

Supplemental Table 1. Total estimated daily per capita components of ultraprocessed foods: SSB* and junk food sales in Nigeria and South Africa and annualized change in sales, 2004–2018**

Country	Category	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Annualized change
Nigeria	SSB (milliliters per capita per day)	22.5	24.9	24.1	24.4	26.0	27.9	29.6	31.0	31.0	33.2	34.5	36.2	36.2	35.9	37.0	1.0
	Junk foods (grams per capita per day)	3.0	2.7	3.6	3.3	3.0	3.0	3.0	3.3	3.3	3.6	3.8	3.8	3.0	3.6	3.6	0.0
South	SSB (milliliters per capita per day)	153.4	162.2	170.7	181.6	186.0	191.5	198.6	203.6	210.1	214.8	222.2	236.4	249.0	255.1	260.3	7.1
Africa	Junk foods (grams per capita per day)	19.7	20.0	20.0	21.6	21.9	23.3	22.7	23.0	23.8	24.4	24.9	25.8	26.3	26.6	27.4	0.5

Source: Euromonitor International Limited 2019 © All rights reserved. Nonmodeled sales volume data were only available for Nigeria and South Africa.

* SSB (sugar-sweetened beverage) categories include regular cola carbonates, noncola carbonates (lemonade/lime, ginger ale, tonic water/other bitters, orange, and other noncola carbonates), juice drinks (up to 24% juice), nectars, ready-to-drink tea, energy drinks, and sports drinks.

** Junk food categories include (when available) cakes, pastries, confectioneries, chilled and shelf-stable desserts and snacks, frozen desserts, ice cream, flavored yogurts, sweet biscuits, snack bars, processed fruit snacks, salty snacks, savory biscuits, popcorn, and other savory snacks.

Supplemental Table 2. GDP/capita (PPP) number of households with children and women, mean age for women

Region	Country	Earliest year	Households N (#) Earliest Year				1990 GDP	Latest Year	Households N (#) Latest Year				
			Households with children (0-4 y*)	Households with women (15-49 y)	Households with children (0-4 y) and women (15-49 y)	Mean age for women			Households with children (0-4y)	Households with women (15-49 y)	Households with children (0-4 y) and women (15-49 y)	Mean age for women	2010 GDP
Sub-Saharan Africa	Burkina Faso	1992	2,728	2,766	2,490	29.4	332.62	2010	4,149	5,197	3,809	28.9	535.89
	Burundi	—	—	—	—	—	202.10	2010	2,294	2,975	1,972	27.7	241.79
	Cameroon	1998	1,479	1,447	1,327	26.9	915.50	2011	3,177	4,700	2,890	28.0	1,144.25
	Central African Republic	1994	1,915	1,806	1,690	27.2	506.86	—	—	—	—	—	451.26
	Chad	1996	3,546	3,231	3,033	27.8	289.23	2014	6,276	7,634	5,336	28.5	760.71
	Comoros	1996	827	767	725	29.5	571.01	2012	1,771	3,286	1,595	27.7	739.51
	Congo, Democratic Republic of the	2007	2,307	3,061	2,026	28.8	256.82	2013	5,052	6,099	4,346	28.5	198.71
	Congo, Republic of the	2005	2,826	4,233	2,618	28.0	1,171.56	2011	2,982	3,839	2,718	28.7	2,970.12
	Côte d'Ivoire	1994	2,500	2,441	2,304	27.3	862.44	2011	2,103	2,901	1,898	28.5	1,161.26
	Ethiopia	2000	6,372	10,258	5,721	28.1	249.98	2016	6,402	10,940	5,764	28.3	320.38
	Gabon	2000	2,095	2,034	1,893	27.1	6,406.90	2012	2,191	3,428	1,976	28.9	8,767.83
	Gambia	—	—	—	—	—	900.00	2013	1,631	2,111	1,525	27.5	1,610.00
	Ghana	1993	1,735	1,681	1,601	28.8	398.09	2014	1,985	3,457	1,803	29.9	1,319.08
	Guinea	1999	2,844	2,698	2,572	29.0	463.00	2012	2,014	2,710	1,853	28.4	474.47
	Kenya	1993	3,290	3,136	2,900	28.7	365.60	2014	13,570	10,783	6,020	29.0	794.77
	Lesotho	2004	1,137	2,435	1,076	28.6	329.91	2014	1,102	2,590	1,076	28.5	1,003.70
	Liberia	2007	3,103	4,519	2,766	29.7	180.72	2013	2,177	3,143	2,020	28.8	323.65
	Madagascar	1997	2,670	2,518	2,352	27.6	273.17	2003	3,290	5,778	2,975	29.8	426.63
	Malawi	1992	2,296	2,216	1,976	29.1	200.49	2015	4,128	6,041	3,830	28.3	362.30
	Mali	1995	4,035	3,819	3,572	28.3	279.17	2013	2,882	3,536	2,537	29.0	613.04
	Mozambique	1997	3,092	3,025	2,827	27.3	181.83	2011	6,595	9,416	5,927	28.9	393.72
	Namibia	1992	1,647	1,764	1,520	29.1	1,661.19	2013	1,379	3,255	1,322	33.2	4,875.97
	Niger	1992	2,877	2,775	2,537	28.0	318.52	2012	2,916	3,381	2,552	29.1	348.80
	Nigeria	2003	2,987	4,660	2,654	28.1	291.87	2013	16,545	24,707	14,581	29.0	1,443.21
	Rwanda	2000	4,368	6,676	3,876	28.2	358.70	2014	2,764	4,602	2,554	28.7	529.41
	Sao Tome and Principe	—	—	—	—	—	660.62	2008	1,239	1,766	1,081	29.3	1,215.49
	Senegal	1992	2,195	2,035	1,965	29.3	789.42	2010	1,878	2,384	1,771	28.0	1,033.91
	Sierra Leone	2008	1,597	2,484	1,461	29.6	163.16	2013	3,212	4,800	3,002	28.8	325.48
	South Africa	—	—	—	—	—	—	2016	904	2,451	866	30.3	7,271.73
	Swaziland	—	—	—	—	—	1,292.06	2006	1,489	3,037	1,423	27.9	3,503.16
	Tanzania	1991	4,124	3,886	3,641	28.6	171.91	2015	5,979	8,753	5,527	28.9	526.56
	Togo	1998	2,964	2,845	2,731	29.2	444.26	2013	2,156	3,136	1,964	29.5	529.65
Uganda	1995	3,368	3,033	2,844	27.2	243.19	2016	3,006	4,205	2,701	28.2	514.51	
Zambia	1992	3,165	2,914	2,724	27.9	418.37	2014	8,123	11,114	7,446	28.5	1,252.49	
Zimbabwe	1994	1,865	1,839	1,711	27.5	839.01	2015	3,933	6,931	3,734	28.6	591.29	

Source: All data are from the DHS (<https://dhsprogram.com>).

* y = years

Supplemental Table 3. Prevalence¹ of household double burdens for children with underweight (ages 0–4 years) and women with overweight (ages 15–49 years) and annualized change in prevalence for earliest to latest survey years

Region	Country	Overweight and stunting in a single child									Total double burden								
		Overweight and stunting in a single child			Overweight woman and wasted child			Overweight woman and stunted child			Overweight woman and wasted or stunted child			Overweight woman or child and wasted or stunted child or thin woman					
		Earliest year	Latest year	Annualized change	Earliest year	Latest year	Annualized change	Earliest year	Latest year	Annualized change	Earliest year	Latest year	Annualized change	Earliest year	Latest year	Annualized change			
Sub-Saharan Africa	Burkina Faso	3.3	3.3	0.00	1.4	1.6	0.01	3.6	3.4	-0.01	4.1	4.4	0.02	7.1	7.3	0.01			
	Burundi		3.4			0.9			4.3			4.8			7.6				
	Cameroon	5.0	5.2	0.02	1.5	2.1	0.04	6.9	11.7	0.37	7.8	12.9	0.40	12.5	17.7	0.40			
	Central African Republic	3.3			0.7			3.1			3.3			7.6					
	Chad	3.3	2.9	-0.03	0.9	1.6	0.04	2.9	5.6	0.15	3.3	6.5	0.18	7.0	10.2	0.18			
	Comoros	3.8	10.5	0.42	2.6	9.2	0.42	6.9	16.7	0.62	8.0	23.2	0.95	12.5	28.6	1.00			
	Congo, Democratic Republic of the	13.0	5.8	-1.19	1.6	1.6	-0.01	6.4	6.4	0.00	7.3	7.2	-0.01	17.7	12.7	-0.83			
	Congo, Republic of the	8.0	2.7	-0.89	2.8	1.8	-0.16	10.3	4.3	-0.99	11.9	6.0	-0.99	18.0	8.9	-1.51			
	Côte d'Ivoire	1.6	2.3	0.04	1.9	2.4	0.03	4.4	8.3	0.23	5.1	9.7	0.27	6.6	11.5	0.29			
	Ethiopia	1.9	2.9	0.07	0.3	0.5	0.01	0.8	1.6	0.05	1.0	1.9	0.05	3.5	6.0	0.16			
	Gabon	4.0	4.8	0.07	1.6	3.8	0.18	7.4	8.8	0.11	8.2	11.3	0.26	11.8	15.1	0.28			
	Gambia		5.9			5.4			10.3			12.9			19.2				
	Ghana	1.6	1.3	-0.01	2.0	1.6	-0.02	3.4	5.6	0.11	4.7	6.9	0.11	6.5	8.6	0.10			
	Guinea	4.9	3.6	-0.11	1.8	2.5	0.05	5.0	8.5	0.27	6.2	10.0	0.29	10.8	13.6	0.22			
	Kenya	4.4	2.1	-0.11	0.7	1.0	0.02	6.1	8.0	0.09	6.0	8.5	0.12	10.5	10.8	0.01			
	Lesotho	7.0	4.3	-0.27	3.3	2.1	-0.12	22.4	16.0	-0.64	24.8	17.5	-0.73	28.3	20.1	-0.82			
	Liberia	4.4	3.4	-0.16	2.7	2.1	-0.09	8.9	10.9	0.33	10.5	11.9	0.24	14.2	16.1	0.32			
	Madagascar	2.3	8.3	0.99	0.3	0.7	0.06	1.5	2.8	0.21	1.7	3.1	0.22	4.8	11.4	1.10			
	Malawi	9.9	3.1	-0.29	0.8	0.8	0.00	5.6	6.5	0.04	5.8	7.1	0.06	15.4	9.6	-0.25			
	Mali	1.9	4.2	0.13	2.5	3.4	0.05	2.8	7.6	0.27	4.5	9.9	0.30	6.0	13.7	0.43			
	Mozambique	5.9	8.8	0.20	2.2	0.8	-0.10	2.5	6.7	0.30	4.4	7.0	0.19	9.6	15.8	0.44			
	Namibia	4.4	2.6	-0.08	3.3	3.5	0.01	9.5	7.7	-0.09	10.9	10.6	-0.01	15.7	13.9	-0.09			
	Niger	2.3	4.2	0.10	2.2	4.6	0.12	4.4	8.9	0.23	5.2	10.8	0.28	7.8	14.7	0.34			
	Nigeria	8.8	6.5	-0.23	3.1	5.8	0.27	10.1	10.1	0.00	11.7	13.2	0.16	20.0	19.4	-0.06			
	Rwanda	6.7	5.0	-0.12	1.6	0.3	-0.10	6.7	8.7	0.15	7.8	8.8	0.07	13.8	13.5	-0.02			
	Sao Tome and Principe		12.1			7.9			10.8			17.9			27.0				
	Senegal	4.6	4.8	0.01	3.7	4.6	0.05	7.3	10.1	0.16	8.9	12.6	0.21	14.4	19.6	0.29			
	Sierra Leone	11.8	9.9	-0.38	3.4	3.5	0.02	11.6	9.3	-0.47	13.4	11.1	-0.47	23.4	20.1	-0.65			
	South Africa		6.7			1.6			19.1			20.3			22.8				
	Swaziland		6.3			2.5			20.1			22.0			24.9				
	Tanzania	6.3	2.8	-0.15	1.2	1.4	0.01	5.5	10.5	0.21	5.9	11.4	0.23	11.3	14.0	0.12			
	Togo	1.9	1.5	-0.03	1.0	1.7	0.05	3.3	5.9	0.17	3.7	7.0	0.22	6.0	8.6	0.18			
Uganda	4.6	2.0	-0.12	0.3	0.7	0.02	4.5	6.7	0.11	4.5	7.3	0.14	9.4	9.5	0.01				
Zambia	4.4	6.1	0.08	1.4	2.0	0.02	7.8	9.5	0.08	8.3	11.0	0.12	12.1	16.5	0.20				
Zimbabwe	3.5	3.5	0.00	2.3	1.1	-0.05	6.4	10.6	0.20	8.4	11.2	0.14	11.1	13.4	0.11				
Region Totals		5.9	4.7	-0.16	1.7	2.4	0.07	5.8	8.2	0.09	6.7	9.6	0.13	12.2	14.0	0.02			

Source: All data are from the DHS (<https://dhsprogram.com>).

1. Nationally representative and regionally weighted.

Supplemental Table 4. Sub-Saharan African countries with high DBM* by time period and GDP/capita (PPP) quartile**

Country	1990 population	1990 GDP	1990 quartile	Early year double burden based on anthropometry***			Most recent year double burden based on anthropometry***			2010 population	2010 GDP	Changes from the 1990s to the 2010s: What happened from earliest survey year to most recent?		
				> 40% overweight	> 30% overweight	> 20% overweight	> 40% overweight	> 30% overweight	> 20% overweight			> 40% overweight	> 30% overweight	> 20% overweight
Angola	14,268,994	1,798	Quartile 4			HI			HI	23,369,131	5,778			
Benin	5,905,558	1,105	Quartile 3						HI	9,199,259	1,782			+
Botswana	1,569,094	6,492	Quartile 4						HI	2,014,866	13,064			+
Burkina Faso	10,089,878	851	Quartile 1	HI	HI					15,605,217	1,395			
Cameron	13,460,994	1,738	Quartile 4						HI	19,970,495	2,871	+		+
Central African Republic	3,352,767	621	Quartile 1			HI			HI	4,448,525	863			+
Chad	7,000,722	759	Quartile 2						HI	11,887,202	1,886			+
Comoros	475,394	1,048	Quartile 3			HI			HI	689,692	1,384			+
Côte d'Ivoire	14,540,820	2,113	Quartile 4			HI				20,401,331	2,636			
Congo, Democratic Republic of the	41,595,744	578	Quartile 1						HI	64,523,263	647			+
Djibouti	630,388	766	Quartile 2		HI	HI			HI	851,146	1,326	+		
Equatorial Guinea	504,871	1,251	Quartile 3			HI				951,104	33,041			
Eritrea	3,090,159	1,156	Quartile 3						HI	4,390,840	1,388			+
Ethiopia	57,309,880	419	Quartile 1						HI	87,702,670	1,052			+
Gambia	1,066,223	1,048	Quartile 2			HI				1,692,149	1,611			
Ghana	16,760,467	1,506	Quartile 3			HI				24,512,104	2,997			
Guinea	7,871,173	957	Quartile 2			HI			HI	10,794,170	1,542			+
Kenya	27,346,456	1,607	Quartile 3			HI				41,350,152	2,426			
Lesotho	1,761,359	1,187	Quartile 3		HI	HI			HI	2,040,551	2,318	+		
Madagascar	13,475,400	1,021	Quartile 2						HI	21,151,640	1,358			+
Malawi	9,909,088	598	Quartile 1						HI	15,167,095	1,012			+
Mali	9,604,450	955	Quartile 2			HI			HI	15,075,085	1,834			+
Mauritania	2,327,075	2,087	Quartile 4			HI				3,609,543	3,250			
Mozambique	15,759,132	272	Quartile 1						HI	24,221,405	899			+
Namibia	1,655,359	4,298	Quartile 4		HI	HI				2,173,170	8,290			
Niger	9,477,333	572	Quartile 1						HI	16,425,578	798			+
Nigeria	108,011,465	2,005	Quartile 4			HI			HI	158,578,261	5,046			+
Rwanda	5,928,078	495	Quartile 1						HI	10,246,842	1,338			+
Senegal	8,746,606	1,287	Quartile 3			HI				12,916,229	2,588			
Sierra Leone	4,274,819	697	Quartile 2			HI			HI	6,458,720	2,140			+
South Africa	41,428,810	6,586	Quartile 4	HI	HI	HI				50,979,432	11,647			
Tanzania	29,960,776	998	Quartile 2			HI			HI	46,098,591	2,048			+
Togo	4,274,024	876	Quartile 2			HI				6,502,952	1,184			
Uganda	20,550,291	668	Quartile 1						HI	33,915,133	1,485			+
Zambia	9,137,077	1,480	Quartile 3			HI			HI	13,850,033	3,213			+
Zimbabwe	11,320,346	1,814	Quartile 4	HI	HI	HI			HI	14,086,317	1,445			
Region totals	534,439,070	1,486		3	6	27	5	23	25	797,849,893	3,699			

Source: Based on UNICEF, WHO, World Bank, and NCD-RisC estimates supplemented with selected DHS and other country direct measures for the 1990s.

* Double burden of malnutrition (DBM) = at least 1 child, adolescent, or adult in a household with a severe level of wasting/stunting/thinness and 1 with overweight/obesity (shown at 20%, 30%, or 40% adult overweight/obesity prevalence). This only includes countries with DBM data available for both time periods (1990s and 2010s).

** Quartile 1 is lowest wealth; quartile 4 is highest wealth.

*** "HI" countries have DBM based on WHO-UNICEF-World Bank-defined high levels of undernutrition and overweight/obesity levels above 20%, 30% or 40% for adult women of child-bearing age.

Supplemental Table 5. Prevalence¹ of wasting, stunting, and overweight or obesity for children (ages 0–4 years) and annualized change in prevalence for earliest to latest survey years

Region	Country	Wasting prevalence			Stunting prevalence			Wasting or stunting prevalence			Overweight or obesity prevalence		
		Earliest year	Latest year	Annualized change	Earliest year	Latest year	Annualized change	Earliest year	Latest year	Annualized change	Earliest year	Latest year	Annualized change
Sub-Saharan Africa	Burkina Faso	25.3	24.5	-0.04	54.6	45.6	-0.50	64.3	57.0	-0.41	5.7	4.9	-0.04
	Burundi	—	9.0	—	—	67.7	—	—	70.0	—	—	4.4	—
	Cameroon	10.9	9.7	-0.10	43.5	42.6	-0.07	49.3	46.5	-0.21	10.8	10.9	0.01
	Central African Republic	12.3	—	—	46.8	—	—	52.7	—	—	5.7	—	—
	Chad	25.5	21.8	-0.21	59.7	53.9	-0.32	69.0	62.8	-0.34	5.0	5.0	0.00
	Comoros	14.0	19.1	0.32	43.7	39.2	-0.28	50.3	52.1	0.11	7.0	17.0	0.62
	Congo, Democratic Republic of the	16.0	13.9	-0.35	58.6	55.2	-0.57	66.6	61.8	-0.81	15.6	8.5	-1.18
	Congo, Republic of the	11.6	8.0	-0.60	37.4	29.3	-1.36	45.2	34.8	-1.74	12.2	5.1	-1.19
	Côte d'Ivoire	15.4	12.9	-0.15	38.5	38.6	0.01	45.9	47.1	0.07	4.1	5.0	0.05
	Ethiopia	18.4	14.0	-0.27	67.6	47.6	-1.25	72.8	54.7	-1.13	3.2	4.7	0.10
	Gabon	7.2	6.0	-0.10	35.4	22.3	-1.09	39.4	25.8	-1.13	9.6	12.7	0.26
	Gambia	—	22.9	—	—	38.0	—	—	51.2	—	—	8.5	—
	Ghana	17.2	6.9	-0.49	36.5	22.0	-0.69	45.8	26.4	-0.92	3.9	3.9	0.00
	Guinea	16.9	16.6	-0.02	47.5	40.0	-0.58	55.8	49.2	-0.51	8.4	7.3	-0.08
	Kenya	10.9	5.7	-0.25	50.2	30.9	-0.92	54.3	34.2	-0.96	9.6	6.0	-0.17
	Lesotho	7.9	4.4	-0.36	49.1	35.8	-1.33	54.2	38.6	-1.55	11.1	10.7	-0.04
	Liberia	11.5	9.1	-0.40	47.1	39.5	-1.25	53.2	44.4	-1.48	7.1	5.9	-0.21
	Madagascar	12.2	21.7	1.59	60.0	61.8	0.30	63.6	71.9	1.38	3.9	10.4	1.10
	Malawi	10.2	4.0	-0.27	66.7	42.0	-1.07	69.7	44.6	-1.09	14.9	6.4	-0.37
	Mali	34.7	20.6	-0.78	42.4	49.7	0.41	62.0	60.2	-0.10	3.0	5.6	0.15
	Mozambique	14.9	9.5	-0.39	49.3	54.0	0.34	56.9	59.2	0.16	7.9	12.8	0.35
	Namibia	15.5	12.2	-0.16	45.1	25.7	-0.92	52.1	34.2	-0.85	8.5	6.5	-0.10
	Niger	30.4	30.5	0.00	62.3	59.1	-0.16	71.9	70.5	-0.07	3.7	6.1	0.12
	Nigeria	19.0	27.9	0.89	54.5	47.5	-0.71	63.0	62.0	-0.10	11.8	8.8	-0.31
	Rwanda	13.0	3.2	-0.70	57.2	44.7	-0.89	64.6	46.6	-1.29	10.3	11.5	0.08
	Sao Tome and Principe	—	16.6	—	—	36.8	—	—	50.4	—	—	18.3	—
	Senegal	18.3	19.7	0.08	50.6	44.0	-0.36	56.9	53.6	-0.18	9.6	7.4	-0.12
	Sierra Leone	16.0	15.3	-0.13	46.1	48.8	0.55	55.9	57.3	0.26	17.4	15.4	-0.40
	South Africa	—	3.6	—	—	30.6	—	—	33.0	—	—	18.0	—
	Swaziland	—	4.5	—	—	34.6	—	—	38.1	—	—	15.9	—
Tanzania	13.3	7.4	-0.24	61.2	42.5	-0.78	66.9	46.2	-0.86	9.6	6.0	-0.15	
Togo	18.1	9.9	-0.55	34.7	32.9	-0.12	45.5	37.9	-0.50	3.9	3.2	-0.04	
Uganda	10.1	6.2	-0.19	55.5	35.4	-0.96	58.8	39.0	-0.94	8.1	6.1	-0.09	
Zambia	10.6	9.4	-0.05	58.0	49.0	-0.41	62.0	55.1	-0.32	7.9	9.9	0.09	
Zimbabwe	7.9	4.9	-0.14	32.1	31.0	-0.05	37.5	34.4	-0.15	9.1	8.4	-0.03	
Region totals		16.5	14.9	0.05	54.36	44.31	-0.62	61.4	52.0	-0.49	8.8	8.1	-0.16

Source: All data are from the DHS (<https://dhsprogram.com>).

1. Nationally representative and regionally weighted.

Supplemental Table 6. Prevalence¹ of thinness and overweight for women (ages 15–49 years) and annualized change in prevalence for earliest to latest survey years

Region	Country	Thinness prevalence			Overweight prevalence		
		Earliest year	Latest year	Annualized change	Earliest year	Latest year	Annualized change
	Burkina Faso	18.3	19.0	0.04	8.1	13.6	0.31
	Burundi	—	19.5	—	—	8.4	—
	Cameroon	7.2	8.2	0.07	21.9	40.3	1.41
	Central African Republic	16.8	—	—	7.0	—	—
	Chad	22.4	20.6	-0.10	5.9	14.0	0.45
	Comoros	8.6	8.1	-0.03	19.1	46.0	1.69
	Congo, Democratic Republic of the	21.2	15.2	-1.00	14.5	18.7	0.69
	Congo, Republic of the	13.7	15.5	0.31	33.9	30.6	-0.55
	Côte d'Ivoire	10.6	9.1	-0.09	16.3	31.4	0.89
	Ethiopia	33.3	23.9	-0.59	3.6	8.2	0.28
	Gabon	7.8	7.4	-0.04	33.2	53.1	1.66
	Gambia	—	23.0	—	—	34.6	—
	Ghana	13.0	6.0	-0.33	13.0	43.9	1.47
	Guinea	13.3	16.2	0.22	14.0	24.3	0.80
	Kenya	10.6	9.8	-0.04	14.8	37.7	1.09
	Lesotho	6.4	4.0	-0.24	49.6	52.5	0.30
	Liberia	11.9	9.1	-0.47	24.1	32.7	1.43
Sub-Saharan Af	Madagascar	20.7	20.9	0.04	3.9	8.2	0.72
	Malawi	10.3	7.2	-0.14	9.5	23.6	0.61
	Mali	16.6	13.1	-0.19	8.5	20.5	0.66
	Mozambique	11.0	9.1	-0.14	11.4	18.8	0.52
	Namibia	16.7	17.2	0.02	24.1	41.8	0.85
	Niger	21.1	17.8	-0.16	8.9	19.3	0.52
	Nigeria	17.3	12.3	-0.51	25.7	30.4	0.47
	Rwanda	9.6	7.3	-0.17	15.1	23.6	0.61
	Sao Tome and Principe	—	8.3	—	—	39.9	—
	Senegal	18.1	30.0	0.66	19.9	34.2	0.79
	Sierra Leone	13.0	10.7	-0.45	33.2	23.0	-2.05
	South Africa	—	3.7	—	—	68.1	—
	Swaziland	—	3.4	—	—	63.0	—
	Tanzania	11.0	10.2	-0.03	11.7	33.0	0.88
	Togo	12.4	8.2	-0.28	12.4	35.3	1.53
	Uganda	10.8	9.4	-0.07	9.2	27.4	0.87
	Zambia	12.3	11.2	-0.05	15.8	26.6	0.49
	Zimbabwe	5.4	6.1	0.03	25.4	41.4	0.76
Region totals		17.1	13.1	-0.31	15.3	28.4	0.65

Source: All data are from the DHS (<https://dhsprogram.com>).

1. Nationally representative and regionally weighted.

Supplemental Table 7. Country overweight burdens by age, sex, and region in 1990s UNICEF and NCD-RisC surveys* with DHS for preschoolers where gaps existed

Region	Country	Population	GDP/capita (PPP)**	Kids (0-4)			Girls (5-18)		Boys (5-18)		Women (≥19)		Men (≥19)		Overweight burden based on anthropometry***		
				Wasting	Stunting	Overweight	Wasting	Overweight	Wasting	Overweight	Thin	Overweight	Thin	Overweight	> 40% overweight	> 30% overweight	> 20% overweight
	Angola	14,268,994	1,798	8.6	61.7	1.6	7.2	4.9	16.2	1.2	15.3	20.9	20.8	10.4			HI
	Benin	5,905,558	1,105	12.3	39.1	2.4	6.2	6.4	15.1	1.9	11.9	24.3	14.4	13.2			HI
	Botswana	1,569,094	6,492	13.2	35.1		8.8	7.9	20.5	2.1	9.4	43.3	16.7	18.0	HI		HI
	Burkina Faso	10,089,878	651	25.3	54.6	5.7	9.3	2.8	15.4	0.8	17.4	16.1	14.4	8.9			HI
	Cameroon	13,460,994	1,738	10.9	43.5	10.8	5.4	8.6	12.0	2.4	9.1	27.6	10.9	15.2			HI
	Central African Republic	3,352,767	621	12.3	46.8	5.7	6.8	5.9	15.5	1.6	15.6	22.5	21.1	11.8			HI
	Chad	7,000,722	759	25.5	59.7	5.0	8.5	4.5	16.2	1.2	17.0	18.8	16.3	10.6			HI
	Comoros	475,394	1,048	14.0	43.7	7.0	5.2	6.8	11.8	2.3	11.8	23.9	14.9	13.1			HI
	Côte d'Ivoire	14,540,820	2,113	15.4	38.5	4.1	5.0	7.7	13.0	2.5	10.6	26.1	12.0	14.7			HI
	Congo, Democratic Republic of the	41,595,744	578	11.4	51.0		8.0	4.9	18.1	1.2	17.5	20.1	23.1	10.3			HI
	Equatorial Guinea	504,871	1,251	4.0	38.7	3.4	6.9	5.8	15.7	1.6	13.3	23.9	20.2	12.0			HI
	Eritrea	3,090,159	1,156	11.8	69.6		7.7	5.2	13.9	1.4	21.8	17.0	21.0	9.8			HI
	Ethiopia	57,309,880	419	9.2	66.9		9.0	4.1	15.9	1.2	19.2	16.8	20.1	9.0			HI
	Gambia	1,066,223	1,048		36.1		7.6	6.6	15.1	2.1	13.3	24.4	15.2	13.4			HI
	Ghana	16,760,467	1,506	17.2	36.5	3.9	5.7	6.6	14.6	1.8	10.1	26.6	14.9	12.9			HI
	Guinea	7,871,173	957	16.9	47.5	8.4	7.4	5.3	15.2	1.4	13.7	21.7	15.2	11.6			HI
Sub-Saharan Africa	Kenya	27,346,456	1,607	10.9	50.2	9.6	6.3	5.6	13.4	1.6	14.1	20.7	17.3	10.3			HI
	Lesotho	1,761,359	1,187	3.2	39.2		6.7	5.4	20.5	0.8	7.8	36.9	16.0	12.3	HI		HI
	Madagascar	13,475,400	1,021	12.2	60.0	3.9	6.6	5.1	12.0	2.0	19.2	18.2	18.0	11.1			HI
	Malawi	9,909,088	598	10.2	66.7	14.9	4.6	5.0	12.6	1.4	13.1	19.1	16.0	10.0			HI
	Mali	9,604,450	955	34.7	42.4	3.0	7.1	5.2	16.7	1.4	13.9	20.8	15.0	11.4			HI
	Mauritania	2,327,075	2,087	17.4	54.8	6.8	6.8	7.7	16.9	2.5	11.0	27.8	14.2	15.0			HI
	Mozambique	15,759,132	272	14.9	49.3	7.9	3.1	7.3	6.1	2.5	13.8	21.6	16.1	11.9			HI
	Namibia	1,655,359	4,298	15.5	45.1	8.5	13.6	5.1	22.6	1.4	13.0	35.9	16.1	15.1	HI		HI
	Niger	9,477,333	572	30.4	62.3	3.7	9.3	3.8	18.3	1.0	16.6	17.9	16.8	9.4			HI
	Nigeria	108,011,465	2,005	11.8	50.5	3.2	11.1	3.9	19.6	1.4	13.4	22.0	15.1	12.4			HI
	Rwanda	5,928,078	495	5.0	56.8	4.0	4.5	5.0	12.7	1.1	12.5	18.5	16.2	8.7			HI
	Senegal	8,746,606	1,287	18.3	50.6	9.6	9.0	6.2	17.3	1.8	13.5	24.5	16.1	12.9			HI
	Sierra Leone	4,274,810	697	10.2	40.9		7.7	6.4	15.0	1.8	12.9	23.7	14.6	12.3			HI
	South Africa	41,426,810	6,586		31.5		15.8	6.4	25.9	2.1	4.4	54.0	10.6	25.9	HI	HI	HI
	Tanzania	29,960,776	998	13.3	61.2	9.6	5.6	5.7	12.3	1.8	14.2	21.2	15.9	12.0			HI
	Togo	4,274,024	876	18.1	34.7	3.9	5.4	5.6	15.4	1.6	12.5	22.5	14.3	12.0			HI
	Uganda	20,550,291	668	10.1	55.5	8.1	3.9	5.4	11.3	1.1	14.3	18.7	15.4	9.3			HI
	Zambia	9,137,077	1,480	10.6	58.0	7.9	4.6	7.8	11.3	3.0	11.5	25.5	17.1	13.5			HI
	Zimbabwe	11,320,346	1,814	7.9	32.1	9.1	6.6	6.8	19.6	1.3	6.9	40.8	14.5	15.1	HI	HI	HI
Region totals		533,808,682		12.0	51.1	4.3	8.3	5.3	16.5	1.6	13.7	24.2	16.3	12.6	3.0	5.0	26.0

Sources: UNICEF-WHO-The World Bank 2017; NCD-RisC; and Stevens et al. 2013 to supplement DHS measures for missing preschooler data.

* NCD-RisC data obtained April 2019

** GDP per capita based on PPP (purchasing power parity using the current international \$) from World Bank indicators

*** "HI" countries have DBM based on WHO-UNICEF-World Bank-defined high levels of undernutrition and overweight/obesity levels above 20%, 30% or 40% for adult women of child-bearing age.

Supplemental Table 8. Country overweight burdens by age, sex, and region in 2010s UNICEF and NCD-RisC surveys* with DHS for preschoolers where gaps existed

Region	Country	Population	GDP/capita (PPP)**	Kids (0-4)			Girls (5-18)		Boys (5-18)		Women (19+)		Men (19+)		Overweight burden based on anthropometry***		
				Wasting	Stunting	Overweight	Wasting	Overweight	Wasting	Overweight	Thin	Overweight	Thin	Overweight	> 40% overweight	> 30% overweight	> 20% overweight
	Angola	23,369,131	5,778	4.9	37.6	3.3	5.2	14.8	11.2	6.9	10.6	36.1	15.9	20.3		HI	HI
	Benin	9,199,259	1,782	4.5	34.0	1.7	3.8	15.5	9.8	7.0	8.4	38.6	10.3	22.0		HI	HI
	Botswana	2,014,866	13,064	7.2	31.4	11.2	2.9	24.6	9.6	10.4	6.2	58.3	11.6	30.8	HI	HI	HI
	Burkina Faso	15,605,217	1,395	7.6	27.3	1.2	5.6	10.1	9.9	5.1	12.5	30.3	10.4	16.7			
	Burundi	8,766,930	748	6.1	57.5	2.9	4.8	14.2	9.7	6.2	10.9	31.1	14.0	14.5		HI	HI
	Cabo Verde	502,384	5,710	6.9	21.4		4.1	16.3	9.2	8.6	6.9	42.8	8.2	28.5			
	Cameroon	19,970,495	2,871	5.2	31.7	6.7	3.1	17.4	7.8	7.9	6.0	43.0	7.0	26.2	HI	HI	HI
	Central African Republic	4,448,525	863	7.4	40.7	1.8	5.2	14.5	11.3	6.6	12.0	34.4	17.2	19.1		HI	HI
	Chad	11,887,202	1,886	13.0	39.9	2.5	5.8	11.8	10.9	5.4	13.0	30.9	12.9	16.6		HI	HI
	Comoros	689,692	1,384	11.1	32.1	10.9	4.0	16.9	9.0	7.3	8.2	36.9	11.6	19.0		HI	HI
	Congo, Republic of the	4,386,693	5,081	8.2	21.2	5.9	4.7	13.7	9.9	7.8	11.1	38.7	14.5	25.2			
	Côte d'Ivoire	20,401,331	2,636	7.6	29.6	3.2	2.8	16.9	8.1	8.8	7.3	40.8	7.9	25.5			
	Congo, Democratic Republic of the	64,523,263	647	8.1	42.6	4.4	5.7	14.0	13.0	6.1	12.9	33.2	18.5	18.7		HI	HI
	Djibouti	851,146	1,326	21.5	33.5	8.1	3.6	21.3	7.4	12.9	7.1	46.1	8.5	33.6	HI	HI	HI
	Equatorial Guinea	951,104	33,041	3.1	26.2	9.7	5.2	14.6	11.3	6.6	9.8	36.7	16.2	19.5			
	Eritrea	4,390,840	1,388	15.3	50.3	1.9	5.9	15.2	10.5	6.3	16.6	29.3	17.5	15.4			HI
	Ethiopia	87,702,670	1,052	9.9	38.4	2.8	7.2	12.5	13.4	4.6	14.2	29.0	16.7	14.0			HI
	Gabon	1,640,210	15,045	3.4	17.5	7.7	3.3	19.5	8.6	11.5	6.5	48.0	10.6	35.1			
	Gambia (The)	1,692,149	1,611	11.1	25.0	3.2	4.9	15.1	9.5	8.1	9.2	40.2	10.0	25.5			
	Ghana	24,512,104	2,997	4.7	18.8	2.6	3.2	15.1	9.0	6.3	6.8	42.3	10.0	23.0			
	Guinea	10,794,170	1,542	15.6	41.5	10.2	4.7	13.4	9.8	5.5	9.8	35.4	11.2	19.5		HI	HI
	Guinea-Bissau	1,555,880	1,372	6.0	27.6	2.3	4.2	14.5	9.9	7.1	8.7	38.5	9.9	23.1			
	Kenya	41,350,152	2,426	4.0	26.0	4.1	4.7	16.2	10.5	6.2	9.4	35.5	13.7	16.8			
Sub-Saharan Africa	Lesotho	2,040,551	2,318	2.8	33.2	7.4	1.6	24.7	9.1	6.2	4.3	55.3	11.5	22.0	HI	HI	HI
	Liberia	3,948,125	686	5.6	32.1	3.2	3.5	14.2	9.2	6.1	7.6	39.6	8.2	24.1		HI	HI
	Madagascar	21,151,640	1,358	21.7	49.2	10.4	5.3	13.4	8.8	7.9	14.4	30.7	13.9	18.5		HI	HI
	Malawi	15,167,095	1,012	4.0	42.0	6.3	3.0	14.8	9.5	6.3	8.8	32.6	12.6	15.4		HI	HI
	Mali	15,075,085	1,834	14.6	37.5	3.9	4.3	14.6	10.7	6.7	9.4	36.4	10.5	21.2		HI	HI
	Mauritania	3,609,543	3,250	14.8	27.9	1.3	4.2	17.4	11.0	9.0	7.5	43.8	9.4	27.0			
	Mauritius	1,250,400	15,616	15.7	13.6	6.5	4.8	18.4	8.9	11.2	6.9	41.2	8.7	25.3	HI	HI	HI
	Mozambique	24,221,405	899	6.1	43.1	7.9	2.8	17.0	4.2	7.8	9.7	34.8	12.2	18.7		HI	HI
	Namibia	2,173,170	8,290	7.1	23.1	4.1	5.5	20.8	10.8	9.8	8.1	53.6	10.8	28.3			
	Niger (The)	16,425,578	798	18.7	43.0	3.0	6.2	11.3	12.5	5.0	12.3	30.7	13.3	15.2		HI	HI
	Nigeria	158,578,261	5,046	10.7	44.5	3.4	7.6	10.3	11.6	6.5	9.3	37.4	10.6	22.6		HI	HI
	Rwanda	10,246,842	1,338	2.2	37.9	7.7	2.8	16.9	8.8	5.2	7.4	34.7	11.5	16.2		HI	HI
	Sao Tome And Principe	174,776	2,588	4.0	17.2	2.4	2.6	16.6	8.1	9.5	7.3	43.0	6.7	29.3			
	Senegal	12,916,229	2,140	7.8	20.5	1.0	6.3	13.4	12.4	5.7	10.3	37.1	12.2	20.3			
	Sierra Leone	6,458,720	1,176	9.4	37.9	8.9	4.8	15.1	9.7	6.3	9.3	37.2	10.6	19.9		HI	HI
	Somalia	12,053,223	1,176	15.0	25.3	3.0	4.3	17.2	8.7	8.4	9.1	37.2	11.7	21.1		HI	HI
	South Africa	50,979,432	11,647	3.6	30.6	18.0	3.4	29.4	6.0	20.2	2.7	67.2	6.2	42.0			
	Sudan (The)	34,385,963	3,298	16.3	38.2	3.0	4.3	16.7	8.9	8.0	7.9	37.3	11.1	20.5		HI	HI
	Swaziland	1,202,843	7,149	2.0	25.5	9.0	1.9	25.0	6.2	8.3	4.9	54.3	9.4	23.1			
	Tanzania	46,098,591	2,048	7.4	42.5	5.9	4.1	16.1	9.0	7.5	9.6	36.7	11.9	20.4		HI	HI
	Togo	6,502,952	1,184	6.7	27.5	2.0	2.8	14.0	9.9	6.5	8.6	37.0	10.3	20.4			
	Uganda	33,915,133	1,485	6.2	35.4	6.1	2.9	16.0	8.1	4.5	9.9	31.9	11.9	14.3		HI	HI
	Zambia	13,850,033	3,213	6.3	40.0	6.2	3.7	16.7	8.6	8.4	8.5	37.6	13.3	19.8		HI	HI
	Zimbabwe	14,086,317	1,445	4.9	31.0	8.4	1.9	22.3	9.1	6.5	4.6	54.5	10.7	23.1	HI	HI	HI
Region Total: Sub-Saharan Africa		867,717,320		8.8	37.5	5.2	5.2	15.0	10.2	7.3	9.7	37.6	12.3	20.9	6	28	30

Sources: UNICEF-WHO-The World Bank 2017; NCD-RisC; and Stevens et al. 2013 to supplement DHS measures for missing preschooler data.

* NCD-RisC data obtained April 2019

** GDP per capita based on PPP (purchasing power parity using the current international \$) from World Bank indicators

*** "HI" countries have DBM based on WHO-UNICEF-World Bank-defined high levels of undernutrition and overweight/obesity levels above 20%, 30% or 40% for adult women of child-bearing age.

Supplemental Table 9. Prevalence¹ of overweight and obesity for lowest- and highest-wealth quintiles, differences in the earliest and latest years, and annualized changes in disparity

Region	Country	Earliest year quintiles				Most recent year quintiles				Annualized change (diff of diff)	Annualized change	
		Year	Poorest prevalence	Richest prevalence	Difference	Year	Poorest prevalence	Richest prevalence	Difference		Poorest quintile	Richest quintile
Sub-Saharan Africa	Burkina Faso	1992	4.8	22.0	-17.2	2010.0	4.5	39.3	-34.8	-1.0	0.0	1.0
	Burundi					2010.0	4.0	24.8	-20.9			
	Cameroon	1998	8.8	39.4	-30.7	2011.0	12.1	61.4	-49.3	-1.4	0.3	1.7
	Central African Republic	1994	4.2	17.3	-13.1							
	Chad	1996	2.7	17.7	-15.0	2014.0	8.8	33.9	-25.1	-0.6	0.3	0.9
	Comoros	1996	17.1	28.5	-11.4	2012.0	34.3	57.5	-23.2	-0.7	1.1	1.8
	Congo, Democratic Republic of the	2007	9.3	40.5	-31.2	2013.0	7.4	47.6	-40.3	-1.5	-0.3	1.2
	Congo, Republic of the	2005	17.4	53.9	-36.5	2011.0	13.6	57.4	-43.8	-1.2	-0.6	0.6
	Côte d'Ivoire	1994	5.6	33.4	-27.8	2011.0	13.4	54.7	-41.2	-0.8	0.5	1.3
	Ethiopia	2000	1.3	11.2	-10.0	2016.0	2.9	23.8	-20.9	-0.7	0.1	0.8
	Gabon	2000	16.5	46.5	-30.0	2012.0	35.5	60.6	-25.0	0.4	1.6	1.2
	Gambia					2013.0	23.3	51.6	-28.3			
	Ghana	1993	5.5	29.8	-24.3	2014.0	16.7	63.9	-47.2	-1.1	0.5	1.6
	Guinea	1999	5.7	37.0	-31.3	2012.0	7.6	51.0	-43.4	-0.9	0.2	1.1
	Kenya	1993	9.6	29.5	-19.9	2014.0	13.6	58.9	-45.3	-1.2	0.2	1.4
	Lesotho	2004	32.9	64.9	-32.0	2014.0	29.6	64.3	-34.7	-0.3	-0.3	-0.1
	Liberia	2007	11.5	45.1	-33.7	2013.0	19.5	51.7	-32.2	0.3	1.4	1.1
	Madagascar	1997	2.7	12.3	-9.6	2003.0	3.2	17.2	-14.0	-0.7	0.1	0.8
	Malawi	1992	4.1	18.9	-14.7	2015.0	13.4	42.7	-29.4	-0.6	0.4	1.0
	Mali	1995	4.0	25.5	-21.5	2013.0	13.2	42.8	-29.6	-0.5	0.5	1.0
	Mozambique	1997	4.3	30.7	-26.4	2011.0	6.6	48.2	-41.7	-1.1	0.2	1.3
	Namibia	1992	10.3	50.6	-40.3	2013.0	17.3	61.7	-44.4	-0.2	0.3	0.5
	Niger	1998	3.9	30.6	-26.8	2012.0	11.2	43.6	-32.3	-0.4	0.5	0.9
	Nigeria	2003	13.0	45.2	-32.2	2013.0	12.5	50.3	-37.8	-0.6	-0.1	0.5
	Rwanda	2000	10.5	28.4	-17.9	2014.0	11.7	45.6	-33.9	-1.1	0.1	1.2
	Sao Tome and Principe					2008.0	31.2	51.6	-20.5			
	Senegal	2005	15.5	61.1	-45.6	2010.0	17.2	45.3	-28.1	3.5	0.3	-3.2
	Sierra Leone	2008	27.0	49.9	-22.9	2013.0	12.5	45.5	-33.1	-2.0	-2.9	-0.9
	South Africa					2016.0	63.5	67.6	-4.1			
	Swaziland					2006.0	49.4	70.7	-21.2			
	Tanzania	1996	7.2	31.8	-24.7	2015.0	14.7	59.8	-45.1	-1.1	0.4	1.5
	Togo	1998	6.1	31.8	-25.7	2013.0	14.6	60.0	-45.4	-1.3	0.6	1.9
Uganda	1995	4.9	19.3	-14.4	2016.0	9.8	52.4	-42.6	-1.3	0.2	1.6	
Zambia	1996	7.0	23.8	-16.9	2014.0	10.2	49.2	-39.0	-1.2	0.2	1.4	
Zimbabwe	1994	15.2	39.2	-24.0	2015.0	23.4	61.2	-37.8	-0.7	0.4	1.0	
Region totals			8.1	32.2	-24.1		14.3	48.3	-34.1	-0.8	0.1	0.9

Source: All data are from the DHS (<https://dhsprogram.com>).

1. All data weighted to be nationally representative.