2.1	55.7	45.4	-0.316	-0.112	-0.203	-35.57	-64.43
Rwanda	712.4	335	135.5	57.7	1.190.	1.172.	-0.854	-0.755	-0.100	-88.35	-11.65

Country	Data Input						Log(ratios:2011/1990)			Contributed Percentage	
	MMR 1990	MMR 2011	MMRate 1990	MMRate 2011	GFR 1990	GFR 2011	Log(MMRate)	Log(MMR)	Log(GFR)	Care improvement	GFR reduction
Afghanistan	1046.8	880.8	281.4	181.6	268.9	206.2	-0.438	-0.173	-0.265	-39.41	-60.59
Albania	32.8	7.3	3.1	0.4	95.4	48.139.	-2.189	-1.503	-0.687	-68.63	-31.37
Algeria	170.3	82.3	23.7	5.8	2.239.	70.184.	-1.413	-0.727	-0.686	-51.45	-48.55
Angola	534.1	334.8	127.9	61.9	5.114.	8	-0.727	-0.467	-0.260	-64.28	-35.72
Saint Lucia	52.2	38.9	6	2	7	51.2	-1.101	-0.294	-0.807	-26.71	-73.29
Saint Vincent and the Grenadines	48.8	30.7	3.9	3.4	80.5	2	-0.141	-0.463	0.323	-58.94	41.06
Samoa	85	26.8	11.2	2.4	3	89.2	-1.541	-1.154	-0.386	-74.92	-25.08
Sao Tome and Principe	306.1	266.4	53.3	34.1	174	128	-0.446	-0.139	-0.307	-31.13	-68.87
Saudi Arabia	20.2	15.6	3.7	1.4	8	88.4	-0.975	-0.258	-0.716	-26.51	-73.49
Senegal	493.1	368.4	99.3	57.4	4	201.155.	-0.548	-0.292	-0.256	-53.23	-46.77
Serbia	17.3	10.7	1.1	0.5	62.8	47.2	-0.766	-0.480	-0.286	-62.71	-37.29
Sierra Leone	648	616.4	112.6	97.3	7	173.157.	-0.146	-0.050	-0.096	-34.18	-65.82
Singapore	9.4	6.8	0.5	0.2	56.7	32.9	-0.868	-0.324	-0.544	-37.32	-62.68
Slovakia	15.7	10.7	1	0.4	62.5	39.2	-0.850	-0.383	-0.466	-45.12	-54.88
Slovenia	17.1	8.5	0.8	0.4	48.2	48.8	-0.688	-0.699	0.011	-98.49	1.51
Solomon Islands	182.2	109.1	33.4	14.7	5	9	-0.821	-0.513	-0.308	-62.49	-37.51
Somalia	491.4	478	94.5	92.5	4	4	-0.022	-0.028	0.006	-83.28	16.72
South Africa	119.6	91.3	14	7.2	117	78.4	-0.670	-0.270	-0.400	-40.30	-59.70
Spain	11.1	8.9	0.5	0.4	41	44.5	-0.137	-0.221	0.083	-72.58	27.42
Sri Lanka	73.6	32.6	5.8	2.3	78.4	69.1	-0.941	-0.814	-0.127	-86.51	-13.49
Suriname	80	57.4	7.7	4.4	96.1	76	-0.566	-0.332	-0.234	-58.61	-41.39
Swaziland	240.7	281.6	42.9	31.9	4	2	-0.298	0.157	-0.455	25.66	-74.34
Sweden	7.1	4.5	0.4	0.2	55	52.3	-0.506	-0.456	-0.050	-90.06	-9.94
Switzerland	8.9	6.7	0.4	0.3	45.8	40.2	-0.414	-0.284	-0.130	-68.53	-31.47
Syrian Arab Republic	120.5	20.8	19.6	1.9	163	91.3	-2.336	-1.757	-0.580	-75.19	-24.81
Tajikistan	72.8	32.6	12.6	3.4	3	8	-1.307	-0.803	-0.503	-61.49	-38.51
Thailand	37.9	40	2.6	1.7	68.4	43.7	-0.394	0.054	-0.448	10.75	-89.25
TFYR Macedonia	19.8	13.9	1.4	0.6	71.9	40.9	-0.919	-0.354	-0.565	-38.51	-61.49
Timor-Leste	529	366	90.6	68.2	2	2	-0.284	-0.368	0.084	-81.39	18.61
Togo	398	398	75.1	51.2	8	7	-0.384	0.000	-0.384		-100.00
Tonga	160.4	80.8	22.3	8	3	98.8	-1.029	-0.686	-0.343	-66.64	-33.36
Trinidad and Tobago	73.2	37.8	6	1.8	81.8	47.2	-1.211	-0.661	-0.551	-54.55	-45.45
Tunisia	90.5	27.9	10.2	1.7	1	60.9	-1.795	-1.177	-0.618	-65.57	-34.43
Turkey	135.5	35.9	14.1	2.3	1	64.5	-1.808	-1.328	-0.479	-73.48	-26.52
Turkmenistan	59.2	26.4	8.7	2	6	76	-1.465	-0.808	-0.657	-55.13	-44.87
Uganda	560.6	274.2	127.7	58.2	7	3	-0.785	-0.715	-0.070	-91.09	-8.91
Ukraine	34.9	37.4	1.9	1.6	54.9	43.3	-0.168	0.069	-0.237	22.57	-77.43
United Arab Emirates	37.5	15.1	5.7	1	3	63.6	-1.777	-0.910	-0.867	-51.19	-48.81

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Algeria	170.3	82.3	23.7	5.8	2	70.1	-1.413	-0.727	-0.686	-51.45	-48.55
Angola	534.1	334.8	127.9	61.9	5	8	-0.727	-0.467	-0.260	-64.28	-35.72
United Kingdom	10.1	10.7	0.6	0.6	54.6	52	0.010	0.058	-0.048	54.73	-45.27
United Republic of Tanzania	598.1	417.5	116.7	78.3	2	6	-0.399	-0.359	-0.040	-90.09	-9.91
United States of America	12.3	20.2	0.7	1.2	59	59	0.495	0.496	-0.001	99.85	-0.15
Uruguay	38.4	27.3	3	1.6	77.1	58.4	-0.619	-0.341	-0.278	-55.10	-44.90
Uzbekistan	50.1	37.3	7.5	2.8	4	76	-0.970	-0.295	-0.675	-30.40	-69.60
Vanuatu	123.1	71	20.7	8.4	1	3	-0.901	-0.550	-0.351	-61.05	-38.95
Venezuela (Bolivarian Republic of)	70	52.5	8	4.1	114	78	-0.667	-0.288	-0.380	-43.12	-56.88
Viet Nam	131	54.1	15.5	3.1	4	57.1	-1.613	-0.884	-0.729	-54.83	-45.17
Yemen	434.3	264	113.4	44	261	6	-0.947	-0.498	-0.449	-52.58	-47.42
Zambia	490.6	293	94.5	62.7	7	2	-0.410	-0.515	0.106	-82.99	17.01
Zimbabwe	245.6	329.2	40.3	39.1	2	6	-0.032	0.293	-0.325	47.42	-52.58