

REPLACE

Appendix 1. Methods and data

With our first set of data sources, the Demographic and Health Surveys (DHS), we developed an understanding of the typology of double burden households at the nationally representative level. For all years these countries collected anthropometry on women of childbearing age and preschoolers. We linked these data with gross domestic product (GDP) per capita to examine the relationship at the country level between the double burden and 1 measure of national income. With our second set of data sources we created measures of the double burden for all nations, but for the most recent period of available data with age-specific under- and overnutrition measures these are only estimates.

COUNTRY ESTIMATES OF THE DOUBLE BURDEN

Country-level anthropometry

We used data from the Institute for Health Metrics and Evaluation recently published in *Lancet*.¹ These publicly available data include anthropometric measures of weight and height to estimate age-specific prevalences of wasting, stunting, and overweight in all age groups. The only measure they exclude is thinness (body mass index [BMI] < 18.5) for women 19 and older.¹ The countries and their regions, populations, and anthropometric levels for the measures noted above are in Supplemental Table S1.

MEASURES FOR HOUSEHOLD AND GLOBAL ANALYSES

Global estimates for all ages for anthropometry

For children ages 6–18 and adults we used estimates for all low- and middle-income countries (LMIC) from a recent study NCD-RisC group¹ In many cases this group used complex statistical algorithms to estimate the levels of stunting and overweight/obesity. The only data missing are the distributions of stunting in adults for each country. For children ages 0–5 we used a data set developed by the joint UNICEF-WHO-The World Bank group.² These preschooler data are based on the WHO Child Growth Standards of -2 standard deviations (SDs) from the standard for wasting and stunting and +2 SDs for overweight and obesity. We collected these data from disparate surveys and estimates that cover all countries, like the adult and child data. The only LMIC missing is South Sudan, so we used Sudanese data for both Sudan and South Sudan.

For the earlier period there are no data in the 1990's for many countries. UNICEF data provided the aged 0-4 data for the most recent decade but had much missing data for the 1990's so we utilized data from DHS as much as possible for the anthropometry in the 1990's for ages 0-4.

Household and national estimates

All the surveys we used had standardized protocols to measure weight and height.³ We calculated BMI as weight in kilograms divided by height in meters squared (kg/m^2). We defined thinness and overweight according to the WHO recommendations, thinness at $\text{BMI} < 18.5 \text{ kg}/\text{m}^2$ and overweight at $\text{BMI} \geq 25 \text{ kg}/\text{m}^2$.^{4,5} We adjusted BMI for women ages 15.0–17.9 according to the International Obesity Task Force definitions.³

We assessed children's anthropometric statuses by comparing data with the WHO Child Growth Standards. We used the WHO igrowup macro to calculate z-scores and excluded children with invalid z-scores for ages 0-4. We excluded 2 countries, Benin and Pakistan, from this study entirely due to their high percentages of invalid z-scores. For iron status we followed WHO cutoffs for children and women.⁶

We calculated the annualized change in prevalence by dividing the absolute change in levels by the number of years between surveys to provide a comparable measure of positive or negative change for all measures of malnutrition in countries for which we have 2 years of data. For a detailed presentation of the observed heterogeneity, we selected a set of countries for which we had pre-1997 and post-2011 data and time spans from 16 to 24 years as examples.

Country-level burden of malnutrition

For the severity of the double burden in children at the country level we used the recent WHO/UNICEF guidelines for high levels of overweight/obesity, wasting, and stunting.² The prevalence levels we used to designate a country's population as high in wasting, overweight, or stunting are $\geq 15\%$, $\geq 15\%$, and $\geq 30\%$, respectively. Meeting any of these criteria meant a country faced undernutrition according to anthropometric status.

For women there is no clear cutoff for overweight and obesity. Thus, we present data based on 40%, 30%, and 30% cutoffs for overweight prevalence in the population. We designated $\geq 20\%$ as the underweight cutoff for thinness prevalence. There is no global agreement on what constitutes a country with excessive overweight and obesity or thinness, so we selected these based on distribution and where we found major breaks and excessively high burdens. The countries who fit these criteria for the double burden spelled out above are found in Supplemental tables S1 and S2.

HOUSEHOLD-LEVEL ANALYSIS

Data sources

Most of our data are from the DHS, a series of nationally representative surveys typically conducted every 5 years (available at <http://www.measuredhs.com>). Details of the DHS sampling methodology are described elsewhere.⁷ Additional data are from the 1993 and 2014 Indonesian Family Life Survey (representative of 83% of the Indonesian population),^{8,9} the 1991 and 2015 China Health and Nutrition Survey (representative of 56% of the Chinese population),¹⁰ the 2013 Brazil National Health Survey (1996 data from the DHS),^{11,12} the 1988 and 2012 Mexico National Survey of Health and Nutrition (ENSANUT, nationally representative),¹³⁻¹⁶ and the 1992 and 2002 Vietnam Living Standards Surveys.¹⁷ For Mexico we eliminated the small ENSANUT 2016, which was collected in a different season than the other surveys.

The sample data for the earliest and the most recent surveys available for each country are in Supplemental Table S3. The supplemental tables include the data discussed below—population size, GDP per capita based on purchasing power parity (GDP [PPP]), and sample size.

Study population and sample size

We restricted all analyses to nonpregnant women ages 15–49 and children ages 0–4. Pregnancy status was available for all countries. The countries for which data were available and the sample sizes are in Supplemental Table S1. Our arrangement of countries into regions follows the World Bank's.¹⁸ For countries with only 1 survey, we included that single survey (Supplemental Table S1). For countries with more than 3 surveys, we included only the oldest and the most recent. The overall total sample size was 469,564 households with at least 1 child age 0–4 and 816,469 households with a nonpregnant woman age 15–49. Additionally, 438,877 households had both a child age 0–4 and a woman age 15–49. In total the analyses included 1,098,378 women 15–49 and 664,547 children 0–4.

We conducted direct measurements of the data sets available to us so we could apply the same measures noted below to all and the same cutoffs for erroneous measurements and weigh the data to be nationally representative (except China, which is representative of 56% of the population). Lacking adequate population coverage to present regional averages, we focused on country results and selected countries in which the most recent survey was after 2011 and the earliest survey was before 1997 (yielding intervals of 16–24 years) to give some sense of the heterogeneity of long-term trends (Supplemental Figure 6). The UNICEF-WHO-The World Bank Joint Child Malnutrition Estimates are the best recent regional estimates.¹⁹

GDP per capita based on purchasing power parity

GDP (PPP) is a measure of GDP divided by the midyear population (GDP/capita) for each country.¹⁸ For our GDP (PPP) measures we used World Bank data, which evaluate the cost of a given basket of goods to equalize exchange rates and ascertain exact values in purchasing terms for each country.²⁰

Statistical analysis

We used STATA version 14.2 (StataCorp, College Station, Texas) for all statistical analyses. All results are nationally weighted to be representative of the country. We adjusted age to the world age structure and felt that it did not significantly impact the results, so we present only the nationally representative weighted results. We weighted regional results by each country's 2010 population for the most recent period and by its 1990 population for the earlier period.

For the regression results we used ordinary least squares with controls for population size and for the GDP/capita relationship. For each outcome we tested linear, quadratic (second-degree polynomial), and cubic polynomial (third-degree polynomial) versions of GDP/capita. We kept the most appropriate relationship in terms of statistical significance.

Equity: Does overweight differ by socioeconomic status?

We followed a method that our group published earlier.²¹ Our outcomes of interest were (1) overweight prevalence difference defined by the difference in overweight prevalence between the lowest and the highest wealth or education quintiles for each survey wave and (2) the annualized difference in the rate of overweight prevalence growth for the lowest and highest wealth or education quintiles between the first and last survey waves. We calculated overweight prevalence difference in each survey wave in each country for wealth quintiles by $\text{Overweight Prevalence}_{\text{lowest quintile}} - \text{Overweight Prevalence}_{\text{highest quintile}}$. A positive overweight prevalence difference indicates that the lower wealth quintile had a higher prevalence of overweight compared to the higher wealth quintile. To obtain the annualized difference in overweight prevalence growth rates between wealth quintiles, we took the difference between the change in overweight prevalence in the lowest group over the survey period and the change in the highest group over the survey period: $(\text{Overweight}_{\text{lowest, lastwave}} - \text{Overweight}_{\text{lowest, firstwave}}) - (\text{Overweight}_{\text{highest, lastwave}} - \text{Overweight}_{\text{highest, firstwave}})$. We annualized this result for each country. A positive difference in prevalence growth rates indicates that the lowest wealth quintile had a higher prevalence growth rate than did the highest quintile, and this gap is growing.

Euromonitor data: Country-level sales of sugar-sweetened beverages and nonessential or junk foods

Comparable data on sales of sugar-sweetened beverages (SSBs) are available for hundreds of countries from Euromonitor International Passport.²² In a new database Euromonitor collected caloric information for most beverages on a country by country basis. With these data we estimated kilocalorie/capita/day trends in sales for a limited number of years (2009–2014). We were the beta tester of the new Euromonitor data, which are now publicly available to subscribers. Longer-term trends from 2000 are available for volume in milliliters (ml). In both cases we combined sales of what Euromonitor terms off-trade volume (i.e., supermarkets, retailers) and on-trade volume (i.e., restaurants, cafeterias). All volume data are reported in ml/capita/day. We suspect these Euromonitor data omit many small local bottlers, but no rigorous study has evaluated the completeness of the data. We define SSBs as regular cola carbonates, noncola carbonates (e.g., lemon/lime and orange carbonates, ginger ale, mixers), liquid and powder concentrates, juice drinks (up to 24% juice), nectars (25–99% juice), ready-to-drink coffees and teas, sports and energy drinks, and Asian specialty drinks.

Nonessential or “junk” foods include cakes, pastries, chocolate and sugar confectioneries, chilled and shelf-stable desserts, frozen baked goods, frozen desserts, ice cream, sweet biscuits, snack bars, processed fruit snacks, salty snacks, savory biscuits, popcorn, pretzels, and other savory snacks. Clearly, these are aggregate measures, and we omit many items and likely include some that would be termed healthful foods and not ultraprocessed junk foods.

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Supplemental Table S1. Country burdens by age, sex, and region in 1990s UNICEF and NCD-RisC surveys with DHS for preschoolers where gaps existed

World Bank Region	Country	Population	GDP per capita*	Kids (0-4)			Girls (5-18)		Boys (5-18)		Women (19+)		Men (19+)		Double burden based on anthropometry**		
				Wasting	Stunting	Overweight	Wasting	Overweight	Wasting	Overweight	Thin	Overweight	Thin	Overweight	>40% overweight	>30% overweight	>20% overweight
Global Total: All Countries		4,332,508,167		11.30	43.73	6.77	10.17	6.47	16.19	5.89	16.08	24.21	15.58	19.34	15	22	45
East Asia & Pacific	Cambodia	10,653,558	801	13.4	58.6	6.5	7.8	2.3	15.8	2.3	20.6	13.8	18.7	9.5			
	China	1,204,855,000	1,869	2.9	36.7	9.3	5.4	5.0	6.8	6.6	9.7	19.4	8.1	17.8			
	Fiji	775,498	4,584	9.8	4.3	2.2	3.6	26.3	5.4	14.3	3.3	56.3	3.3	45.7			
	Indonesia	196,957,849	4,384	12.7	51.9	4.4	8.5	4.0	14.2	3.1	19.9	17.3	20.9	10.5			
	Lao People's Democratic Rep. (The)	4,851,923	1,475	11.8	53.6		6.4	2.6	14.9	2.3	18.6	14.6	18.4	9.4			
	Malaysia	20,495,597	10,646	15.3	20.7	5.5	8.0	8.1	12.6	8.8	12.6	26.9	12.9	20.7			HI
	Mongolia	2,298,039	3,094	2.4	33.1		2.4	12.5	3.2	8.1	4.1	43.5	3.7	40.0	HI	HI	HI
	Myanmar	43,237,792	676	12.7	53.6		9.7	2.9	17.3	2.7	21.1	16.1	21.4	10.3			
	Philippines (The)	69,835,715	2,887	6.9	43.3		5.8	4.8	13.5	5.1	18.5	20.4	16.1	15.7			HI
	Thailand	59,491,790	6,840	7.3	21.1		7.5	5.6	12.1	5.8	14.1	20.6	15.7	13.3			
Vanuatu	168,235	1,903	6.8	25.7		1.3	20.9	2.5	9.3	4.5	47.8	2.3	38.7				
Viet Nam	71,995,500	1,425	8.7	67.6	4.0	12.8	1.5	19.0	1.2	26.5	10.9	25.1	6.6				
Region Total: East Asia & Pacific		1,685,616,496		5.1	39.9	7.4	6.3	4.7	9.1	5.8	12.5	18.9	11.4	16.0	1	1	3
Europe & Central Asia	Albania	3,187,784	2,782	8.1	20.4	9.5	2.6	7.7	2.5	10.2	3.3	40.5	0.9	48.6			
	Armenia	3,217,342	1,585	3.3	15.1	10.8	1.8	15.6	2.8	11.8	4.2	47.0	3.0	44.7			
	Azerbaijan	7,685,000	2,420	3.8	28.0	6.1	2.7	12.4	4.1	9.5	4.2	43.9	2.6	41.6			
	Georgia	4,734,000	1,673	3.1	16.1	17.9	3.0	12.6	3.6	10.4	4.8	43.7	2.7	42.9			
	Kazakhstan	15,815,626	6,039	9.2	23.3	6.3	2.4	13.0	3.4	10.6	4.8	43.7	3.2	43.2			
	Kyrgyzstan	4,560,400	1,237	2.9	36.2	8.1	3.1	9.3	4.6	6.6	5.7	37.6	3.7	36.5		HI	HI
	Romania	22,684,270	5,453	3.3	11.2	4.0	4.2	9.7	4.7	12.8	2.8	45.6	1.6	53.0			
	Tajikistan	5,764,712	926	11.4	41.5		3.6	8.2	5.1	5.5	6.8	35.0	4.4	34.1		HI	HI
	Former Yugoslav Republic of Macedonia (The)	1,983,252	4,704	1.7	8.0	9.6					2.8	46.9	0.9	55.2			
	Turkey	58,486,381	7,487	5.5	27.5	7.0	4.5	17.1	7.0	13.6	2.5	58.8	2.4	49.8			
Uzbekistan	22,785,000	1,635	15.5	42.8	26.1	2.9	9.7	4.4	7.0	5.8	37.9	3.5	36.8	HI	HI	HI	
Region Total: Europe & Central Asia		150,903,767		7.0	26.7	9.6	3.6	13.0	5.2	11.0	3.8	48.5	2.6	45.9	1	3	3
Latin America & Caribbean	Argentina	34,994,814	10,130	1.6	7.1	11.1	1.2	25.1	1.4	27.0	1.9	52.3	1.0	54.1			
	Bolivia (Plurinational State of)	7,566,714	2,994	6.8	37.9	9.7	0.9	18.5	2.5	13.0	2.2	49.0	3.0	37.9	HI	HI	HI
	Brazil	162,296,612	8,073	4.1	15.1	8.0	3.1	17.5	4.3	15.4	5.4	45.2	4.3	41.9			
	Colombia	37,441,977	6,156	2.4	22.9	6.2	2.4	17.2	3.2	13.6	3.7	52.3	3.8	43.1			
	Costa Rica	3,510,926	6,533	2.4	8.2	9.5	2.4	17.4	3.1	13.3	4.2	48.5	3.2	40.9			
	Dominican Republic (The)	7,892,423	4,751	3.6	25.1	7.3	3.4	17.9	4.8	14.4	5.9	50.7	7.0	36.4			
	Ecuador	11,440,583	5,633	3.2	32.5		1.3	17.7	2.4	13.7	2.1	49.0	1.9	39.4	HI	HI	HI
	El Salvador	5,611,115	3,911	1.4	29.5	3.9	1.7	18.5	3.2	13.0	3.7	49.4	3.5	40.8			
	Guatemala	10,408,489	4,082	6.7	63.1	10.1	1.7	15.8	2.0	11.4	3.2	47.2	3.4	37.2	HI	HI	HI
	Guyana	761,291	2,852	13.3	14.0	1.9	5.3	11.6	6.9	8.3	7.4	43.2	8.6	28.7			
	Haiti	7,819,806	1,275	14.4	47.3	7.8	4.9	10.0	5.6	8.7	9.7	39.5	8.0	29.0		HI	HI
	Honduras	5,709,051	2,388	2.1	42.5		2.8	14.8	3.5	10.4	4.6	45.6	4.6	36.0	HI	HI	HI
	Jamaica	2,537,440	6,159	5.3	9.1		1.8	16.9	2.7	12.5	5.5	51.1	9.0	31.7			
	Mexico	94,045,579	8,390	8.7	30.9	9.2	2.2	23.9	2.4	23.1	2.5	57.1	2.2	50.8	HI	HI	HI
	Nicaragua	4,612,228	2,149	5.1	35.9	11.4	1.9	18.8	3.1	13.4	3.6	50.6	4.0	41.2	HI	HI	HI
	Panama	2,739,730	6,749	1.4	21.5	6.2	2.4	18.4	3.1	13.8	4.1	50.0	3.9	41.6			
	Paraguay	4,760,850	4,840	0.6	18.3	6.3	2.4	14.5	3.1	12.0	4.2	40.9	2.9	38.3			
Peru	24,038,760	4,540	3.1	42.7	13.6	1.1	19.5	2.2	15.6	2.1	51.4	2.0	41.9	HI	HI	HI	
Venezuela (Bolivarian Republic of)	22,188,667	11,172	5.7	18.6	4.0	1.7	27.1	2.2	23.9	2.1	57.9	2.2	51.6				
Region Total: Latin America & Caribbean		450,377,055		4.9	23.5	8.1	2.4	19.8	3.2	17.7	3.9	50.1	3.3	44.5	7	8	8

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World Bank Region	Country	Population	GDP per capita*	Kids (0-4)			Girls (5-18)		Boys (5-18)		Women (19+)		Men (19+)		Double burden based on anthropometry**		
				Wasting	Stunting	Overweight	Wasting	Overweight	Wasting	Overweight	Thin	Overweight	Thin	Overweight	>40% overweight	>30% overweight	>20% overweight
Middle East & North Africa	Algeria	28,904,298	6,777	7.1	22.9	8.7	5.0	16.3	9.2	12.7	5.7	52.8	7.2	40.9			
	Djibouti	630,388	766	14.9	31.7		4.1	15.3	9.2	7.9	8.4	37.4	12.0	24.6			
	Egypt	63,714,386	4,588	6.6	40.5	21.8	2.4	20.7	5.6	16.3	1.9	58.3	3.2	44.7	HI	HI	HI
	Iran (Islamic Republic of)	60,575,644	9,069	8.1	24.4	5.5	6.7	14.9	10.4	12.1	5.3	53.5	6.3	41.5			
	Iraq	20,208,387	4,783	4.4	27.6		3.8	21.3	7.7	17.7	2.9	60.2	4.0	49.6			
	Jordan	4,572,904	5,027	3.9	16.3	7.5	3.1	21.5	5.7	17.5	1.8	64.3	2.1	54.0			
	Lebanon	3,033,394	9,077	3.6	17.2	20.8	3.8	24.0	6.6	23.2	3.0	62.6	2.5	55.4			
	Libya	4,948,798	16,640	3.6	21.1	13.4	4.1	22.8	7.7	19.8	2.3	62.8	3.6	51.8			
	Morocco	27,075,232	2,855	4.5	38.7	16.6	4.8	14.6	9.6	11.1	5.2	51.5	5.5	41.5	HI	HI	HI
	Syrian Arab Republic (The)	14,345,492	989	10.0	32.9	15.0	5.1	15.1	9.2	11.7	4.1	53.6	4.6	43.2	HI	HI	HI
Tunisia	9,113,975	4,470	7.2	11.9	1.4	4.7	15.0	9.2	9.9	4.7	55.1	5.7	42.9				
Yemen	15,320,653	2,575	14.3	52.4	8.1	9.8	7.9	19.0	5.1	12.6	37.0	9.0	29.3		HI	HI	
Region Total: Middle East & North Africa		252,443,551		7.2	31.5	11.6	4.8	17.0	9.0	13.4	4.5	54.4	5.2	42.8	3	5	5
South Asia	Afghanistan	17,099,541	876	18.2	53.2	6.5	13.7	2.3	28.4	1.8	23.4	14.5	23.4	10.6			
	Bangladesh	118,706,871	1,048	27.9	66.8	3.6	15.7	2.1	28.1	1.9	31.7	11.8	27.3	8.9			
	Bhutan	514,877	2,112	2.5	47.7	3.9	14.2	2.1	26.7	1.9	18.7	15.5	18.4	11.9			
	India	960,482,795	1,485	23.9	57.2	5.5	22.3	1.5	34.6	1.3	31.3	12.5	30.3	9.2			
	Maldives	255,000	5,672	16.1	36.1	1.2	12.0	3.5	17.3	3.4	14.7	19.1	16.8	11.9			
	Nepal	21,396,384	986	17.9	62.0	1.2	12.6	1.6	26.8	1.4	25.6	11.9	22.5	10.1			
	Pakistan	122,829,148	2,448	12.5	54.5	5.4	17.4	2.6	28.6	2.7	21.7	18.7	22.1	14.3			
Sri Lanka	18,074,000	3,253	17.5	29.7		12.0	2.9	18.6	2.6	18.9	16.2	20.9	9.9				
Region Total: South Asia		1,259,358,616		22.9	57.4	5.2	20.8	1.7	33.0	1.5	30.0	13.1	28.8	9.7	0	0	0
Sub-Saharan Africa	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	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			
	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 (The)	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			
	Comoros (The)	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
	Cote 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
	Democratic Rep. of the Congo (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			
	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			
	Gambia (The)	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
	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			
	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			
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 (The)	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				
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				
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	4,274,819	697	10.2	40.9		7.7	6.4	15.0	1.8	12.9	23.7	14.6	12.3			HI	

Continued...

World Bank Region	Country	Population	GDP per capita*	Kids (0-4)			Girls (5-18)		Boys (5-18)		Women (19+)		Men (19+)		Double burden based on anthropometry**		
				Wasting	Stunting	Overweight	Wasting	Overweight	Wasting	Overweight	Thin	Overweight	Thin	Overweight	>40% overweight	>30% overweight	>20% overweight
	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
Sub-Saharan Africa	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			
<i>(continued)</i>	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 Total: Sub-Saharan Africa		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	5	26

Data sources: UNICEF-WHO-The World Bank, 2017; NCD-RisC; and Stevens et al., 2013 supplemented for missing preschooler data with DHS measures. Most recent year of data for UNICEF, WHO, and World Bank is 2017.

* GDP per capita based on PPP (current international \$) from World Bank Indicators

** Prevalence of wasting, stunting or thinness exceed threshold and prevalence of overweight exceeds threshold

Supplemental Table S2. Country burdens by age, sex, and region in most recent UNICEF and NCD-RisC surveys

World Bank Region	Country	Population	GDP per capita*	Kids (0-4)			Girls (5-18)		Boys (5-18)		Women (19+)		Men (19+)		Double burden based on anthropometry***		
				Wasting	Stunting	Overweight	Wasting	Overweight	Wasting	Overweight	Thin	Overweight	Thin	Overweight	>40% overweight	>30% overweight	>20% overweight
Global Total: All Countries		5,593,022,415	—	9.49	26.79	9.77	9.13	16.52	12.86	19.69	11.31	36.54	10.63	32.67	10	35	48
	Cambodia	14,308,740	2,472	9.6	32.4	2.0	8.4	8.6	13.2	13.6	13.8	25.1	12.6	19.4			HI
	China	1,337,705,000	9,333	4.6	17.1	23.4	3.3	20.8	3.5	35.0	6.1	31.1	3.8	35.6			
	Fiji	859,950	7,203	6.3	7.5	5.1	3.2	39.5	4.6	29.3	1.7	69.4	1.6	61.7			
	Indonesia	242,524,123	8,263	9.9	35.7	9.0	8.5	14.2	11.9	16.4	12.4	32.3	12.7	26.0		HI	HI
	Lao People's Democratic Rep. (The)	6,246,274	4,133	6.4	43.8	2.0	6.4	11.6	11.3	15.5	11.1	28.9	11.0	23.4			HI
	Malaysia	28,112,289	20,680	8.0	17.7	7.1	7.0	23.3	8.0	30.2	6.8	44.4	5.7	43.4			
	Mongolia	2,712,650	7,553	1.0	10.8	10.5	2.3	18.8	2.2	16.5	2.6	57.2	1.6	57.3			
	Myanmar	50,155,896	3,646	7.0	29.2	1.3	10.6	9.9	15.3	13.4	14.1	28.8	14.5	22.1			HI
East Asia & Pacific	Papua New Guinea	7,108,239	3,127	14.3	49.5	13.8	0.9	37.7	1.7	25.9	2.8	59.7	1.3	49.0	HI	HI	HI
	Philippines (The)	93,726,624	5,484	7.9	30.3	5.0	7.7	10.9	11.9	14.6	13.4	29.9	10.4	27.1			HI
	Samoa	186,205	5,291	1.3	6.4	6.2	0.1	57.6	0.2	47.5	0.4	83.8	0.1	75.8			
	Solomon Islands	527,790	1,834	4.3	32.8	2.5	0.7	30.0	1.5	16.7	1.9	62.0	0.9	51.2	HI	HI	HI
	Thailand	67,208,808	13,214	6.7	16.3	10.9	6.9	19.3	8.5	25.1	7.9	36.8	8.6	30.3			
	Timor-Leste	1,109,591	8,682	11.0	50.2	1.5	9.5	10.7	12.4	14.1	17.6	25.2	14.1	19.5			HI
	Tonga	104,137	4,883	5.2	8.1	17.3	0.0	63.1	0.1	53.0	0.3	84.0	0.2	76.9			
	Tuvalu	10,531	2,926	3.3	10.0	6.3	0.1	63.0	0.2	54.0	0.5	85.7	0.1	82.2			
	Vanuatu	236,295	2,888	4.4	28.5	4.6	1.0	37.0	1.9	24.5	2.2	63.7	1.2	53.9			
	Viet Nam	86,932,500	4,319	6.4	24.6	5.3	13.1	7.6	15.4	11.6	17.9	21.3	16.8	16.4			HI
Region Total: East Asia & Pacific		1,939,775,642	—	5.7	21.0	18.3	5.0	18.5	6.1	29.4	8.1	31.2	6.4	32.6	2	3	9
	Albania	2,913,021	9,637	9.4	23.1	23.4	1.4	20.9	1.1	29.8	2.0	52.7	0.4	66.3			
	Armenia	2,877,311	6,567	4.2	9.4	13.6	2.0	20.0	2.3	18.5	3.2	56.1	1.7	56.0			
	Azerbaijan	9,054,332	15,628	3.1	18.0	13.0	2.7	19.0	3.0	18.7	2.9	55.7	1.3	54.6			
	Belarus	9,490,583	15,907	2.2	4.5	9.7	2.0	18.6	1.9	26.3	2.0	58.0	0.7	64.4			
	Bosnia And Herzegovina	3,722,084	9,315	2.3	8.9	17.4	2.3	17.8	2.5	25.9	2.3	48.6	0.4	61.5			
	Bulgaria	7,395,599	14,949	3.2	8.8	13.6	1.9	23.0	1.8	33.6	1.8	56.1	0.3	70.8			
	Georgia	3,926,000	6,598	1.6	11.3	19.9	3.1	19.0	2.4	20.7	3.3	55.2	1.3	56.4			
	Kazakhstan	16,321,581	19,690	3.1	8.0	9.3	2.5	19.0	2.3	19.9	3.4	54.3	1.7	56.0			
	Kyrgyzstan	5,447,900	2,734	2.8	12.9	7.0	3.3	16.1	3.3	16.0	3.7	50.4	2.0	49.0			
Europe & Central Asia	Montenegro	619,428	13,648	2.8	9.4	22.3	2.2	19.6	1.4	30.0	2.2	54.2	0.4	68.2			
	Republic Of Moldova (The)	3,562,045	3,832	1.9	6.4	4.9	2.9	15.4	2.6	19.3	2.4	51.7	1.0	55.1			
	Romania	20,246,871	17,027	3.5	12.8	8.3	2.8	19.7	2.4	29.2	2.1	52.8	0.8	66.2			
	Serbia	7,291,436	12,087	3.9	6.0	13.9	2.2	22.1	1.9	32.8	2.6	52.2	0.5	65.7			
	Tajikistan	7,641,630	2,064	9.9	26.8	6.6	3.5	15.3	3.8	14.0	4.5	47.8	2.6	45.8			
	Former Yugoslav Republic of Macedonia (The)	2,070,739	11,285	1.8	4.9	12.4	—	—	—	—	2.2	52.8	0.5	66.8			
	Turkey	72,326,914	17,443	1.7	9.5	10.9	4.6	28.7	5.1	30.4	1.5	71.4	0.9	66.0			
	Turkmenistan	5,087,210	9,741	4.2	11.5	5.9	3.2	18.0	3.3	17.9	3.6	53.1	1.7	53.7			
	Ukraine	45,870,700	7,666	0.3	3.7		2.3	18.1	2.4	24.2	1.9	57.2	0.7	63.2			
	Uzbekistan	28,562,400	4,154	4.5	19.6	12.8	2.9	16.9	3.2	16.3	3.8	50.5	2.0	48.9			
Region Total: Europe & Central Asia		254,427,784	—	2.6	10.5	9.1	3.1	21.2	3.3	24.7	2.4	58.9	1.1	60.9	0	0	0
	Argentina	41,223,889	18,334	1.2	8.2	9.9	1.0	31.9	0.9	41.0	1.1	61.0	0.3	68.0			
	Belize	321,608	7,717	1.8	15.0	7.3	3.4	28.7	3.5	28.3	2.7	63.1	3.3	49.7			
Latin America & Caribbean	Bolivia (Plurinational State of)	9,918,242	5,298	1.6	18.1	11.8	0.7	29.9	1.6	26.2	1.3	61.3	1.3	53.8			
	Brazil	196,796,269	14,243	1.6	7.1	7.3	2.4	26.6	3.0	30.0	3.1	57.1	1.8	59.4			
	Colombia	45,918,097	10,680	0.9	12.7	4.8	1.7	26.3	2.3	22.5	2.4	63.0	1.6	58.4			
	Costa Rica	4,545,280	12,737	1.0	5.6	8.1	1.5	33.1	1.9	30.3	2.1	65.0	1.0	61.7			
	Cuba	11,333,051	5,676	2.4	7.0		3.3	29.3	3.5	31.4	4.3	64.3	3.9	56.3			

Continued...

World Bank Region	Country	Population	GDP per capita*	Kids (0-4)			Girls (5-18)		Boys (5-18)		Women (19+)		Men (19+)		Double burden based on anthropometry***		
				Wasting	Stunting	Overweight	Wasting	Overweight	Wasting	Overweight	Thin	Overweight	Thin	Overweight	>40% overweight	>30% overweight	>20% overweight
Latin America & Caribbean (continued)	Dominican Republic (The)	9,897,985	10,907	2.4	7.1	7.6	3.3	32.5	3.3	33.0	3.1	67.2	2.6	58.7			
	Ecuador	14,934,690	9,163	2.3	25.2	7.5	0.9	29.1	1.5	27.4	1.2	60.7	0.9	54.2			
	El Salvador	6,164,626	6,173	2.1	13.6	6.4	1.2	33.5	2.0	28.0	2.0	63.9	1.3	58.8			
	Guatemala	14,630,417	6,578	0.7	46.5	4.7	1.1	30.6	1.3	26.2	1.7	61.5	1.5	53.1	HI	HI	HI
	Guyana	746,556	5,730	6.4	12.0	5.3	5.4	25.8	5.3	23.9	4.2	58.4	4.8	43.0			
	Haiti	9,999,617	1,472	5.3	24.9	5.0	4.4	24.5	3.4	30.4	4.6	60.1	3.1	52.8			
	Honduras	8,194,778	3,891	1.4	22.7	5.2	1.9	29.6	2.3	24.9	2.4	61.2	2.0	53.5			
	Jamaica	2,817,210	7,834	3.0	5.7	7.8	1.8	30.9	1.9	29.2	3.1	65.0	4.3	49.0			
	Mexico	117,318,941	14,859	1.0	12.4	5.2	1.4	35.2	1.6	35.8	1.5	67.6	0.8	65.4			
	Nicaragua	5,737,723	3,947	1.5	23.0	6.2	1.3	31.9	2.2	26.6	2.1	63.0	1.8	56.4			
	Panama	3,643,222	15,312	1.2	19.1	—	1.7	32.0	2.1	26.9	2.4	63.0	1.6	58.0			
	Paraguay	6,209,877	7,142	2.6	10.9	11.7	1.8	26.9	2.1	28.8	2.1	54.8	1.2	55.4			
	Peru	29,373,646	9,755	0.6	14.6	8.8	0.8	27.9	1.3	26.2	1.4	61.6	0.9	56.5			
Saint Lucia	172,580	11,879	3.7	2.5	6.3	4.2	24.6	4.4	22.6	3.5	58.1	4.8	40.7				
Suriname	526,103	13,924	5.0	8.8	4.0	3.8	30.1	3.3	32.2	2.8	66.1	3.2	55.1				
Venezuela (Bolivarian Republic of)	29,028,033	16,210	4.1	13.4	6.4	1.4	35.0	1.7	33.1	1.6	65.5	0.9	64.7				
Region Total: Latin America & Caribbean	569,452,440	—	1.6	12.0	6.7	1.8	29.8	2.2	31.0	2.3	61.7	1.4	60.5	1	1	1	
Middle East & North Africa	Algeria	36,117,637	12,610	4.1	11.7	12.4	4.9	30.0	6.9	31.2	3.3	68.1	3.3	59.7			
	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
	Egypt	84,107,606	9,658	9.5	22.3	15.7	2.0	37.2	3.5	35.8	1.0	71.3	1.5	59.0			
	Iran (Islamic Republic of)	74,567,511	17,580	4.0	6.8	—	7.3	25.0	9.7	26.1	3.5	67.4	3.1	59.5			
	Iraq	30,762,701	12,460	7.4	22.6	11.8	4.0	31.6	6.4	31.9	2.0	70.0	2.0	62.9			
	Jordan	7,182,390	9,281	2.4	7.8	4.7	3.4	30.6	4.5	31.1	1.2	74.2	0.8	68.9			
	Lebanon	4,337,141	16,119	6.6	16.5	16.7	4.5	30.4	5.5	36.6	2.2	71.1	1.1	68.8			
	Libya	6,169,140	12,121	6.5	21.0	22.4	4.7	31.3	6.6	33.5	1.7	72.0	1.8	65.3			
	Morocco	32,409,639	29,031	2.3	14.9	10.7	5.0	27.1	7.7	27.0	3.1	66.0	2.6	58.3			
	Syrian Arab Republic (The)	21,018,834	6,313	11.5	27.5	17.9	5.2	27.7	7.1	28.8	2.5	67.4	2.2	59.1			
Tunisia	10,639,931	10,225	2.8	10.1	14.3	5.1	25.9	7.9	24.0	3.0	67.8	2.8	59.0				
Yemen	23,606,779	4,388	16.3	46.5	2.0	10.2	20.7	16.7	19.2	7.6	55.1	5.0	45.7	HI	HI	HI	
Region Total: Middle East & North Africa	331,770,455	—	7.0	18.2	10.0	5.0	29.7	7.4	29.7	2.8	67.9	2.6	58.9	2	2	2	
South Asia	Afghanistan	28,803,167	1,582	9.5	40.9	5.4	10.9	9.8	23.1	8.9	15.6	27.1	16.7	20.5			HI
	Bangladesh	152,149,102	2,393	14.3	36.1	1.4	13.6	8.7	22.3	9.3	22.8	23.0	19.7	18.7			HI
	Bhutan	727,641	6,290	5.9	33.6	7.6	11.5	9.5	19.7	10.8	10.4	30.7	10.7	26.2		HI	HI
	India	1,230,980,691	4,316	21.0	38.4	3.8	22.7	6.1	30.7	7.5	23.7	22.4	22.6	18.5			HI
	Maldives	367,000	11,763	10.2	20.3	6.5	13.3	14.2	14.1	19.5	8.2	35.4	9.5	28.0			HI
	Nepal	27,023,137	1,946	12.8	40.8	1.6	10.3	7.8	21.1	7.2	17.2	23.7	15.6	19.9			HI
	Pakistan	170,560,182	4,197	10.5	45.0	4.8	15.3	9.1	23.1	10.1	14.4	32.4	14.8	26.7		HI	HI
	Sri Lanka	20,119,000	8,357	21.4	14.7	0.6	13.4	11.7	16.6	13.9	12.5	28.3	14.8	19.4			HI
Region Total: South Asia	1,630,729,920	—	18.9	38.7	3.6	20.5	6.9	28.6	8.0	22.3	23.7	21.2	19.5	0	2	7	
Sub-Saharan Africa	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			HI
	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			HI
	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 (The)	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 (The)	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 (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			HI
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			HI	

Continued...

World Bank Region	Country	Population	GDP per capita*	Kids (0-4)			Girls (5-18)		Boys (5-18)		Women (19+)		Men (19+)		Double burden based on anthropometry***		
				Wasting	Stunting	Overweight	Wasting	Overweight	Wasting	Overweight	Thin	Overweight	Thin	Overweight	>40% overweight	>30% overweight	>20% overweight
	Democratic Rep. of the Congo (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
	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	9.9	31.3	3.8	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			
	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	20.6	49.7	5.6	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	7.2	32.9	1.6	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	1,130	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	2,588	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	2,140	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	4.7	23.9	10.9	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	866,866,174	—	8.3	35.1	4.4	5.2	15.0	10.2	7.3	9.7	37.6	12.3	20.9	5	27	29

Data sources: UNICEF-WHO-The World Bank, 2017; NCD-RisC; and Stevens et al., 2013 supplemented for missing preschooler data with DHS measures. Most recent year of data for UNICEF, WHO, and World Bank is 2017.

* GDP per capita based on PPP (current international \$) from World Bank Indicators

** Prevalence of wasting, stunting or thinness exceed threshold and prevalence of overweight exceeds threshold

Supplemental Table S3. Number of households with children and women, mean age for women, and GDP per capita (PPP) by country for earliest and latest survey years*

Region	Country	Earliest year	Households N (#) earliest year					Latest year	Households N (#) latest year				
			Households with children (0–4y)	Households with women (15–49y)	Households with children and women (15–49y)	Mean age for women	1990 GDP (PPP)		Households with children (0–4y)	Households with women (15–49y)	Households with children and women (15–49y)	Mean age for women	2010 GDP (PPP)
East Asia & Pacific	Cambodia	2000	2762	5045	2454	29.95	265.81	2014	3614	7973	3426	30.53	795.17
	China	1991	859	2395	739	35.16	314.43	2015	794	3120	555	38.74	4432.96
	Indonesia	1993	2170	4551	1826	32.96	620.72	2014	4721	9059	2962	31.71	2951.70
	Myanmar	—	—	—	—	—	—	2015	3410	8929	3242	31.81	3534.80
	Timor-Leste	—	—	—	—	—	425.49	2009	5263	8503	4793	28.91	765.95
	Vietnam	1992	2047	2101	753	27.37	98.03	2002	9238	27221	6655	31.35	1224.31
Europe & Central Asia	Albania	—	—	—	—	—	638.89	2008	1262	5424	1217	31.80	3700.74
	Armenia	2000	1157	4237	1098	31.42	636.68	2015	1272	4420	1223	31.66	3030.71
	Azerbaijan	—	—	—	—	—	1237.32	2006	1532	5519	1444	31.30	5843.17
	Kazakhstan	1995	647	2723	618	30.68	1647.46	1999	463	1744	448	31.25	9070.01
	Kyrgyz Republic	1997	842	2625	802	29.85	608.95	2012	2860	5663	2632	29.95	880.04
	Moldova	—	—	—	—	—	972.09	2005	1225	5628	1182	31.34	1631.53
	Tajikistan	—	—	—	—	—	496.00	2012	244	5485	229	29.23	740.00
	Turkey	1993	2412	2330	2198	27.93	2783.59	2003	2990	2927	2767	28.62	10049.77
Uzbekistan	1996	920	2900	873	28.91	651.42	—	—	—	—	—	1377.08	
Latin America & the Caribbean	Bolivia	1994	2547	2273	2149	28.64	731.04	2008	5880	12299	5488	29.66	1978.85
	Brazil	1996	3189	3122	2911	28.21	3086.88	2013	—	21645	—	35.29	10992.94
	Colombia	1995	3347	3173	3055	28.33	1212.96	2010	12840	34233	12050	29.65	6186.02
	Dominican Republic	1991	2235	2066	1907	27.63	983.18	2013	2581	6685	2421	30.24	5195.38
	Guatemala	1995	5370	4771	4631	28.90	857.34	2014	8664	16459	8151	28.89	2873.08
	Guyana	—	—	—	—	—	547.06	2009	1272	3438	1174	30.65	2994.45
	Haiti	1994	1861	1762	1610	30.10	477.94	2017	4250	6043	2688	28.56	663.91
	Honduras	2005	6940	13335	6492	28.71	623.58	2011	7787	15370	7419	28.96	2018.75
	Mexico	1988	5022	9786	4530	28.74	3116.12	2012	10658	13690	4382	34.04	9127.54
	Nicaragua	1998	4797	8536	4486	28.50	244.97	2001	4313	8451	4056	28.75	1455.84
Peru	1992	5454	4967	4770	29.50	1212.53	2012	7531	17314	7242	30.79	5283.22	
Middle East & North Africa	Egypt, Arab Rep.	1992	4905	4494	4397	29.87	758.76	2014	10958	18432	9872	33.75	2698.37
	Jordan	1997	3389	2996	2840	30.76	1268.22	2012	4204	6212	3732	35.09	4370.00
	Morocco	1992	3021	2705	2639	31.49	1032.75	2003	4233	9595	4007	29.79	2795.49
	Yemen, Rep.	—	—	—	—	—	472.64	2013	8874	13836	7964	27.19	1290.62
South Asia	Bangladesh	1996	3887	3862	3555	25.79	286.24	2014	6048	14235	5814	31.36	674.93
	India	1998	23147	66015	21535	31.63	373.79	2015	171135	463872	160623	30.24	1375.38
	Maldives	—	—	—	—	—	980.02	2009	1897	4031	1782	33.24	6570.43
	Nepal	1996	3200	3169	2929	26.99	190.11	2016	1825	4373	1749	29.50	534.52
Sub-Saharan Africa	Burkina Faso	1992	2728	2766	2490	29.44	332.62	2010	4149	5197	3809	28.90	535.89
	Burundi	—	—	—	—	—	202.10	2010	2294	2975	1972	27.71	241.79
	Cameroon	1998	1479	1447	1327	26.92	915.50	2011	3177	4700	2890	27.98	1144.25
	Central African Republic	1994	1915	1806	1690	27.16	506.86	—	—	—	—	—	451.26
	Chad	1996	3546	3231	3033	27.82	289.23	2014	6276	7634	5336	28.45	760.71
	Comoros	1996	827	767	725	29.48	571.01	2012	1771	3286	1595	27.69	739.51

Continued...

Region	Country	Earliest year	Households N (#) earliest year				1990 GDP (PPP)	Latest year	Households N (#) latest year				
			Households with children (0–4y)	Households with women (15–49y)	Households with children (0–4y) and women (15–49y)	Mean age for women			Households with children (0–4y)	Households with women (15–49y)	Households with children (0–4y) and women (15–49y)	Mean age for women	2010 GDP (PPP)
	Congo, Dem. Rep.	2007	2307	3061	2026	28.80	256.82	2013	5052	6099	4346	28.46	198.71
	Congo, Rep.	2005	2826	4233	2618	28.05	1171.56	2011	2982	3839	2718	28.74	2970.12
	Côte d'Ivoire	1994	2500	2441	2304	27.28	862.44	2011	2103	2901	1898	28.48	1161.26
	Ethiopia	2000	6372	10258	5721	28.14	249.98	2016	6402	10940	5764	28.28	320.38
	Gabon	2000	2095	2034	1893	27.11	6406.90	2012	2191	3428	1976	28.94	8767.83
	Gambia	—	—	—	—	—	900.00	2013	1631	2111	1525	27.46	1610.00
	Ghana	1993	1735	1681	1601	28.75	398.09	2014	1985	3457	1803	29.92	1319.08
	Guinea	1999	2844	2698	2572	28.99	463.00	2012	2014	2710	1853	28.37	474.47
	Kenya	1993	3290	3136	2900	28.68	365.60	2014	13570	10783	6020	29.00	794.77
	Lesotho	2004	1137	2435	1076	28.59	329.91	2014	1102	2590	1076	28.53	1003.70
	Liberia	2007	3103	4519	2766	29.69	180.72	2013	2177	3143	2020	28.79	323.65
	Madagascar	1997	2670	2518	2352	27.57	273.17	2003	3290	5778	2975	29.75	426.63
	Malawi	1992	2296	2216	1976	29.07	200.49	2015	4128	6041	3830	28.33	362.30
	Mali	1995	4035	3819	3572	28.30	279.17	2013	2882	3536	2537	29.04	613.04
	Mozambique	1997	3092	3025	2827	27.31	181.83	2011	6595	9416	5927	28.90	393.72
	Namibia	1992	1647	1764	1520	29.08	1661.19	2013	1379	3255	1322	33.20	4875.97
	Niger	1992	2877	2775	2537	27.96	318.52	2012	2916	3381	2552	29.10	348.80
	Nigeria	2003	2987	4660	2654	28.09	291.87	2013	16545	24707	14581	29.04	1443.21
	Rwanda	2000	4368	6676	3876	28.22	358.70	2014	2764	4602	2554	28.71	529.41
	Sao Tome and Principe	—	—	—	—	—	660.62	2008	1239	1766	1081	29.29	1215.49
	Senegal	1992	2195	2035	1965	29.32	789.42	2010	1878	2384	1771	28.02	1033.91
	Sierra Leone	2008	1597	2484	1461	29.60	163.16	2013	3212	4800	3002	28.83	325.48
	Swaziland	—	—	—	—	—	1292.06	2006	1489	3037	1423	27.92	3503.16
	Tanzania	1991	4124	3886	3641	28.59	171.91	2015	5979	8753	5527	28.91	526.56
	Togo	1998	2964	2845	2731	29.18	444.26	2013	2156	3136	1964	29.47	529.65
	Uganda	1995	3368	3033	2844	27.21	243.19	2016	3006	4205	2701	28.21	514.51
	Zambia	1992	3165	2914	2724	27.86	418.37	2014	8123	11114	7446	28.48	1252.49
	Zimbabwe	1994	1865	1839	1711	27.51	839.01	2015	3933	6931	3734	28.63	591.29

* All data are from the Demographic and Health Surveys (DHS, <https://dhsprogram.com/>) with the exceptions of China (China Health and Nutrition Survey), Indonesia (Indonesian Family Life Survey), Mexico (Mexico's National Survey of Health and Nutrition), Brazil (Brazilian National Health Survey), and Vietnam (Vietnam Living Standards Survey).

Supplemental Table S4. Prevalence* 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			Woman with overweight and child with wasting			Woman with overweight and child with stunting			Woman with thinness and child with overweight			Total double burden: Woman or child with overweight and child with wasting/stunting or woman with thinness		
		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
East Asia & Pacific	Cambodia	5.49	1.85	-0.26	0.38	2.19	0.129	2.44	6.67	0.302	1.39	0.15	-0.09	7.93	10.32	0.17
	China	3.88	8.33	0.19	0.16	0.74	0.024	3.59	4.90	0.055	0.16	3.99	0.16	9.89	15.57	0.24
	Indonesia	2.87	4.30	0.07	1.42	2.97	0.074	6.47	15.14	0.413	0.60	0.79	0.01	9.16	20.06	0.52
	Myanmar	—	0.96	—	—	2.12	—	—	6.09	—	—	0.14	—	—	9.07	—
	Timor-Leste	—	8.90	—	—	1.06	—	—	3.73	—	—	3.41	—	—	14.79	—
	Vietnam	3.03	0.97	-0.21	0.07	0.44	0.037	0.45	1.08	0.063	0.73	0.56	-0.02	1.95	2.78	0.08
Eastern Europe & Central Asia	Albania	—	16.18	—	—	4.17	—	—	12.69	—	—	1.46	—	—	23.59	—
	Armenia	5.97	5.15	-0.05	0.82	1.43	0.041	8.32	5.83	-0.166	0.83	0.66	-0.01	15.09	10.35	-0.32
	Azerbaijan	—	14.85	—	—	6.33	—	—	20.66	—	—	0.78	—	—	34.74	—
	Kazakhstan	1.86	1.47	-0.10	3.64	0.27	-0.841	8.67	1.93	-1.686	0.31	0.34	0.01	12.60	6.05	-1.64
	Kyrgyz Republic	4.20	5.32	0.08	0.50	1.09	0.040	10.71	8.22	-0.166	0.25	0.54	0.02	17.83	12.78	-0.34
	Moldova	—	2.98	—	—	1.62	—	—	4.40	—	—	0.24	—	—	7.76	—
	Tajikistan	—	7.39	—	—	9.16	—	—	14.48	—	—	0.37	—	—	23.64	—
	Turkey	2.55	1.67	-0.09	2.06	0.34	-0.172	14.08	9.54	-0.454	0.05	0.04	0.00	16.84	10.62	-0.62
	Uzbekistan	17.22	—	—	1.94	—	—	15.25	—	—	4.02	—	—	33.09	—	—
Latin America & the Caribbean	Bolivia	4.90	3.85	-0.08	2.23	1.19	-0.074	12.35	15.91	0.255	0.27	0.02	-0.02	16.42	18.38	0.14
	Brazil	1.43	—	—	1.11	—	—	4.15	—	—	0.31	—	—	6.52	—	—
	Colombia	1.32	0.67	-0.04	0.87	0.33	-0.036	8.92	5.63	-0.219	0.08	0.07	0.00	10.26	6.95	-0.22
	Dominican Republic	2.28	1.63	-0.03	0.70	2.40	0.077	3.80	3.79	0.000	0.28	0.37	0.00	6.28	8.11	0.08
	Guatemala	6.15	2.18	-0.21	1.40	0.53	-0.046	19.04	24.34	0.279	0.27	0.09	-0.01	24.68	26.03	0.07
	Guyana	—	5.79	—	—	1.87	—	—	11.81	—	—	1.83	—	—	17.56	—
	Haiti	4.68	1.78	-0.13	1.43	1.63	0.009	3.77	6.48	0.118	1.40	0.36	-0.05	8.45	10.29	0.08
	Honduras	1.59	0.89	-0.12	0.71	0.94	0.037	12.77	13.71	0.156	0.14	0.15	0.00	14.77	15.33	0.09
	Mexico	3.75	1.49	-0.09	2.35	0.81	-0.064	8.79	7.83	-0.040	0.59	0.07	-0.02	14.27	8.83	-0.23
	Nicaragua	4.96	3.92	-0.35	2.96	1.10	-0.621	14.19	12.77	-0.472	0.30	0.19	-0.04	20.02	15.84	-1.39
	Peru	5.14	0.63	-0.23	0.80	0.29	-0.026	14.88	11.24	-0.182	0.08	0.18	0.00	19.08	12.08	-0.35
Middle East & North Africa	Egypt, Arab Rep.	10.13	12.15	0.09	3.46	10.21	0.307	19.84	21.10	0.057	0.10	0.00	0.00	28.20	32.84	0.21
	Jordan	2.15	1.10	-0.07	2.01	2.60	0.040	9.90	7.49	-0.160	0.03	0.09	0.00	11.51	10.42	-0.07
	Morocco	6.12	8.47	0.21	0.69	5.66	0.453	9.93	10.72	0.072	0.43	0.73	0.03	14.80	22.37	0.69
	Yemen, Rep.	—	3.45	—	—	5.15	—	—	13.29	—	—	0.82	—	—	19.29	—
South Asia	Bangladesh	2.84	1.46	-0.08	0.69	2.45	0.098	1.05	5.42	0.243	1.17	0.41	-0.04	3.52	9.01	0.31
	India	4.41	2.63	-0.10	0.95	4.10	0.185	3.17	6.43	0.191	1.67	0.74	-0.05	8.21	12.16	0.23
	Maldives	—	2.51	—	—	9.15	—	—	11.11	—	—	0.51	—	—	19.85	—
	Nepal	0.76	0.57	-0.01	0.09	1.67	0.079	0.79	5.51	0.236	0.12	0.29	0.01	1.65	7.91	0.31
Sub-Saharan Africa	Burkina Faso	3.33	3.29	0.00	1.44	1.59	0.008	3.57	3.40	-0.009	1.11	0.79	-0.02	7.13	7.34	0.01
	Burundi	—	3.36	—	—	0.92	—	—	4.31	—	—	0.37	—	—	7.63	—
	Cameroon	4.98	5.20	0.02	1.51	2.06	0.043	6.86	11.73	0.374	0.53	0.35	-0.01	12.47	17.68	0.40
	Central African Republic	3.33	—	—	0.74	—	—	3.13	—	—	0.56	—	—	—	7.62	—
	Chad	3.33	2.86	-0.03	0.92	1.63	0.039	2.94	5.61	0.148	0.54	0.66	0.01	6.96	10.19	0.18
	Comoros	3.76	10.52	0.42	2.56	9.22	0.416	6.90	16.75	0.616	0.58	0.89	0.02	12.55	28.58	1.00
	Congo, Dem. Rep.	13.00	5.84	-1.19	1.60	1.57	-0.005	6.44	6.43	-0.002	2.61	0.85	-0.29	17.68	12.70	-0.83
	Congo, Rep.	8.04	2.68	-0.89	2.81	1.85	-0.160	10.30	4.34	-0.993	1.34	0.75	-0.10	17.97	8.90	-1.51
	Côte d'Ivoire	1.63	2.30	0.04	1.87	2.39	0.031	4.40	8.32	0.231	0.16	0.22	0.00	6.58	11.52	0.29
	Ethiopia	1.86	2.93	0.07	0.27	0.47	0.012	0.85	1.59	0.046	0.74	0.74	0.00	3.48	6.02	0.16
	Gabon	3.97	4.80	0.07	1.57	3.76	0.182	7.40	8.77	0.114	0.38	0.41	0.00	11.80	15.12	0.28
	Gambia	—	5.93	—	—	5.44	—	—	10.31	—	—	—	2.20	—	19.20	—
	Ghana	1.62	1.34	-0.01	1.97	1.56	-0.019	3.41	5.63	0.106	0.35	0.19	-0.01	6.53	8.58	0.10

Continued...

Region	Country	Overweight and stunting in a single child			Woman with overweight and child with wasting			Woman with overweight and child with stunting			Woman with thinness and child with overweight			Total double burden: Woman or child with overweight and child with wasting/stunting or woman with thinness		
		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
	Guinea	4.94	3.57	-0.11	1.83	2.52	0.053	4.99	8.45	0.266	0.82	0.33	-0.04	10.76	13.56	0.22
	Kenya	4.38	2.06	-0.11	0.66	1.01	0.017	6.13	7.97	0.088	0.60	0.50	0.00	10.53	10.78	0.01
	Lesotho	7.04	4.35	-0.27	3.29	2.09	-0.120	22.35	15.98	-0.638	0.18	0.15	0.00	28.31	20.08	-0.82
	Liberia	4.38	3.43	-0.16	2.65	2.09	-0.094	8.86	10.86	0.333	0.55	1.34	0.13	14.18	16.10	0.32
	Madagascar	2.32	8.28	0.99	0.34	0.69	0.059	1.55	2.80	0.209	0.50	2.01	0.25	4.78	11.40	1.10
	Malawi	9.89	3.15	-0.29	0.79	0.76	-0.001	5.64	6.55	0.039	1.00	0.15	-0.04	15.35	9.55	-0.25
	Mali	1.86	4.20	0.13	2.47	3.45	0.054	2.85	7.61	0.265	0.39	0.75	0.02	5.99	13.71	0.43
	Mozambique	5.93	8.78	0.20	2.22	0.79	-0.102	2.51	6.65	0.295	0.20	0.92	0.05	9.62	15.77	0.44
	Namibia	4.36	2.59	-0.08	3.27	3.49	0.011	9.49	7.69	-0.086	1.89	0.66	-0.06	15.73	13.94	-0.09
Sub-Saharan Africa	Niger	2.26	4.20	0.10	2.24	4.57	0.117	4.43	8.93	0.225	0.88	0.34	-0.03	7.83	14.68	0.34
<i>(continued)</i>	Nigeria	8.82	6.51	-0.23	3.06	5.78	0.272	10.08	10.08	0.000	2.23	1.26	-0.10	20.00	19.36	-0.06
	Rwanda	6.72	5.03	-0.12	1.64	0.29	-0.096	6.68	8.71	0.145	0.52	0.12	-0.03	13.80	13.51	-0.02
	Sao Tome and Principe	—	12.12	—	—	7.87	—	—	10.77	—	—	0.61	—	—	26.96	—
	Senegal	4.63	4.81	0.01	3.66	4.61	0.053	7.29	10.13	0.158	1.97	2.45	0.03	14.40	19.58	0.29
	Sierra Leone	11.78	9.88	-0.38	3.38	3.48	0.021	11.60	9.26	-0.467	1.43	1.54	0.02	23.38	20.14	-0.65
	Swaziland	—	6.29	—	—	2.51	—	—	20.13	—	—	0.42	—	—	24.87	—
	Tanzania	6.26	2.77	-0.14	1.23	1.41	0.008	5.48	10.48	0.209	0.45	0.26	-0.01	11.29	14.05	0.12
	Togo	1.94	1.47	-0.03	1.02	1.72	0.046	3.34	5.88	0.170	0.38	0.20	-0.01	5.96	8.64	0.18
	Uganda	4.63	2.04	-0.12	0.30	0.72	0.020	4.52	6.72	0.105	0.38	0.10	-0.01	9.35	9.47	0.00
	Zambia	4.41	6.12	0.08	1.43	1.97	0.024	7.76	9.55	0.081	0.73	0.65	0.00	12.06	16.50	0.20
	Zimbabwe	3.47	3.52	0.00	2.25	1.12	-0.054	6.43	10.56	0.197	0.63	0.41	-0.01	11.15	13.35	0.10

Data sources: All data are from the Demographic and Health Surveys (DHS, <https://dhsprogram.com/>) with the exceptions of China (China Health and Nutrition Survey), Indonesia (Indonesian Family Life Survey), Mexico (Mexico National Survey of Health and Nutrition), Brazil (Brazil National Health Survey), and Vietnam (Vietnam Living Standards Survey).

* Nationally representative and regionally weighted

Supplemental Table S5. Prevalence* of wasting, stunting, and overweight or obesity for children (ages 0–4 years) and annualized change in prevalence from earliest to latest survey years**

Region	Country	Wasting prevalence			Stunting prevalence			Wasting or stunting prevalence			Overweight or obesity		
		Earliest year	Latest year	Annualized change	Earliest year	Latest year	Annualized change	Earliest year	Latest year	Annualized change	Earliest year	Latest year	Annualized change
East Asia & Pacific	Cambodia	23.75	12.85	-0.78	55.34	36.63	-1.34	68.72	44.06	-1.76	6.43	3.24	-0.23
	China	2.94	4.57	0.07	36.67	17.13	-0.81	38.43	21.90	-0.69	9.28	23.39	0.59
	Indonesia	12.69	9.92	-0.13	51.87	35.69	-0.77	59.13	42.49	-0.79	4.35	9.03	0.22
	Myanmar	—	8.50	—	—	32.30	—	—	38.08	—	—	2.18	—
	Timor-Leste	—	27.07	—	—	68.91	—	—	80.52	—	—	10.37	—
	Vietnam	8.65	9.39	0.07	67.56	33.66	-3.39	70.10	39.44	-3.07	4.01	2.23	-0.18
Eastern Europe & Central Asia	Albania	—	12.09	—	—	27.09	—	—	38.25	—	—	29.23	—
	Armenia	3.29	5.62	0.16	20.02	11.88	-0.54	23.00	17.14	-0.39	20.30	17.17	-0.21
	Azerbaijan	—	9.44	—	—	33.22	—	—	40.22	—	—	19.97	—
	Kazakhstan	9.21	3.14	-1.52	23.25	16.32	-1.73	30.52	19.14	-2.84	6.30	7.14	0.21
	Kyrgyz Republic	4.56	4.10	-0.03	36.11	22.33	-0.92	39.21	25.38	-0.92	11.30	12.31	0.07
	Moldova	—	7.43	—	—	11.88	—	—	18.59	—	—	11.11	—
	Tajikistan	—	18.96	—	—	39.62	—	—	51.60	—	—	10.09	—
	Turkey	5.50	1.40	-0.41	27.49	17.21	-1.03	30.51	18.21	-1.23	6.96	11.46	0.45
Uzbekistan	15.53	—	—	42.80	—	—	54.43	—	—	26.07	—	—	
Latin America & the Caribbean	Bolivia	6.82	2.24	-0.33	37.90	30.80	-0.51	41.68	32.16	-0.68	9.74	11.79	0.15
	Brazil	4.05	—	—	15.13	—	—	18.28	—	—	8.00	—	—
	Colombia	2.44	1.24	-0.08	22.93	13.87	-0.60	24.38	14.79	-0.64	6.24	6.01	-0.02
	Dominican Republic	3.60	2.97	-0.03	25.09	8.68	-0.75	27.21	11.14	-0.73	7.25	10.10	0.13
	Guatemala	6.73	1.08	-0.30	63.06	49.67	-0.70	64.95	50.01	-0.79	10.11	6.82	-0.17
	Guyana	—	7.54	—	—	25.09	—	—	31.06	—	—	13.43	—
	Haiti	14.39	5.33	-0.39	47.33	24.90	-0.98	53.03	28.54	-1.06	7.79	4.99	-0.12
	Honduras	2.26	1.75	-0.09	32.45	24.79	-1.28	34.04	25.81	-1.37	7.97	6.92	-0.17
	Mexico	8.65	1.60	-0.29	30.92	13.79	-0.71	36.77	15.24	-0.90	9.21	9.13	0.00
	Nicaragua	5.10	3.36	-0.58	35.92	29.59	-2.11	38.91	31.61	-2.43	11.40	10.93	-0.15
Peru	3.12	0.84	-0.11	42.74	19.66	-1.15	44.34	20.15	-1.21	13.57	8.75	-0.24	
Middle East & North Africa	Egypt, Arab Rep.	6.55	13.54	0.32	40.45	27.52	-0.59	44.50	39.38	-0.23	21.81	21.46	-0.02
	Jordan	3.92	4.03	0.01	16.29	10.78	-0.37	19.09	14.26	-0.32	7.45	7.13	-0.02
	Morocco	4.45	14.53	0.92	38.73	27.53	-1.02	40.76	39.52	-0.11	16.61	17.95	0.12
	Yemen, Rep.	—	24.72	—	—	56.93	—	—	67.06	—	—	4.58	—
South Asia	Bangladesh	27.92	17.45	-0.58	66.76	40.03	-1.49	76.45	49.82	-1.48	3.64	2.38	-0.07
	India	23.93	27.93	0.24	57.18	44.40	-0.75	67.75	60.57	-0.42	5.50	3.77	-0.10
	Maldives	—	14.85	—	—	23.08	—	—	33.90	—	—	8.62	—
	Nepal	17.89	12.75	-0.26	62.02	40.76	-1.06	67.81	47.65	-1.01	1.24	1.62	0.02
Sub-Saharan Africa	Burkina Faso	25.28	24.50	-0.04	54.56	45.55	-0.50	64.27	56.96	-0.41	5.67	4.90	-0.04
	Burundi	—	8.96	—	—	67.65	—	—	69.95	—	—	4.39	—
	Cameroon	10.93	9.67	-0.10	43.52	42.57	-0.07	49.29	46.50	-0.21	10.80	10.91	0.01
	Central African Republic	12.32	—	—	46.84	—	—	52.69	—	—	5.74	—	—
	Chad	25.49	21.75	-0.21	59.66	53.93	-0.32	68.97	62.76	-0.34	4.96	4.99	0.00
	Comoros	13.96	19.09	0.32	43.65	39.18	-0.28	50.30	52.13	0.11	7.04	16.97	0.62
	Congo, Dem. Rep.	16.01	13.90	-0.35	58.63	55.23	-0.57	66.60	61.75	-0.81	15.61	8.52	-1.18
	Congo, Rep.	11.61	8.01	-0.60	37.44	29.30	-1.36	45.24	34.82	-1.74	12.23	5.11	-1.19
	Côte d'Ivoire	15.39	12.91	-0.15	38.50	38.62	0.01	45.90	47.13	0.07	4.09	4.97	0.05
Ethiopia	18.38	14.03	-0.27	67.58	47.57	-1.25	72.78	54.66	-1.13	3.17	4.74	0.10	

Continued ...

Region	Country	Wasting prevalence			Stunting prevalence			Wasting or stunting prevalence			Overweight or obesity		
		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 (continued)	Gabon	7.20	5.96	-0.10	35.42	22.30	-1.09	39.39	25.84	-1.13	9.60	12.69	0.26
	Gambia	—	22.94	—	—	38.04	—	—	51.16	—	—	8.52	—
	Ghana	17.19	6.85	-0.49	36.48	22.04	-0.69	45.82	26.40	-0.92	3.88	3.90	0.00
	Guinea	16.89	16.63	-0.02	47.49	39.96	-0.58	55.82	49.23	-0.51	8.40	7.33	-0.08
	Kenya	10.90	5.70	-0.25	50.24	30.92	-0.92	54.34	34.24	-0.96	9.58	6.03	-0.17
	Lesotho	7.92	4.37	-0.36	49.14	35.81	-1.33	54.16	38.63	-1.55	11.06	10.70	-0.04
	Liberia	11.48	9.07	-0.40	47.06	39.53	-1.25	53.21	44.36	-1.48	7.11	5.86	-0.21
	Madagascar	12.20	21.74	1.59	59.99	61.79	0.30	63.57	71.87	1.38	3.85	10.43	1.10
	Malawi	10.24	3.96	-0.27	66.69	42.03	-1.07	69.70	44.56	-1.09	14.85	6.35	-0.37
	Mali	34.68	20.58	-0.78	42.39	49.71	0.41	62.03	60.21	-0.10	3.00	5.62	0.15
	Mozambique	14.93	9.47	-0.39	49.27	54.04	0.34	56.86	59.16	0.16	7.92	12.76	0.35
	Namibia	15.53	12.19	-0.16	45.11	25.71	-0.92	52.07	34.23	-0.85	8.50	6.50	-0.10
	Niger	30.38	30.47	0.00	62.30	59.14	-0.16	71.85	70.46	-0.07	3.69	6.11	0.12
	Nigeria	19.03	27.94	0.89	54.52	47.46	-0.71	63.00	62.02	-0.10	11.84	8.75	-0.31
	Rwanda	13.01	3.24	-0.70	57.23	44.73	-0.89	64.62	46.59	-1.29	10.34	11.45	0.08
	Sao Tome and Principe	—	16.62	—	—	36.84	—	—	50.42	—	—	18.26	—
	Senegal	18.29	19.70	0.08	50.57	44.03	-0.36	56.91	53.62	-0.18	9.58	7.43	-0.12
	Sierra Leone	15.98	15.33	-0.13	46.05	48.82	0.55	55.93	57.26	0.26	17.42	15.42	-0.40
	Swaziland	—	4.54	—	—	34.62	—	—	38.06	—	—	15.86	—
	Tanzania	13.25	7.44	-0.24	61.22	42.54	-0.78	66.86	46.20	-0.86	9.64	5.95	-0.15
Togo	18.14	9.90	-0.55	34.70	32.92	-0.12	45.49	37.93	-0.50	3.89	3.23	-0.04	
Uganda	10.14	6.16	-0.19	55.53	35.41	-0.96	58.78	39.00	-0.94	8.10	6.11	-0.09	
Zambia	10.57	9.41	-0.05	57.97	49.02	-0.41	62.04	55.08	-0.32	7.91	9.85	0.09	
Zimbabwe	7.88	4.90	-0.14	32.12	31.03	-0.05	37.54	34.39	-0.15	9.09	8.38	-0.03	

* Nationally representative and regionally weighted

** All data are from the Demographic and Health Surveys (DHS, <https://dhsprogram.com/>) with the exceptions of China (China Health and Nutrition Survey), Indonesia (Indonesian Family Life Survey), Mexico (Mexico National Survey of Health and Nutrition), Brazil (Brazil National Health Survey), and Vietnam (Vietnam Living Standards Survey).

Supplemental Table S6. Prevalence* of thinness and overweight for women (ages 15–49 years) and annualized change in prevalence from earliest to latest survey years**

Region	Country	Earliest survey year	Latest survey year	Thinness prevalence			Overweight prevalence		
				Earliest year	Latest year	Annualized change	Earliest year	Latest year	Annualized change
East Asia & Pacific	Cambodia	2000	2014	23.84	16.42	-0.53	7.49	21.13	0.97
	China	1991	2015	7.30	10.97	0.15	10.76	25.78	0.63
	Indonesia	1993	2014	16.11	10.93	-0.25	15.24	40.57	1.21
	Myanmar	—	2015	—	18.85	—	—	27.46	—
	Timor-Leste	—	2009	—	30.19	—	—	6.75	—
	Vietnam	1992	2002	34.93	32.73	-0.22	2.32	5.39	0.31
Eastern Europe & Central Asia	Albania	—	2008	—	3.84	—	—	44.22	—
	Armenia	2000	2015	4.46	3.42	-0.07	48.70	47.73	-0.06
	Azerbaijan	—	2006	—	5.92	—	—	54.75	—
	Kazakhstan	1995	1999	8.14	8.61	0.12	42.17	35.64	-1.63
	Kyrgyz Republic	1997	2012	6.74	7.75	0.07	34.44	44.12	0.65
	Moldova	—	2005	—	6.33	—	—	45.78	—
	Tajikistan	—	2012	—	13.42	—	—	40.51	—
	Turkey	1993	2003	2.19	2.43	0.02	50.83	58.91	0.81
Uzbekistan	1996	—	11.71	—	—	27.38	—	—	
Latin America & the Caribbean	Bolivia	1994	2008	2.38	2.03	-0.02	33.59	56.28	1.62
	Brazil	1996	2013	7.29	3.95	-0.20	35.90	48.73	0.75
	Colombia	1995	2010	3.88	5.58	0.11	45.63	53.42	0.52
	Dominican Republic	1991	2013	8.21	7.91	-0.01	23.37	57.15	1.54
	Guatemala	1995	2014	3.62	2.92	-0.04	34.28	62.26	1.47
	Guyana	—	2009	—	11.94	—	—	53.27	—
	Haiti	1994	2017	22.01	12.55	-0.41	11.33	39.37	1.22
	Honduras	2005	2011	4.35	4.91	0.09	54.78	60.25	0.91
	Mexico	1988	2012	14.25	1.78	-0.52	36.24	69.71	1.39
	Nicaragua	1998	2001	4.52	3.82	-0.24	52.99	57.89	1.63
Peru	1992	2012	1.34	1.98	0.03	40.05	60.22	1.01	
Middle East & North Africa	Egypt, Arab Rep.	1992	2014	1.75	0.22	-0.07	56.07	79.64	1.07
	Jordan	1997	2012	2.04	2.84	0.05	62.73	63.17	0.03
	Morocco	1992	2003	3.79	8.72	0.45	32.53	48.14	1.42
	Yemen, Rep.	—	2013	—	28.76	—	—	31.82	—
South Asia	Bangladesh	1996	2014	53.48	21.67	-1.77	2.94	23.63	1.15
	India	1998	2015	39.76	26.86	-0.76	10.90	23.93	0.77
	Maldives	—	2009	—	12.81	—	—	47.94	—
	Nepal	1996	2016	30.41	19.49	-0.55	1.68	26.84	1.26
Sub-Saharan Africa	Burkina Faso	1992	2010	18.28	18.96	0.04	8.07	13.58	0.31
	Burundi	—	2010	—	19.54	—	—	8.42	—
	Cameroon	1998	2011	7.23	8.20	0.07	21.89	40.27	1.41
	Central African Rep.	1994	—	16.79	—	—	6.98	—	—
	Chad	1996	2014	22.42	20.63	-0.10	5.90	13.99	0.45
	Comoros	1996	2012	8.59	8.08	-0.03	19.05	46.03	1.69
	Congo, Dem. Rep.	2007	2013	21.15	15.17	-1.00	14.51	18.66	0.69
	Congo, Rep.	2005	2011	13.65	15.53	0.31	33.88	30.60	-0.55
	Côte d'Ivoire	1994	2011	10.60	9.12	-0.09	16.32	31.40	0.89
	Ethiopia	2000	2016	33.33	23.94	-0.59	3.61	8.17	0.28
	Gabon	2000	2012	7.83	7.39	-0.04	33.22	53.11	1.66
	Gambia	—	2013	—	23.01	—	—	34.56	—
	Ghana	1993	2014	13.00	5.99	-0.33	13.03	43.85	1.47
	Guinea	1999	2012	13.30	16.22	0.22	13.98	24.33	0.80
	Kenya	1993	2014	10.64	9.79	-0.04	14.75	37.69	1.09
	Lesotho	2004	2014	6.35	3.95	-0.24	49.55	52.51	0.30
	Liberia	2007	2013	11.93	9.12	-0.47	24.12	32.68	1.43
	Madagascar	1997	2003	20.69	20.94	0.04	3.89	8.19	0.72
	Malawi	1992	2015	10.27	7.17	-0.14	9.54	23.55	0.61
	Mali	1995	2013	16.57	13.11	-0.19	8.54	20.50	0.66
	Mozambique	1997	2011	11.03	9.07	-0.14	11.41	18.76	0.52
	Namibia	1992	2013	16.67	17.19	0.02	24.05	41.83	0.85
	Niger	1992	2012	21.06	17.83	-0.16	8.90	19.28	0.52
	Nigeria	2003	2013	17.32	12.27	-0.51	25.69	30.40	0.47
	Rwanda	2000	2014	9.63	7.31	-0.17	15.09	23.62	0.61
	Sao Tome and Principe	—	2008	—	8.26	—	—	39.86	—
	Senegal	1992	2010	18.05	29.99	0.66	19.91	34.18	0.79
	Sierra Leone	2008	2013	12.98	10.73	-0.45	33.23	22.99	-2.05
	Swaziland	—	2006	—	3.37	—	—	63.02	—
	Tanzania	1991	2015	10.99	10.22	-0.03	11.73	32.95	0.88
Togo	1998	2013	12.43	8.21	-0.28	12.37	35.26	1.53	
Uganda	1995	2016	10.82	9.35	-0.07	9.19	27.41	0.87	
Zambia	1992	2014	12.25	11.16	-0.05	15.84	26.55	0.49	
Zimbabwe	1994	2015	5.43	6.07	0.03	25.39	41.41	0.76	

* Nationally representative and regionally weighted; ** All data are from the Demographic and Health Surveys (DHS, <https://dhsprogram.com/>) with the exceptions of China (China Health and Nutrition Survey), Indonesia (Indonesian Family Life Survey), Mexico (Mexico National Survey of Health and Nutrition), Brazil (Brazil National Health Survey), and Vietnam (Vietnam Living Standards Survey).

Supplemental Table S7. Prevalence* of overweight and obesity for lowest and highest wealth quintiles, differences in earliest and latest years, and annualized changes in disparity

Region	Country	Earliest year quintiles			Most recent year quintiles			Annualized change (Diff of diff)		
		Year	Poorest prevalence	Richest prevalence	Difference	Year	Poorest prevalence		Richest prevalence	Difference
East Asia & Pacific	Cambodia	2000	2.87	16.92	-14.06	2014	11.69	32.90	-21.21	-0.51
	China	1991	6.06	12.83	-6.77	2015	29.80	22.69	7.11	0.58
	Indonesia	1993	12.23	23.35	-11.12	2014	39.88	40.79	-0.92	0.49
	Myanmar	—	—	—	—	2015	15.41	42.09	-26.68	—
	Timor-Leste	—	—	—	—	2009	2.89	15.18	-12.29	—
	Vietnam	1992	1.12	4.49	-3.38	2002	2.47	10.22	-7.75	-0.44
Europe & Central Asia	Albania	—	—	—	—	2008	38.94	40.84	-1.90	—
	Armenia	2000	43.31	50.22	-6.91	2015	48.88	46.71	2.17	0.61
	Azerbaijan	—	—	—	—	2006	42.51	60.48	-17.98	—
	Kazakhstan	1995	36.70	41.66	-4.96	1999	38.08	34.40	3.68	2.16
	Kyrgyz Republic	1997	27.59	36.44	-8.85	2012	48.52	40.61	7.91	1.12
	Moldova	—	—	—	—	2005	47.81	41.68	6.13	—
	Tajikistan	—	—	—	—	2012	29.40	45.91	-16.52	—
	Turkey	1993	41.95	48.96	-7.01	2003	52.56	50.24	2.32	0.93
Uzbekistan	1996	20.37	31.11	-10.75	—	—	—	—	—	
Latin America & the Caribbean	Bolivia	1994	21.06	43.20	-22.14	2008	43.24	56.24	-13.00	0.65
	Brazil	1996	28.60	33.30	-4.70	2013	53.37	41.10	12.27	1.00
	Colombia	1995	34.64	52.67	-18.02	2010	52.63	51.47	1.16	1.28
	Dominican Republic	1996	34.27	53.67	-19.40	2013	51.04	57.65	-6.62	0.75
	Guatemala	1995	22.45	57.48	-35.03	2014	46.65	70.15	-23.50	0.61
	Guyana	—	—	—	—	2009	51.01	57.86	-6.85	—
	Haiti	1994	4.22	31.32	-27.11	2017	20.04	60.57	-40.53	-0.58
	Honduras	2005	32.81	65.70	-32.89	2011	43.48	67.10	-23.63	1.54
	Mexico	1988	29.25	34.59	-5.33	2012	67.44	65.55	1.89	0.30
	Nicaragua	1998	34.79	61.83	-27.04	2001	37.47	66.58	-29.10	-0.69
Peru	1992	28.67	49.58	-20.91	2012	47.76	61.47	-13.72	0.36	
Middle East & North Africa	Egypt, Arab Rep.	1995	30.59	73.55	-42.96	2014	78.36	81.95	-3.59	2.07
	Jordan	1997	57.77	62.38	-4.61	2012	64.65	51.32	13.33	1.20
	Morocco	1992	16.19	51.47	-35.28	2003	31.77	57.45	-25.68	0.87
	Yemen, Rep.	—	—	—	—	2013	8.55	56.12	-47.57	—
South Asia	Bangladesh	1996	0.61	17.41	-16.81	2014	8.15	46.89	-38.74	-1.22
	India	1998	1.64	29.18	-27.54	2015	6.96	41.06	-34.09	-0.39
	Maldives	—	—	—	—	2009	38.04	54.91	-16.87	—
	Nepal	1996	1.03	9.25	-8.22	2016	12.07	52.82	-40.75	-1.63
Sub-Saharan Africa	Burkina Faso	1992	4.78	22.01	-17.23	2010	4.49	39.29	-34.81	-0.98
	Burundi	—	—	—	—	2010	3.97	24.84	-20.87	—
	Cameroon	1998	8.76	39.41	-30.65	2011	12.14	61.43	-49.29	-1.43
	Central African Republic	1994	4.18	17.27	-13.10	—	—	—	—	—
	Chad	1996	2.72	17.70	-14.98	2014	8.78	33.89	-25.12	-0.56
	Comoros	1996	17.09	28.51	-11.42	2012	34.34	57.49	-23.16	-0.73
	Congo, Dem. Rep.	2007	9.26	40.48	-31.22	2013	7.36	47.62	-40.25	-1.50
	Congo, Rep.	2005	17.38	53.91	-36.53	2011	13.58	57.41	-43.83	-1.22
	Côte d'Ivoire	1994	5.62	33.41	-27.79	2011	13.41	54.65	-41.23	-0.79
	Ethiopia	2000	1.29	11.24	-9.95	2016	2.90	23.83	-20.93	-0.69
	Gabon	2000	16.49	46.51	-30.02	2012	35.54	60.56	-25.01	0.42
	Gambia	—	—	—	—	2013	23.27	51.57	-28.30	—
	Ghana	1993	5.48	29.81	-24.33	2014	16.67	63.89	-47.21	-1.09
	Guinea	1999	5.65	36.99	-31.34	2012	7.61	51.00	-43.38	-0.93
	Kenya	1993	9.61	29.53	-19.92	2014	13.57	58.91	-45.34	-1.21
	Lesotho	2004	32.86	64.87	-32.02	2014	29.63	64.33	-34.70	-0.27
	Liberia	2007	11.45	45.11	-33.66	2013	19.52	51.71	-32.18	0.25
	Madagascar	1997	2.66	12.28	-9.62	2003	3.24	17.23	-13.99	-0.73
	Malawi	1992	4.11	18.86	-14.74	2015	13.35	42.70	-29.35	-0.64
	Mali	1995	4.02	25.52	-21.51	2013	13.18	42.76	-29.57	-0.45
	Mozambique	1997	4.34	30.72	-26.38	2011	6.58	48.23	-41.65	-1.09
	Namibia	1992	10.27	50.59	-40.32	2013	17.28	61.65	-44.37	-0.19
	Niger	1998	3.88	30.63	-26.75	2012	11.23	43.56	-32.33	-0.40
	Nigeria	2003	12.98	45.18	-32.20	2013	12.50	50.27	-37.77	-0.56
	Rwanda	2000	10.49	28.39	-17.89	2014	11.65	45.55	-33.90	-1.14
	Sao Tome and Principe	—	—	—	—	2008	31.17	51.62	-20.45	—
	Senegal	2005	15.48	61.11	-45.62	2010	17.19	45.32	-28.12	3.50
	Sierra Leone	2008	27.02	49.89	-22.87	2013	12.47	45.54	-33.07	-2.04
	Swaziland	—	—	—	—	2006	49.43	70.65	-21.22	—
	Tanzania	1996	7.15	31.81	-24.66	2015	14.73	59.79	-45.06	-1.07
	Togo	1998	6.07	31.81	-25.74	2013	14.57	60.01	-45.44	-1.31
	Uganda	1995	4.91	19.25	-14.35	2016	9.80	52.37	-42.57	-1.34
Zambia	1996	6.98	23.83	-16.85	2014	10.19	49.19	-39.00	-1.23	
Zimbabwe	1994	15.24	39.23	-23.99	2015	23.38	61.15	-37.78	-0.66	

* All data weighted to be nationally representative; Data sources: All data are from the Demographic and Health Surveys (DHS, <https://dhsprogram.com/>) with the exceptions of China (China Health and Nutrition Survey), Indonesia (Indonesian Family Life Survey), Mexico (Mexico's National Survey of Health and Nutrition), Brazil (Brazilian National Health Survey), and Vietnam (Vietnam Living Standards Survey).

Supplemental Table S8. Total estimated sales volumes and annualized change in sales volume of sugar-sweetened beverages* 2004 and 2017

Region	Country**	mL per capita per day		Annualized change
		2014	2017	
East Asia & Pacific	Cambodia	19.18	41.64	1.60
	China	38.63	84.11	3.25
	Indonesia	23.56	57.53	2.43
	Lao People's Democratic Rep	19.45	43.01	1.68
	Malaysia	73.42	120.00	3.33
	Myanmar	6.85	15.07	0.59
	Philippines (The)	114.52	164.66	3.58
	Thailand	106.58	157.53	3.64
	Viet Nam	18.08	116.16	7.01
Europe & Central Asia	Bulgaria	221.10	289.04	4.85
	Romania	183.56	278.90	6.81
	Turkey	104.93	165.75	4.34
	Ukraine	79.73	101.37	1.55
Latin America & Caribbean	Argentina	465.75	363.01	-7.34
	Brazil	196.71	202.47	0.41
	Colombia	163.56	198.90	2.52
	El Salvador	213.70	273.42	4.27
	Honduras	121.37	136.16	1.06
	Mexico	410.14	452.60	3.03
	Panama	209.59	215.89	0.45
	Paraguay	117.81	214.52	6.91
	Peru	118.36	224.93	7.61
Middle East & North Africa	Egypt	78.90	104.38	1.82
	Iraq	59.18	91.51	2.31
	Jordan	90.68	118.08	1.96
	Lebanon	95.07	129.59	2.47
	Morocco	45.21	46.30	0.08
South Asia	India	5.75	15.89	0.72
Sub-Saharan Africa	Angola	20.00	43.56	1.68
	Ethiopia	6.30	20.00	0.98
	Ghana	11.78	37.81	1.86
	Nigeria	23.01	35.89	0.92
	South Africa	157.81	266.58	7.77
		Tanzania	4.93	7.12

* Sugar-sweetened beverages include regular cola carbonates, non-cola carbonates (e.g., lemon/lime and orange carbonates, ginger ale, mixers), liquid and powder concentrates, juice drinks (up to 24% juice), nectars (25-99% juice), ready-to-drink coffees and teas, sports and energy drinks, and Asian specialty drinks.

** Included are low- and middle-income countries for which Euromonitor had data for the majority of sugar-sweetened beverage categories; countries with modeled data were excluded.

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Supplemental Table S9. Total estimated sales volumes and annualized changes in sales volume of nonessential junk foods* for 2004 and 2017

Region	Country**	grams per capita per day		Annualized change
		2004	2017	
East Asia & Pacific	China	18.90	38.90	1.43
	Indonesia	11.51	19.18	0.55
	Malaysia	25.48	31.51	0.43
	Philippines	13.70	18.36	0.33
	Thailand	7.95	15.89	0.57
	Viet Nam	3.84	12.60	0.63
Europe & Central Asia	Bulgaria	35.89	47.40	0.82
	Romania	23.84	49.32	1.82
	Turkey	50.14	80.82	2.19
	Ukraine	35.89	37.81	0.14
Latin America & Caribbean	Argentina	76.99	87.95	0.78
	Brazil	44.38	51.78	0.53
	Colombia	24.38	30.96	0.47
	Mexico	75.07	75.07	0.00
Middle East & North Africa	Algeria	31.23	29.86	-0.10
	Egypt	19.73	34.79	1.08
	Morocco	3.01	9.04	0.43
	Tunisia	3.01	3.56	0.04
South Asia	India	27.12	39.73	0.90
Sub-Saharan Africa	Nigeria	18.90	38.90	1.43
	South Africa	11.51	19.18	0.55

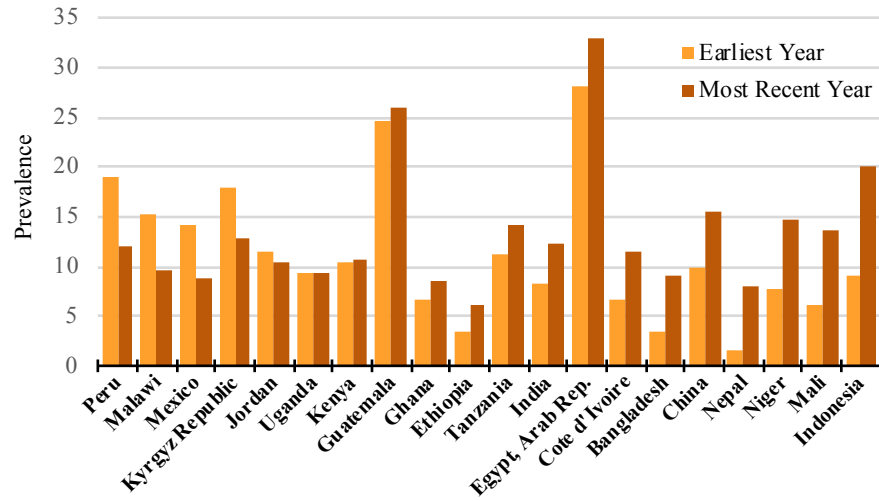
* Nonessential junk foods include cakes, pastries, chocolate & sugar confectionery, chilled and shelf-stable desserts, frozen baked goods, frozen desserts, ice cream, sweet biscuits, snack bars, processed fruit snacks, salty snacks, savoury biscuits, popcorn, and other savoury snacks.

** Included are low- and middle-income countries for which Euromonitor had data for the majority of junk food categories; countries with modeled data were excluded.

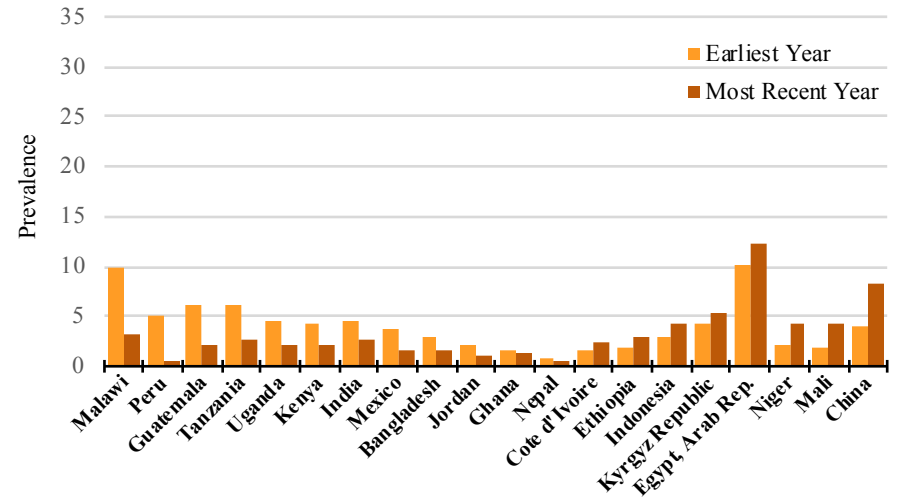
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Supplemental Figure S1. Changes in nationally representative prevalence of individual preschooler and household double burden from selected countries' earliest to latest survey years,* weighted by 2010 populations

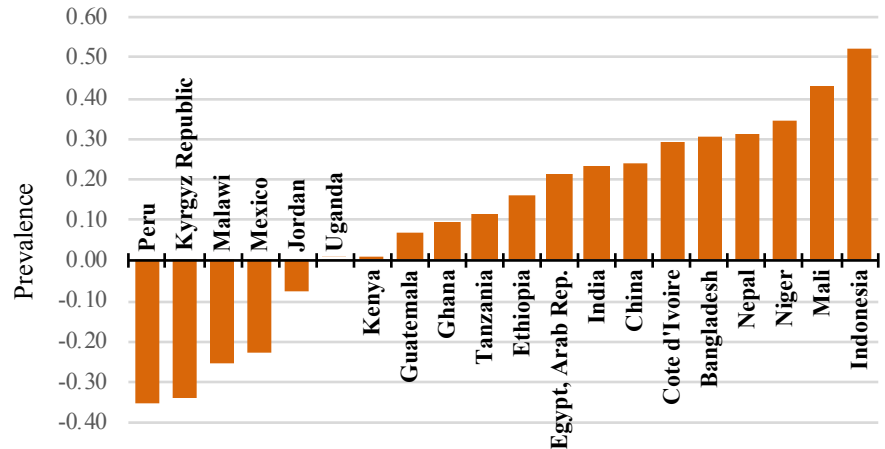
S1a. Total double burden: Overweight in woman or child + wasting or stunting in child or thinness in woman



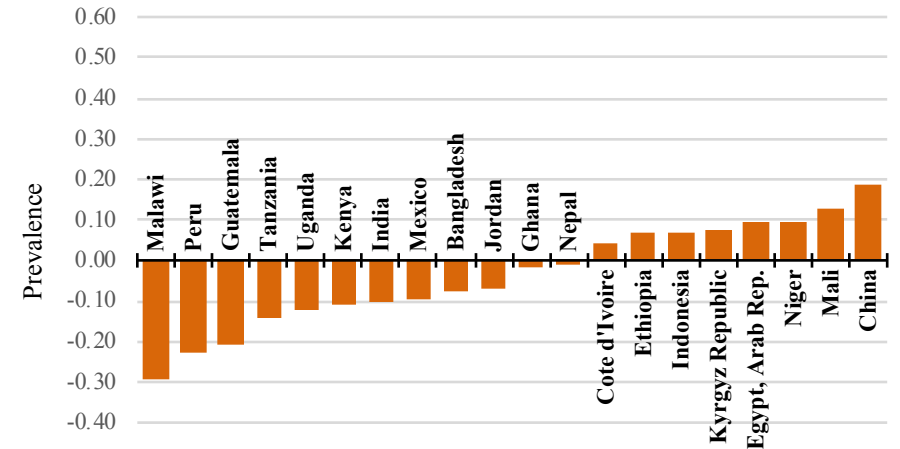
S1c. Overweight + stunting in single child



S1b. Total double burden: Annualized change in overweight in woman or child + wasting or stunting in child or thinness in woman

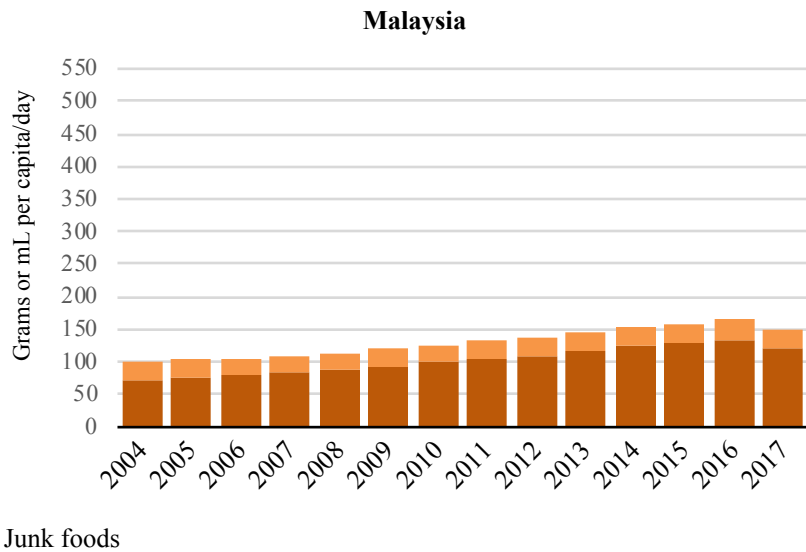
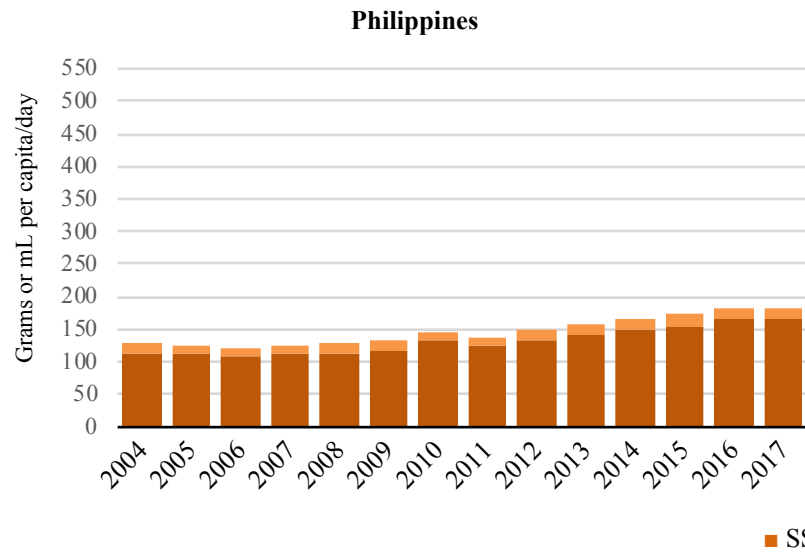
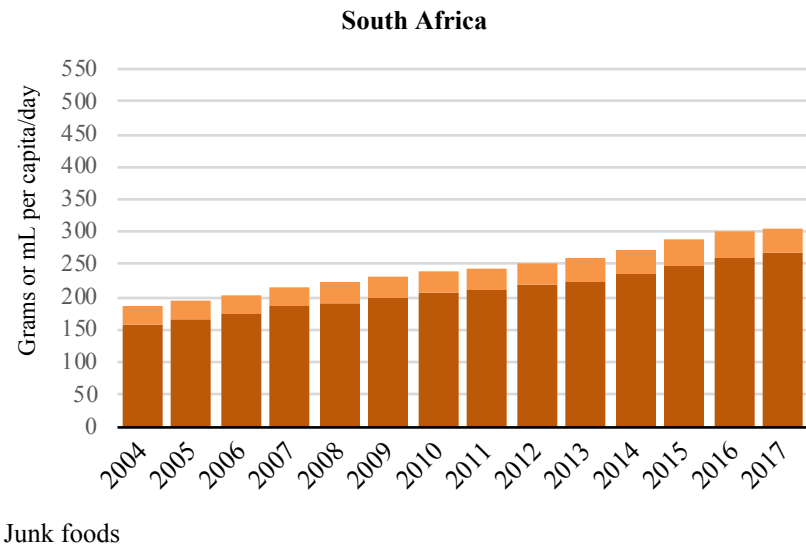
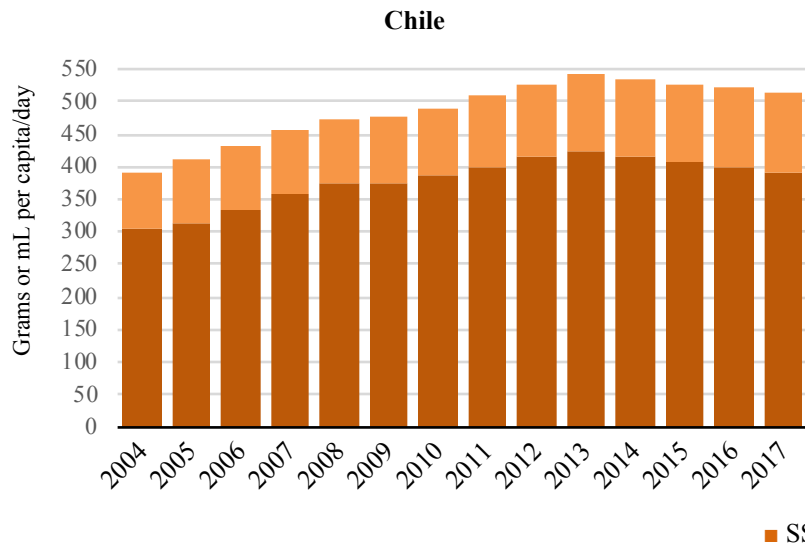


S1d. Annualized Change in overweight + stunting in single child



* Countries presented here had earliest-to-latest-year data spanning 15 or more years, latest-year data after 2010, and a population greater than ≈ 15 million (with the exception of Jordan and Kyrgyz Republic, which both had smaller populations but were included for regional representation). The data presented is from years spanning 1988 to 2016, but exact years vary by country. The span of earliest-to-latest years collected ranges from 15 years to 24 years. All data are from the Demographic and Health Surveys (DHS, <https://dhsprogram.com/>) with the exceptions of China (China Health and Nutrition Survey), Indonesia (Indonesian Family Life Survey), Mexico (Mexico National Survey of Health and Nutrition), Brazil (Brazil National Health Survey), and Vietnam (Vietnam Living Standards Survey).

Supplemental Figure S2. Trends in estimated total SSB* and junk food sales volumes, 2004–2017**

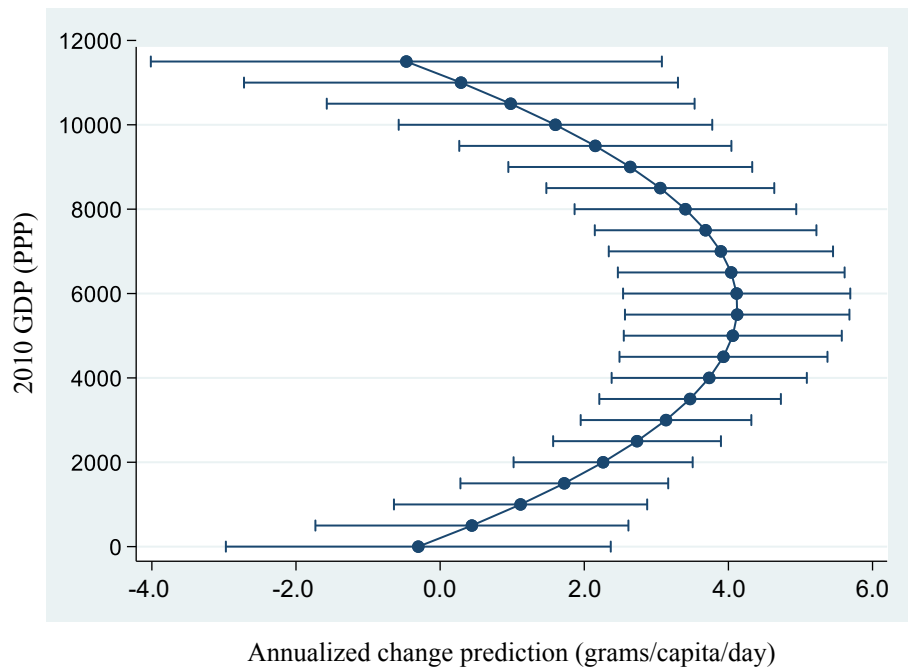


* Sugar-sweetened beverages (SSBs): include regular cola carbonates, non-cola carbonates (i.e., lemon/lime and orange carbonates, ginger ale, mixers), liquid and powder concentrates, juice drinks (up to 24% juice), nectars (25–99% juice), ready-to-drink coffees and teas, sports and energy drinks, and Asian specialty drinks.

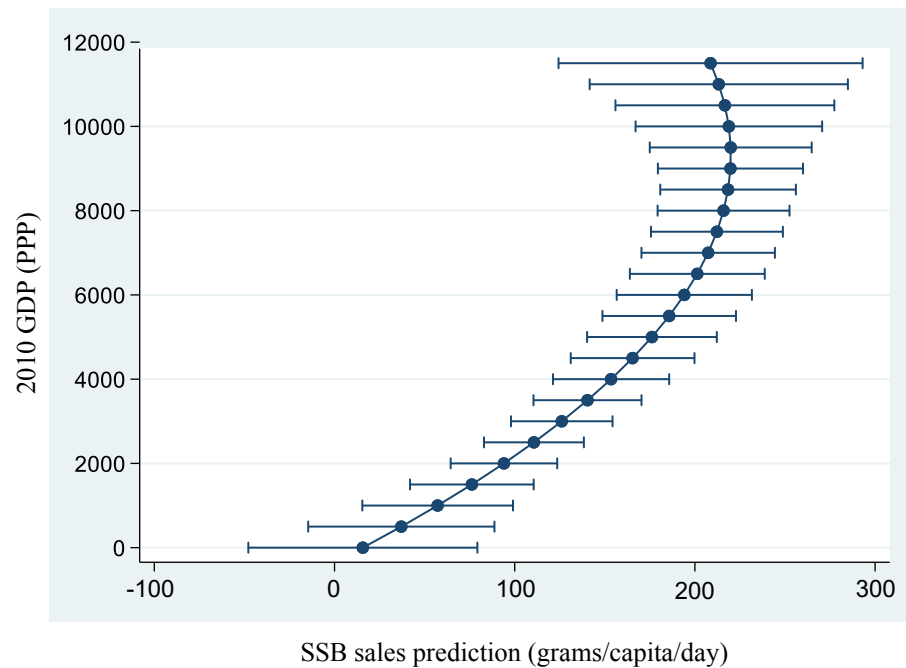
** “Junk” foods include cakes, pastries, confectionery, chilled and shelf-stable desserts and snacks, frozen desserts, ice cream, flavored yogurts, sweet biscuits, snack bars, processed fruit snacks, salty snacks, savory biscuits, popcorn, and other savory snacks.

Supplemental Figure S3. Regressions of global trends in estimated total SSB* sales in LMICs**

S3a. Annualized change in SSB sales, 2004–2017



S3b. 2017 SSB sales

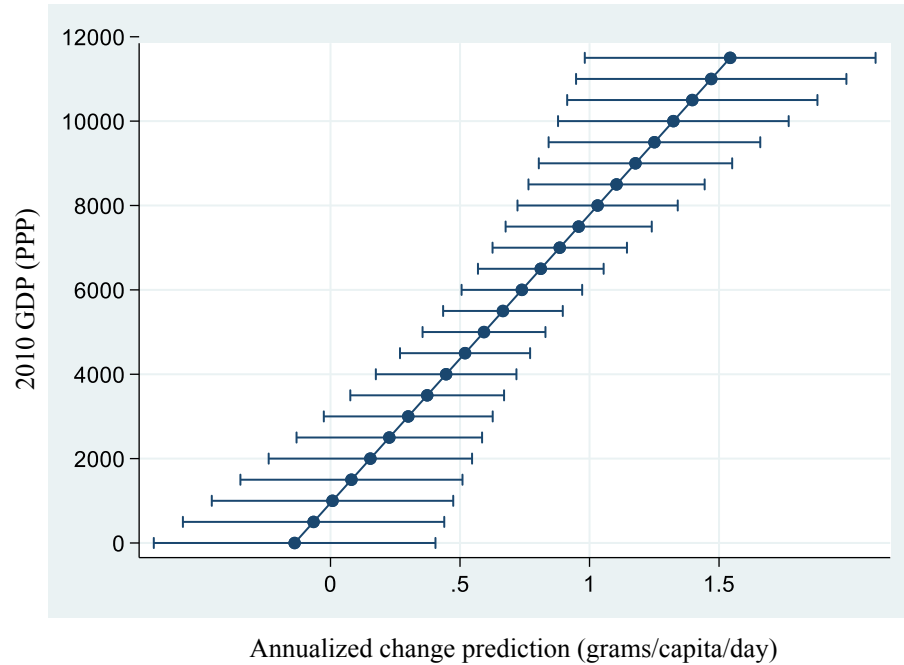


* Sugar-sweetened beverages (SSBs) include regular cola carbonates, noncola carbonates (e.g., lemon/lime and orange carbonates, ginger ale, mixers), liquid and powder concentrates, juice drinks (up to 24% juice), nectars (25–99% juice), ready-to-drink coffees and teas, sports and energy drinks, and Asian specialty drinks.

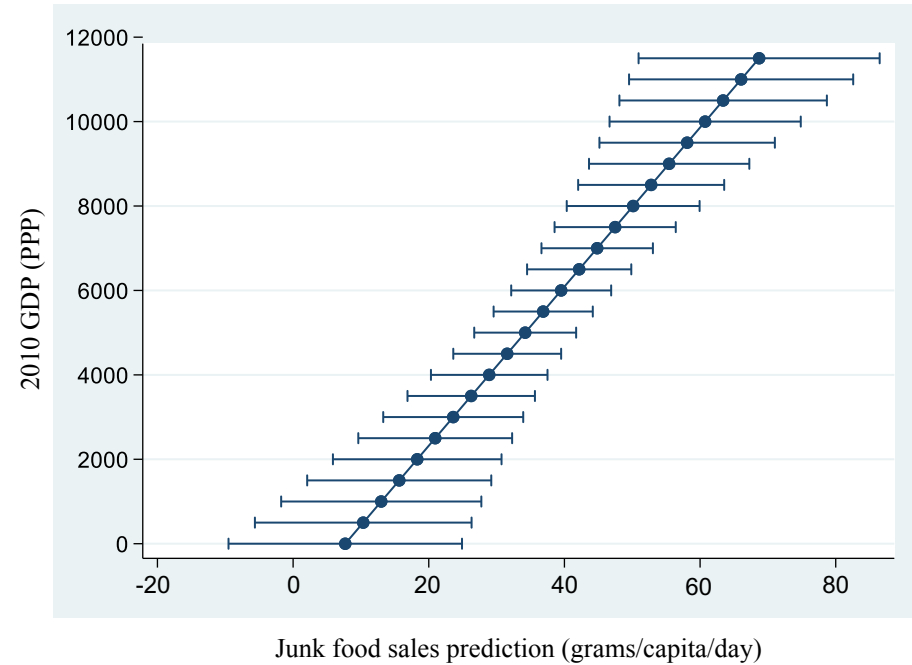
** Low- and middle-income countries: includes LMICs for which Euromonitor had data for the majority of SSB categories. Countries with modeled data were excluded. Data source: Euromonitor International Limited 2018 © All rights reserved

Supplemental Figure S4. Regressions of global trends in estimated total junk food* sales in LMICs**

S4a. Annualized change in junk food sales, 2004–2017



S4b. 2017 junk food sales

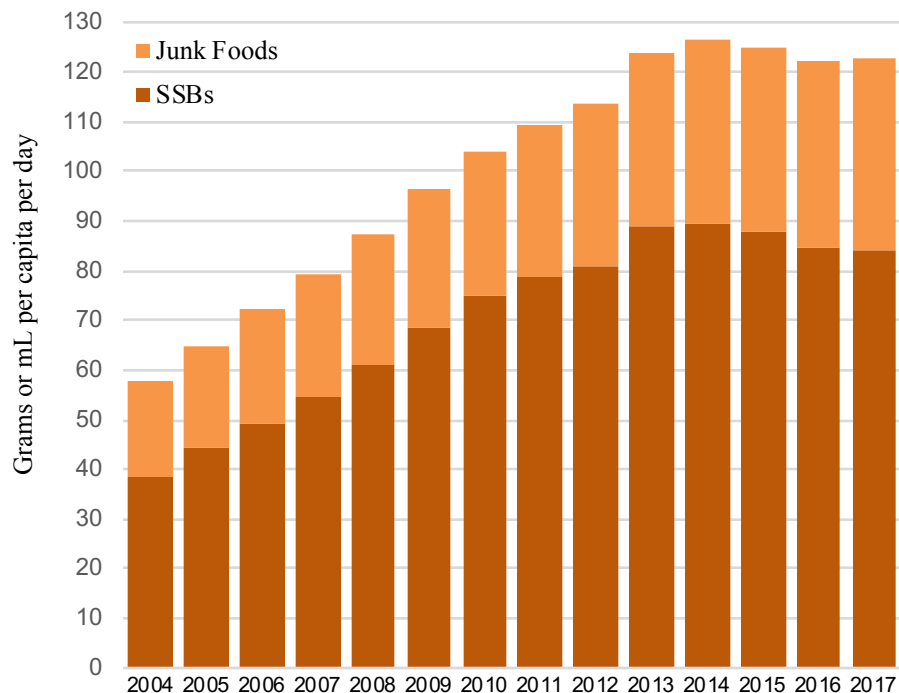


* “Junk” foods include cakes, pastries, chocolate & sugar confectioneries, chilled and shelf-stable desserts, frozen baked goods, frozen desserts, ice cream, sweet biscuits, snack bars, processed fruit snacks, salty snacks, savory biscuits, popcorn, pretzels, and other savory snacks.

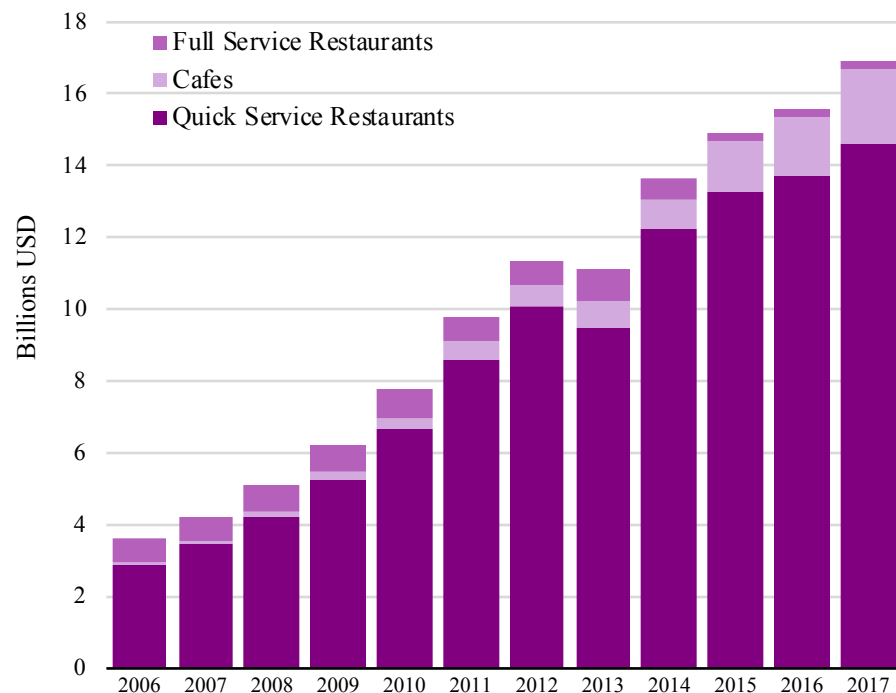
** Low- and middle-income countries: includes LMICs for which Euromonitor had data for the majority of SSB categories. Countries with modeled data were excluded. Data source: Euromonitor International Limited 2018 © All rights reserved

Supplemental Figure S5. Trends in estimated total SSB* and junk food sales and restaurant*** banner sales in China**

S5a. Trends in estimated total retail + foodservice sales volumes for SSBs* and junk foods, 2004–2017**



S5b. Trends in total banner sales from quick-service, café, and full-service restaurant retailers, 2006–2017



Data source: Euromonitor International Limited 2018 © All rights reserved

Source: Authors' analysis of data from www.Planetretail.net.

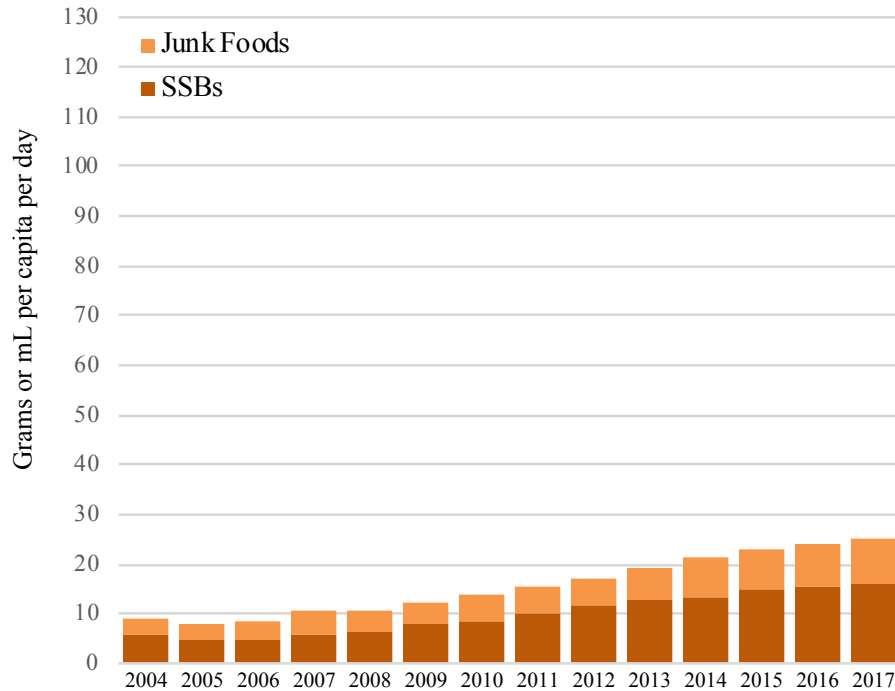
* Sugar-sweetened beverages (SSBs): include regular cola carbonates, non-cola carbonates (i.e., lemon/lime and orange carbonates, ginger ale, mixers, and other non-cola carbonates), liquid and powder concentrates, juice drinks (up to 24% juice), nectars (25–99% juice), ready-to-drink coffees and teas, sports and energy drinks, and Asian specialty drinks

** “Junk” foods include cakes, pastries, confectionery, 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.

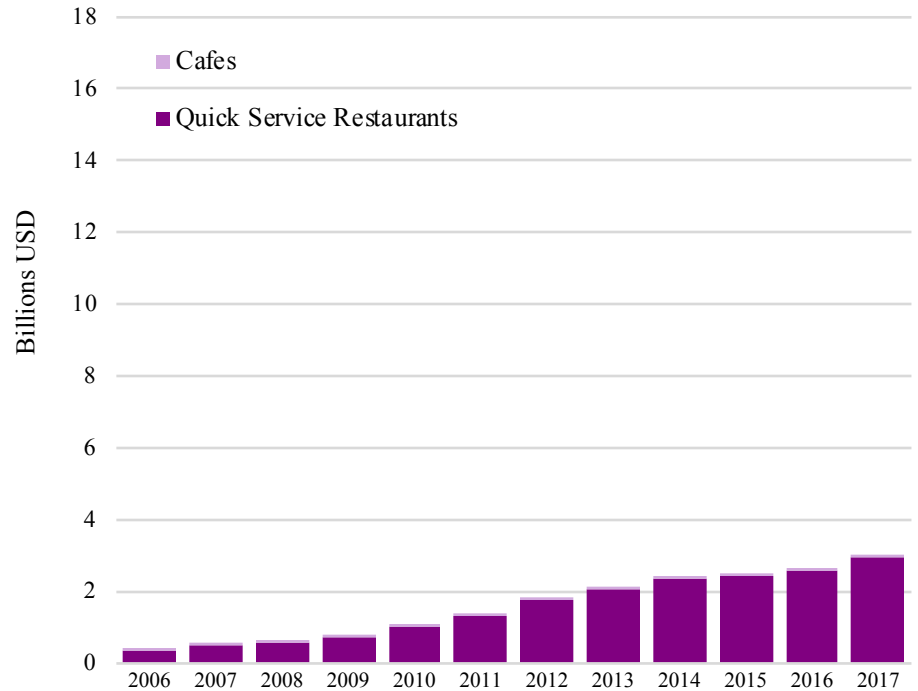
*** Cafes include bars, coffee shops/tea houses, pubs, and snack bars. Quick service restaurants include Arab-style fast food, Asian fast food, fast food chicken outlets, fish & chips/seafood, hamburger outlets, ice cream & juices, Mexican fast food, pizza/pasta fast food, and sandwich outlets. Full service restaurants include American-style restaurants, Asian restaurants, barbecue/steakhouse, buffet-style restaurants, Caribbean-style restaurants, Italian restaurants, Mexican restaurants, restaurants, seafood restaurants, tapas, and theme restaurants. Sales figures are for food retail chains PlanetRetail followed per country. PlanetRetail follows the leading national chains, not smaller chains, independents, or regional chains in a country. The total sales for a given country are thus an underestimate of all modern food retail sales but the trends are meaningful.

Supplemental Figure S6. Trends in estimated total SSB* and junk food sales and restaurant*** banner sales in India**

S6a. Trends in estimated total retail + foodservice sales volumes for sugar-sweetened beverages* and junk foods, 2004–2017**



S6b. Trends in total banner sales from quick-service, café, and full-service restaurant retailers, 2006–2017



Data source: Euromonitor International Limited 2018 © All rights reserved

Source: Authors' analysis of data from www.PlanetRetail.net.

* Sugar-sweetened beverages: include regular cola carbonates, non-cola carbonates (i.e., lemon/lime and orange carbonates, ginger ale, mixers, and other non-cola carbonates), liquid and powder concentrates, juice drinks (up to 24% juice), nectars (25–99% juice), ready-to-drink coffees and teas, sports and energy drinks, and Asian specialty drinks

** “Junk” foods include cakes, pastries, confectionery, 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.

*** Cafes include bars, coffee shops/tea houses, pubs, and snack bars. Quick service restaurants include Arab-style fast food, Asian fast food, fast food chicken outlets, fish & chips/seafood, hamburger outlets, ice cream & juices, Mexican fast food, pizza/pasta fast food, and sandwich outlets. Full service restaurants include American-style restaurants, Asian restaurants, barbecue/steakhouse, buffet-style restaurants, Caribbean-style restaurants, Italian restaurants, Mexican restaurants, restaurants, seafood restaurants, tapas, and theme restaurants. Sales figures are for food retail chains PlanetRetail followed per country. PlanetRetail follows the leading national chains, not smaller chains, independents, or regional chains in a country. The total sales for a given country are thus an underestimate of all modern food retail sales but the trends are meaningful.