



CARBONATING THE WORLD

The Marketing and Health Impact of Sugar Drinks
in Low- and Middle-income Countries

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By Allyn L. Taylor, J.D., LL.M, JSD, and Michael F. Jacobson, Ph.D.



“Willie Sutton used to say he robbed banks because that is where the money is. Well, we are increasingly global because 95 percent of the world’s consumers are outside this country. It’s that simple.”¹

Roberto Guzieta, CEO (1971), The Coca-Cola Co.

This report was written by Allyn L. Taylor, affiliate professor of law at the University of Washington School of Law, and Michael F. Jacobson, president of the Center for Science in the Public Interest.

The Center for Science in the Public Interest (CSPI), founded in 1971, is a non-profit health-advocacy organization. CSPI conducts innovative research and advocacy programs in the area of nutrition and food safety and has been particularly concerned about over-consumption of sugar drinks. CSPI is supported by the subscribers to its *Nutrition Action Healthletter* and foundation grants.

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Center for Science in the Public Interest

1220 L Street, NW, Suite 300 • Washington, DC 20005

Tel: (202) 332-9110 • Fax: (202) 265-4954

E-mail: cspi@cspinet.org • Internet: www.cspi.net

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Abbreviations:

- ASCI – Advertising Standards Council of India
- BMI – body mass index
- CEO – chief executive officer
- CSR – corporate social responsibility
- HDL – high-density lipoprotein (“good” blood cholesterol)
- HFCS – high-fructose corn syrup
- ICBA – International Council of Beverages Association
- IFBA – International Food and Beverage Alliance
- IFC – International Finance Corporation
- LDL – low-density lipoprotein (“bad” blood cholesterol)
- LMIC – low- and middle-income countries
- MDC – micro distribution centers
- PPPs – public private partnerships
- SSB – sugar-sweetened beverage
- TBT – Technical Barriers to Trade
- WHO – World Health Organization
- WTO – World Trade Organization

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Executive Summary

Public health officials, researchers, health advocates, and the public have become increasingly concerned about the over-consumption of sugar-sweetened beverages (SSBs, including sugar-sweetened carbonated soft drinks, energy drinks, teas, fruit drinks, and others), because scientific research has determined that excessive consumption increases the risks of tooth decay, obesity, diabetes, and heart disease. Publicity in the United States about that evidence, for example, has helped decrease per-capita consumption of sugar drinks by 25 percent between 1998 and 2014. Declines have also occurred in other high-income nations. However, that is not the case globally.

The two major global soft-drink producers, Coca-Cola and PepsiCo, have sought to maintain their profits in the face of declining sales in wealthier countries by, like the tobacco industry, investing heavily in low- and middle-income countries. Thus, both companies, as well as other multinational and local beverage producers, are spending several billion dollars a year in such countries as Brazil, China, India, and Mexico to build bottling plants, create distribution networks, and advertise their products to maximize sales.

The effects of intensive marketing of sugar drinks may best be seen in Mexico. That country is one of the biggest consumers of those drinks and has some of the highest rates of obesity in the world. The Mexican government is seeking to reverse that health crisis by imposing a modest excise tax on sugar drinks (and a sales tax on snack foods), with industry fighting back vigorously. However, few other countries have adopted any measures to prevent or reduce excessive consumption of sugar drinks and the serious health and costly health-care consequences that are sure to follow.

Some companies have voluntarily disclosed calories on containers and refrained from selling sugar drinks in schools, but they have opposed legislation and their timid self-regulatory measures have done little to restrain the marketing or consumption of the products. Hence, for the sake of the public's health, nations, the World Health Organization, companies, and civil society need to take more vigorous steps, including:

Countries should:

- Make improved nutrition (regarding SSBs and other parts of the diet) a top priority, especially in light of the global obesity epidemic. Health ministries should work with other relevant ministries (including taxation, agriculture, justice, and trade), as well as with civil society organizations.
- Restrict the sugar content of beverages to about one-fourth of current levels—probably the simplest, most effective way to prevent health problems related to added sugars.
- Levy excise taxes on sugar drinks that would boost prices by at least 10 to 20 percent, using the revenues to sponsor health programs.

- Mount well-funded public-education campaigns to discourage consumption of sugar drinks (and other unhealthy foods).
- Protect children by barring the advertising and sale of SSBs (and other unhealthy foods) in schools and advertisements for sugar drinks in all media (including the Internet, mobile media, and packaging) directed at children.
- Bar or limit sugar drinks (and other unhealthy foods) on the government's own property, such as schools, office buildings, prisons, and parks.
- Require easily understood nutrition labels for foods high in added sugars (or sodium or saturated fat), as Ecuador and Chile are doing.
- Require warning labels on SSB containers and warning notices in advertising for SSBs.
- Bar sugar drinks on children's restaurant menus, and ensure safe, free water at all public places where children study and play.

The World Health Organization should:

- Hold trainings at the WHO regional offices for national health officials and provide technical assistance to help countries strengthen policies, including establish legal frameworks to discourage consumption of SSBs.
- Establish a global database of laws and implementing regulations that countries have adopted to discourage the consumption of SSBs, especially by youths, along with evidence of the effectiveness of such policies.
- Provide countries with toolkits for reducing the consumption of sugar drinks and provide technical assistance; the toolkits should include fact sheets on projected consumption levels, the health effects of sugar drinks, and model legislation.
- Hold consultations on the development of a treaty or non-binding international legal instrument to establish global standards on the labeling and marketing of sugar drinks and other unhealthy foods.
- Support research on the comparative effectiveness of legislative approaches to discourage youth consumption of SSBs in order to strengthen the evidence base for effective action.
- Set an example by removing sugar drinks from WHO facilities in Geneva and elsewhere—as well as at all other units of the United Nations—and not serving sugar drinks at meetings and conferences.

Beverage companies should:

- Acknowledge that heavy consumption of their full-calorie products contributes to obesity and other health problems.

- Stop all forms of marketing that are intended or likely to influence children under 12.
- Reduce container sizes (for instance, no container larger than 1.5 liters, with smaller containers reduced in size).
- Include a notice on containers disclosing adverse health effects.
- Reduce the calorie content of drinks to no more than 40 calories per 355 ml (12 oz.) by selling less-sweet drinks or using non-caloric sweeteners.
- Stop opposing governmental measures aimed at reducing the harm from sugar drinks.
- Discontinue advertising and indirect promotions of caloric beverages.

Restaurants should:

- Drop sugar drinks from kids menus.
- List the calorie content next to each dish.
- Limit serving sizes of drinks to about 500 ml.

Civil society organizations should:

- Educate the public and policy makers about the health impact of SSBs and behavior of SSB marketers.
- Obtain funding from international development donors to conduct awareness campaigns, advocate legislation, and evaluate policy actions.
- Advocate for laws and policies at the local, national, and international levels, using education, legislation, litigation, and shareholder actions, to prevent health harm from SSBs.
- Advocate for the recognition of SSBs as a global-health and -development issue and discourage international financial institutions from subsidizing the SSB industry.
- Monitor the activities of industry and its compliance with voluntary commitments and with laws.
- Evaluate the impact of voluntary and legal measures.
- Discourage athletes, celebrities, and sports organizations from promoting SSBs.
- Create an international coalition of health, public interest, and research organizations to collect country-level data on public and private actions and advocate for strong international, national, and local actions to reduce the harm from unhealthy SSBs and foods and oppose the westernization of traditional diets.

Preface

By Alejandro Calvillo Unna, *El Poder del Consumidor*, Mexico

The high consumption of sugar-sweetened beverages is spreading like an epidemic all over the planet and has brought catastrophic consequences to human health in a growing number of countries. This is a silent catastrophe, for which official statistics of the casualties to date have been provided but the origins have yet to be explained. The main causes have not been revealed, as governments are afraid to raise a finger to point them out. Families suffer the consequences, the most visible ones being obesity and diabetes, but they refrain from speaking about it or where it came from.

Overweight, obesity, and diabetes have been spreading throughout the world hand in hand with the consumption of ultra-processed foods, especially sugar-sweetened beverages. My country, Mexico, has almost the highest per capita consumption of sugary drinks in the world, where 70 percent of added-sugar consumption comes from those products. You can stand in front of any audience and ask who has a relative with diabetes, and a landscape full of hands will rise before you, revealing a tragedy that has already caught up to us.

Every hand raised is a human story, the majority of which are already tragedies or will shortly become one. In countries with limited resources, disease prevention is non-existent, and both early detection and early treatment are exceptionally rare. By the time a person has seen a doctor, the disease has already progressed. This is how in many countries diabetes is becoming a leading cause of death, amputations, and blindness.

The infiltration of sugary drinks into consumer habits and, in many cases, consumer addictions is the result of some of the most expensive marketing campaigns in the era of the consumer society, backed by the omnipresence of the product. In many places throughout the globe, it is easier to find a Coca-Cola than clean water.

In regions where poverty prevails and most people do not participate in the world of hyper-consumption, drinking a Coke or other extremely sugary and intensely marketed drink is the result of an aspirational act—the desire to belong to a world from which they are excluded. Those instances of marketing “happiness,” of belonging to that advertised world, are accompanied by the activation of pleasure centers in the brain by the high quantities of sugar. Companies take advantage of the vulnerability of those communities to market their products. The result: racially and culturally discriminatory marketing practices that worsen the poor health conditions and marginalization these groups already experience.

Although Big Soda does not want consumers to know the most basic information about its products (their sugar content); although it wants to sow doubt that sugary

beverages cause overweight, obesity, diabetes, cancer, and heart disease; and although it wants to continue using deceptive marketing strategies to maximize consumption, it is imperative to speak out, to expose, to shed light, to point the finger.

Despite Big Soda's enormous economic and political power, the joint action of citizen organizations, health professionals, academics, and public servants of local, national, and international bodies is beginning to take the offensive: sugary drinks are being removed from schools and public spaces, bold nutrition labels are being placed on products, taxes are being levied, and marketing is being regulated. And most importantly, despite multi-million-dollar marketing campaigns, more and more consumers no longer associate these drinks with happiness, but with disease.

With this report, the Center for Science in the Public Interest contributes to the efforts of this movement by unveiling the marketing strategies of Big Soda in countries from Mexico to Ghana to Indonesia and by highlighting efforts being made around the world to regulate the products. This is a victory in progress that will protect consumers the world over.

Introduction

Obesity has emerged as a global public health crisis. Though once considered a health concern afflicting only high-income countries, over the past quarter-century obesity and chronic diet-related diseases have spread to low- and middle-income countries (LMIC) as well. Now, most countries face rising and daunting obesity rates.

In parallel with the obesity epidemic, medical research has established that sugar drinks—carbonated colas and energy drinks and non-carbonated fruit drinks, sports drinks, sweetened teas, and the like—are potent (though hardly the only) contributors to weight gain and obesity, as well as other health problems. That's especially the case in the countries, such as Mexico and the United States, which are among the biggest consumers of those drinks. But more and more countries are drinking more and more soft drinks.

Noting that 600 million teenagers had not consumed a Coke in the past week, Coca-Cola International president Ahmet Bozer, saw a \$300 billion growth opportunity for new sales outside of North America between 2014 and 2020.² Driving consumption—and obesity rates—ever upward are massive marketing campaigns. The Coca-Cola Co. is the biggest marketer, with PepsiCo and local brands nipping at its heels. With soda executives drooling over the almost limitless opportunities for sales growth in Latin America, Asia, Africa, and the Middle East, their marketing onslaught involves everything from building bottling plants to buying a fleet of trucks to sponsoring celebrity-studded advertising campaigns. Thanks to that industry effort, rates of obesity, diabetes, heart disease, tooth decay, and other health problems related to sugar drinks have begun to soar in some countries and will undoubtedly soar in others, imposing enormous health-care costs on countries already struggling to provide health care to their growing populations.

This report documents how the biggest soft-drink companies, with sales plateauing or declining in North America and Western Europe, are investing ever more heavily in LMIC—such as Brazil and China—whose burgeoning populations and rising incomes provide a golden opportunity to increase profits over the next half-century. Much of the companies' marketing is aimed at adolescents, but sometimes also at young children, notwithstanding the industry codes of conduct that preclude at least the latter. The report also documents the limited efforts that countries have made to discourage unrestrained advertising and spiraling consumption, and how much stronger action is needed to protect present and future populations.



Young boy in Ghana.
Source: NYU SeedProgram.

Globesity

Obesity has become a global problem, rather than one unique to high-income countries. With the exception of some countries in sub-Saharan Africa, practically every country in the world faces daunting obesity rates.⁴ Levels of overweight and obesity across low- and middle-income countries, particularly in the Middle East, North Africa, Latin America, and the Caribbean, have approached levels found in higher-income countries.⁵ Over the past two decades, global obesity has risen 82 percent, with the Middle East and North Africa experiencing even greater increases.⁶ Overall, almost one-third of the world's total population—2.1 billion people—is obese or overweight, with the number of overweight and obese individuals increasing from 857 million (20 percent) in 1980 to 2.1 billion (30 percent) in 2013.⁷

Coke President's Epiphany in Brazil

Jeffery Dunn, who in 2001 was Coca-Cola [USA]'s president, "was making frequent trips to Brazil, where the company had recently begun a push to increase consumption of Coke among the many Brazilians living in *favelas*.... [O]n one trip, as he walked through one of the impoverished areas, he had an epiphany. 'A voice in my head says, "These people need a lot of things, but they don't need a Coke." I almost threw up."³

Michael Moss
The New York Times

Currently, 62 percent of the world's obese people live in developing and middle-income countries, and China and India together represent 15 percent of the world's obese population.⁸ More than 50 percent of the world's 671 million obese people live in just 10 countries: United States, China, India, Russia, Brazil, Mexico, Egypt, Germany, Pakistan, and Indonesia.⁹ In Tonga more than 50 percent of men and women are obese, and in Kuwait, Libya, Qatar, and the Pacific islands of Kiribati, Micronesia, and Samoa, more than 50 percent of women are obese.¹⁰ A 2006 Kuwaiti survey found 44 percent of boys and 46 percent of girls were overweight or obese. Over the past 30 years, the steepest rises in obesity among women have been in Egypt, Saudi Arabia, Oman, Honduras, and

Bahrain, and among men in New Zealand, Bahrain, Kuwait, Saudi Arabia, and the United States.¹¹ Partly because of obesity, Saudi Arabia has the highest rate of diabetes in the world—about twice as high as the rates in China and the United States.¹²

Even more disconcerting, around 42 million children under the age 5 are overweight or obese, and close to 31 million of those children live in developing countries.¹³ In addition, one in five children ages 5–17 are overweight or obese.¹⁴ Particularly high rates of child and adolescent obesity were seen in Middle Eastern and North African countries, especially among girls.¹⁵

Childhood overweight and obesity follows a similar trajectory as that for adults: it is increasing in all countries across the world, with the most rapid rise in lower-income countries.¹⁶ Over the last 30 years, there has been a 50 percent increase in the prevalence of overweight or obese children and adolescents across the globe.¹⁷ If current trends continue, the number of overweight or obese infants and young children globally will increase to 70 million by 2025.¹⁸

In the developing world, about 13 percent of both boys and girls are overweight or obese. That's still only about half the rate in high-income countries, but the rate of increase in low-income countries has been more than 30 percent higher.

Christopher Murray, director of the Institute of Health Metrics and Evaluation and a co-founder of the Global Burden of Disease Study, says “In the last three decades, not one country has achieved success in reducing obesity rates, and we expect obesity to rise steadily as incomes rise in low- and middle-income countries in particular, unless urgent steps are taken to address this public health crisis.”¹⁹

This massive growth in obesity is having an enormous impact on global health trends, placing people around the world at greater risk of developing non-communicable diseases (NCDs; also called chronic diseases). In the past, global health resources and attention have been largely directed toward controlling the spread of infectious disease. However, that focus is beginning to shift with the growing awareness that heart disease, cancer, and other NCDs in developing countries now account for a greater health burden than infectious diseases.²⁰

Obesity imposes major health-care costs across the globe. In 2013 Credit Suisse estimated the global annual cost to health services of type 2 diabetes, for which excess body weight is a major cause, at \$470 billion now and projected to rise by 2020 to \$700 billion.²¹ Even more foreboding, a 2011 World Bank study, which assumed that intervention efforts remain static and NCD prevalence continues to increase as populations grow and age, estimated that economic losses to poorer countries due to NCDs would exceed \$30 trillion over the next two decades. That represents 48 percent of global GDP in 2010 and would push millions of people below the poverty line. Clearly, the soaring rates of obesity and the medical problems to which it leads should inspire countries to immediately mount prevention programs.

Drivers of obesity are complex, but it is clear that global trends are a consequence of global trade liberalization, economic growth, and rapid urbanization that alter living environments, diets, and lifestyles.²² Drivers include factors such as changes in the global food system; an increasing food energy supply; inadequate systems for monitoring population weight and nutrition in most countries; “obesogenic” environments; and a reluctance on the part of governments to address obesity, with a sense that it should be left to individuals, the private sector, and non-governmental organizations.²³

Soft Drinks' Rising Impact on Health

Several decades ago, consumption of sugar-sweetened beverages (SSBs) was modest in wealthy countries and almost negligible in poorer countries. Dentists decried sugar drinks for causing tooth decay, and nutritionists contended that the drinks were “empty calories”—calories without nutrients. They were right, but as SSB consumption increased, medical researchers discovered that the health impact of

sugar—and sugar drinks—was far graver.

At the most basic level, drinking sugary beverages adds calories to the diet. Consumption of added sugars (sugar and high-fructose corn syrup (HFCS)) has risen sharply over the last few decades. The global daily average consumption of added sugars in 2013 was 70 grams per person (or 17 teaspoons) per day, up 46

Over the past six years, I have witnessed first-hand the alarming increases in obesity and other health problems around the world. In many countries, heavily marketed sugar drinks have been proven to be a cause of those problems; elsewhere those drinks are likely to become a cause in the near future.

*Professor Olivier De Schutter,
UN Special Rapporteur on the Right to Food
(2008–2014)*²⁴

percent from 30 years ago.²⁵ Today, added sugars constitute about 15 percent of the American diet, with sugar drinks providing almost half of that.²⁶ Consumption in Brazil, Argentina, Mexico, Australia, and certain other countries is probably in the same ballpark,²⁷ and other countries will likely be there soon.

In March 2015, the WHO recommended that adults and children reduce their daily intake of “free sugars” (added sugars and juice sugars) to less than 10 percent of their total energy intake. That’s equivalent to 12 teaspoons of sugar for someone consuming 2,000 calories per day. The guideline cited evidence demonstrating that children with the highest intakes of SSBs are more likely to be overweight or obese than children with a low intake. Francesco Branca, director of WHO’s Department of Nutrition for Health and Development, recently noted that “We have solid evidence that keeping intake of free sugars to less than 10 percent of total energy

intake reduces the risk of overweight, obesity, and tooth decay.”²⁸

SSBs are of particular concern because the body treats the sugar calories in beverages differently from those in foods. Sugar drinks are not as satiating, or filling, as food. That is, people tend to drink them without compensating for the calories by eating less food later in the day.²⁹

The ready availability of SSBs is characteristic of what researchers describe as “obesogenic” environments: those in which circumstances make it likely that individuals in that community will consume too many calories and gain weight.³⁰



The ubiquity of soft drinks, as in the Indian village of Mehdi ganj, is a major contributor to increased consumption.

Source: Wallstreetdaily.com.³¹

Studies conducted since about 2000 have provided strong evidence that consumption of SSBs increases the risk of overweight and obesity and is associated with type 2 diabetes, tooth decay, heart disease, and other health risks.³² Most of the research has been done in the United States and other countries with long-standing high consumption of SSBs, but the findings likely would pertain to people around the world as well.

SSBs and Obesity

SSB consumption has been estimated to account for at least one-fifth of the weight gain between 1977 and 2007 in the U.S. population.³³ That kind of observation spurred researchers to conduct numerous high-quality studies over the past 20 years. Those provide strong evidence that excess consumption of SSBs promotes weight gain and obesity.^{34,35,36,37} A 2013 review found “compelling” evidence that a decrease in SSB consumption will lead to a lower risk of obesity and related diseases.³⁸ Furthermore, studies have shown that the replacement of SSBs with water or milk is associated with a reduction in total caloric intake and a lower prevalence of obesity in children.^{39,40} Y. Claire Wang, an assistant professor of health policy and management at the Columbia University Mailman School of Public Health in New York, states, “[Soda is] definitely one of the major, if not the main, driver in childhood obesity [in the United States].”⁴¹

It’s bad enough that overweight children have to put up with taunts from mean kids—which might haunt them well into adulthood. But those children are also at greater risk of asthma, musculo-skeletal disorders, fatty liver disease, insulin resistance, type 2 diabetes, and obstructive sleep apnea.⁴² Most overweight children are likely to remain obese into adulthood, when they will be more prone to obesity, type 2 diabetes, cardiovascular disease, some cancers, obstructive respiratory disease, mental health problems, and reproductive disorders.⁴³ Since it is so difficult to lose weight, those problems are often chronic, impacting both the individual and a nation’s health system.

Intervention trials provide clear evidence that sugar drinks can pack on the pounds. In the longest and largest double-blind, randomized trial, Dutch researchers randomly assigned 641 normal-weight children aged four to 12 who typically drank sugary beverages to receive one eight-ounce can a day of a beverage sweetened with either sugar (104 calories, about the same as a cup (240 ml) of Coca-Cola) or artificial sweeteners (0 calories). After one and a half years, body weight, body mass index (BMI), waist size, and fat mass increased more in the youngsters who got the sugar drinks. “Children in the United States consume on average almost three times as many calories from sugar-sweetened beverages as the amount provided in our trial,” noted the authors.⁴⁷ Smaller studies found similar results.⁴⁸

Cohort studies, which monitor the diets of large numbers of people over several years, support the clinical research. Several reviews of such studies concluded that a consistent and growing body of evidence demonstrates that consumption of SSBs increases the risk of overweight, obesity, or weight gain in children and adults.^{49,50} For instance, when researchers tracked more than 50,000 healthy women for

Obesity and SSBs

- Beverages contribute to weight gain more than solid foods, because the body doesn’t compensate fully for beverage calories by reducing calorie intake later in the day.⁴⁴
- An extra 12-ounce sugar drink a day increases a child’s risk of becoming obese by about 60 percent.⁴⁵
- Adults who drink one sugar drink or more per day are 27 percent more likely to be overweight or obese than non-drinkers.⁴⁶

four years, they found that weight gain was greatest (about 4.5 kg or 10 pounds) among women who went from drinking no more than one SSB a week to at least one a day.⁵¹ Similarly, among roughly 4,000 men and women in the Framingham Offspring Study, those who consumed at least one soft drink a day had a 35 percent higher risk of obesity over the next four years, compared to those who drank no soft drinks.⁵²

SSBs and Type 2 Diabetes

Type 2 diabetes used to be called “adult-onset,” but its name was changed when it began showing up in younger and younger people. It is a particularly diabolical disease, because, before it kills, it causes blindness, amputations, and other effects. A recent study conducted by the University of Washington’s Institute for Health Metrics and Evaluation reported that the prevalence of diabetes worldwide rose by a remarkable 45 percent between 1990 and 2013.⁵³ Rising rates of diabetes in both rich and poor countries are imposing huge health-care costs.

Robert Lustig, a professor of pediatric endocrinology at the University of California, San Francisco, charges that sugar drinks are a particularly potent cause of diabetes. He said, “When people ate 150 calories more every day, the rate of diabetes went up 0.1 percent. But if those 150 calories came from a can of fizzy drink, the rate went up 1.1 percent. Added sugar is 11 times more potent at causing diabetes than general calories.”⁵⁴



“Would you drink 12 teaspoons of sugar? Sugar is sweet, diabetes is not.” Billboard supporting a soda tax in Mexico. Source: El Poder del Consumidor.

In the Nurses’ Health Study, which tracked more than 90,000 American women for eight years, those who consumed at least one SSB per day had an 83 percent higher risk of being diagnosed with type 2 diabetes than those who consumed less than one SSB per month.⁵⁵ Among 43,580 men and women in the Singapore Chinese Health Study, those who consumed at least two soft drinks a week had a 42 percent higher risk of diabetes than those who rarely consumed soft drinks.⁵⁶ After adjustment for BMI and calorie intake, the risk was 34 percent higher among those who drank at least two soft drinks a day (meaning that soft drinks promoted diabetes by means in addition to increasing body weight). Finally, a meta-analysis, which included those two studies and six additional ones involving more than 310,000 people in total, found that people who consumed at least one to two servings of SSBs per day had a 26 percent higher risk of type 2 diabetes than those who consumed less than one serving per month.⁵⁷

SSBs and Cardiovascular Disease

For many years, researchers, especially in the United States, pinned much of the blame for heart disease on the saturated fat, trans fat, and cholesterol in foods. But research both old and new began shining a spotlight on sugar and sugar drinks as another important cause.

- In a study involving more than 42,000 American men, those who consumed at least 3.7 SSBs per week had a 20 percent higher risk of coronary heart disease than those who consumed no SSBs. (Those calculations were made *after* adjusting for BMI, meaning that SSBs increased the risk of obesity in ways in addition to promoting weight gain.) SSB consumption was associated with higher levels of triglycerides and lower levels of HDL (“good”) cholesterol.⁵⁸
- In a study involving more than 88,000 healthy women, those who consumed at least two SSBs a day had a 35 percent higher risk of coronary heart disease than those who consumed less than one SSB per month.⁵⁹ Even after adjusting for BMI, diabetes, and total caloric intake, women who consumed at least two SSBs a day had a 21 percent higher risk.



Shop in Kenya.
Source: Natalia Echeverri.

Those large cohort studies are reinforced by metabolic studies that shed light on how diets high in fructose (half of the sugar molecule and about half the content of HFCS) can upset a person’s metabolism. Those changes can lead to liver and muscle fat that are risk factors for heart disease and diabetes.^{60,61} The amounts needed to cause problems were high, but no higher than what millions of people—at least in the United States—consume from cake, cookies, candy, and many other foods, but most prominently SSBs.

- When American researchers gave 48 men and women 25 percent of their calories from beverages sweetened with HFCS, fructose, or glucose for two weeks, those consuming either HFCS or fructose (but not glucose) had higher triglyceride levels and higher fasting LDL levels.⁶²
- A Danish study assigned 47 overweight subjects to consume one liter a day of either sugar-sweetened cola, isocaloric semi-skim milk, aspartame-sweetened diet cola, or water for six months. Those consuming regular cola had a significant increase in visceral fat, liver fat, skeletal muscle fat, and blood triglycerides. Many people consume one liter per day of sugary beverages (about 400 calories, or about 20 percent of total caloric intake) plus added sugars from other sources. The authors stated that “daily intake of [regular cola] for 6 mo[nths] increases [visceral] fat accumulation and lipids compared with milk, diet cola, and water. Thus, daily intake of [SSBs] is likely to enhance the risk of cardiovascular and metabolic diseases.”⁶⁴
- A Swiss study found that after three weeks the waist-to-hip ratio and LDL cholesterol rose significantly in men consuming 80 grams of fructose

Importantly, the current results provide evidence that sugar consumption at this level increases risk factors for cardiovascular disease within 2 [weeks] in young adults, thus providing direct experimental support for the epidemiological evidence linking sugar consumption with dyslipidemia and cardiovascular disease.

Kimber Stanhope, et al. 2011⁶³

Double Burden of Disease: Under- and Over-Nutrition

Many low-income and emerging-market countries face a double burden: the persistence of under-nutrition, especially among children, along with a rapid rise in overweight, obesity, and diet-related chronic diseases. The two can co-exist in the same countries, communities, and households. That's the case in Bangladesh, India, and Thailand, for instance. Despite decades of progress on under-nutrition, they have significant disease burdens and high costs around overweight and obesity-related diseases.^{66,67} In South Africa the double burden of under- and over-nutrition is high in children, with children from rural areas more susceptible to underweight and stunting, while those in urban areas are at a higher risk of overweight and obesity.⁶⁸

(equivalent to four cans of Coke) or 80 grams of sucrose (equivalent to two cans of Coke). The authors concluded, “this study clearly shows that consumption of SSBs, even in moderate amounts, has adverse effects on lipid and glucose metabolism as well as on the inflammatory status of healthy young men.”⁶⁵

Health Impact of SSBs—The Bottom Line

Added sugars and SSBs have an enormous impact on health. A recent report estimated that sugar-sweetened soda pop, sports drinks, and fruit drinks may be associated with more than 180,000 deaths around the world each year. The study, using 2010 data, linked intake of SSBs to 133,000 diabetes deaths, 44,000 deaths from cardiovascular diseases, and 6,000 cancer deaths per year. Of those deaths, 78 percent were in low- and middle-income countries.⁶⁹

That study found that the Latin America/Caribbean region had the most diabetes deaths (38,000) related to SSB consumption in 2010, and that East/Central Eurasia had the largest numbers of cardiovascular deaths (11,000) related to SSB consumption. Mexico, with the world's highest per-capita consumption of carbonated soft drinks, also had the highest death rate (318 deaths per million adults) associated with SSB consumption. In contrast, Japan, with one of the lowest consumption rates also had the lowest death rate (10 deaths per million adults).⁷⁰

Although many factors are contributing to the rise of childhood obesity, one certain factor is the marketing of SSBs, especially to children, in an increasingly globalized world.

Industry Claim: Soft Drinks do not Cause Obesity

- Katie Bayne, then president and general manager of sparkling [carbonated] beverages for Coca-Cola North America: “There is no scientific evidence that connects sugary beverages to obesity.”⁷¹
- Christopher Gindlesperger, a spokesman for the American Beverage Association: “None of the studies say that drinking a soft drink will make you obese.”⁷²
- Indra Nooyi, the CEO of PepsiCo: “If all consumers exercised, did what they had to do, the problem of obesity wouldn't exist.”⁷³

The Global Sugar-water Marketers

The \$820 billion global non-dairy beverage industry produces carbonated soft drinks, fruit and vegetable juices, bottled water, ready-to-drink teas and coffee, and sports and energy drinks.⁷⁴ Carbonated soft drinks are by far the most popular type of non-alcoholic soft drink worldwide, commanding almost a \$350 billion market.⁷⁵ Fizzy drinks in this category basically consist of water, carbon dioxide, sweeteners, colorings, and often caffeine. In the United States and Canada the primary caloric sweetener is HFCS, while cane or beet sugar is generally used elsewhere. Diet soft drinks are made with various combinations of such artificial sweeteners as aspartame, acesulfame potassium, and sucralose, while the wave of the future appears to include such naturally derived sweeteners as rebiana (stevia) and monk fruit extract.⁷⁶

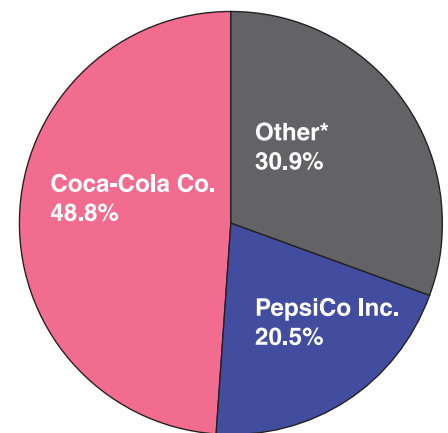
Coca-Cola and PepsiCo reign supreme in the soft-drink world: by 2010 those two industry leaders controlled a combined 69 percent of the global market, including many formerly local, independent brands.⁷⁷ Coca-Cola and PepsiCo also make many non-carbonated SSBs, though their position in those markets is less dominant. Both corporations have a significant presence in the \$65 billion energy and sports drinks market, with PepsiCo (Gatorade) capturing a 29 percent market share and Coca-Cola (PowerAde) a 17.4 percent market share. In the highly fragmented \$147 billion global fruit/vegetable juice market, Coca-Cola and PepsiCo enjoy a 13 percent and six percent market share, respectively.⁷⁸ By selling many non-carbonated beverages, Coca-Cola and PepsiCo partially insulate themselves from the threat of changing tastes.

Internationally, the two American corporate giants distribute beverages predominantly through large independent bottling companies that depend on the industry goliaths to develop new products, deliver syrup, and effectively market their brands. In addition to sophisticated and elaborate marketing, Coke and Pepsi have expanded their global reach by buying up smaller companies and entering into distribution and other arrangements.⁷⁹ Although there are many significant local players in the soda business, few are real competitors to the beverage titans, which have built extensive distribution networks and enjoy tremendous economies of scale.

Coca-Cola

Coca-Cola, the world's largest beverage company, dominates the global beverage marketplace. Every day almost 2 billion people—roughly one-third of the global population—drink a Coca-Cola product.⁸² The Coca-Cola logo is said to be recognized by 94 percent of all earthlings.⁸³ Coca-Cola produces and licenses over 500 brands, which are available in over 200 countries—from fast-food outlets and supermarkets in Paris and Taipei, to individual vendors in remote villages in Zambia and Ecuador. Today most Coca-Cola products are sold outside of the United States, including in key markets such as Mexico, Brazil, China, and Russia. The Obama administration's effort in 2015 to ease the American embargo against Cuba is paving

Carbonated Beverages
Global market: \$341.6 billion



*Companies with less than 5% market share
Source: Euromonitor, Bloomberg Intelligence

the way for this classic American brand to reenter Cuba, leaving North Korea as the last country on earth where Coca-Cola cannot officially be bought or sold.⁸⁴

Coca-Cola is not produced by a single legal entity: it does not own or control most of its bottling partners. Rather, Coca-Cola owns the brands, manufactures and

sells syrups and concentrates to its bottling partners, and oversees marketing and advertising. Independent bottlers and some Coca-Cola entities manufacture, purchase, distribute, and sell the final branded beverages to individuals and vendors. Local bottling partners also work closely with vendors—whether retail stores, kiosks, or restaurants—to implement marketing strategies developed in partnership with Coca-Cola.⁸⁵

Coca-Cola's distribution networks are so vast that public health organizations and foundations, such as the Gates Foundation, have looked to Coca-Cola as a model and a means to deliver essential medicines along with its sugary products to remote corners of the world.⁸⁶ With close to 250 independent bottling partners,⁸⁷ Coca-Cola is distributed to remote villages in every African country—yet an estimated 30–50 percent of children in sub-Saharan Africa have no access to essential medicines.⁸⁸

Today, Coke markets four of the world's top five non-alcoholic beverages: Coke, Diet Coke, Fanta, and Sprite.⁸⁹ The original Coca-Cola drink is a billion-dollar brand in 19 countries. Coca-Cola has 17 billion-dollar brands and 20 more that generate between \$500

Soft Drinks: top 10 global companies by percent of non-restaurant ready-to-drink volume share, 2012	
Coca-Cola Co, The	21.2
PepsiCo Inc	9.9
Danone, Groupe	4.7
Nestlé SA	3.7
Mondelez International, Inc	2.0
Ting Hsin International Group	1.6
Dr Pepper Snapple Group Inc	1.5
Suntory Holdings Ltd	1.1
Hangzhou Wahaha Group	0.9
Acqua Minerale San Benedetto SpA	0.6

Euromonitor, Passport, Soft Drinks in 2014: Products, Performance Prospects.



Sources¹⁰²

million and \$1 billion in retail sales each year.⁹⁰ In 2014, sales in the United States represented only 19 percent of Coke's global sales volume. Mexico, China, Brazil, and Japan accounted for 31 percent of Coke's worldwide volume.⁹¹ Those huge sales volumes are pumped up by huge advertising budgets—Coca-Cola reported global advertising expenses of \$3.5 billion in 2014 alone.⁹²

Emerging markets are critical to Coke's growth: in 2013 operations outside of the United States accounted for \$27 billion (58 percent) of Coca-Cola's net operating revenues.⁹³ In 2012, Coke sales grew sharply in Thailand (up 22 percent), India (16 percent), and Russia (8 percent) alone.⁹⁴ Brazil has been a key driver for Coca-Cola.⁹⁵ The company also is achieving double-digit volume growth in such markets as Ecuador, Vietnam, and Algeria.⁹⁶ Many of its major recent acquisitions are in emerging markets, including bottling operations in Guatemala, Vietnam, Cambodia, and the Middle East.⁹⁷

Coca-Cola aims to double its revenue between 2010 and 2020.⁹⁸ In 2014 it said it is plowing an additional \$1 billion into advertising through 2016 to help reach that goal, much of it in emerging markets.⁹⁹ Despite increasing concerns about the link between SSBs and health, the company expects the global retail value of carbonated, and mostly sugary, beverages to grow by \$100 billion by 2020—representing about a third of the growth of the entire beverage industry.¹⁰⁰ Based on company announcements, *The Atlanta Journal-Constitution* said that the company would be

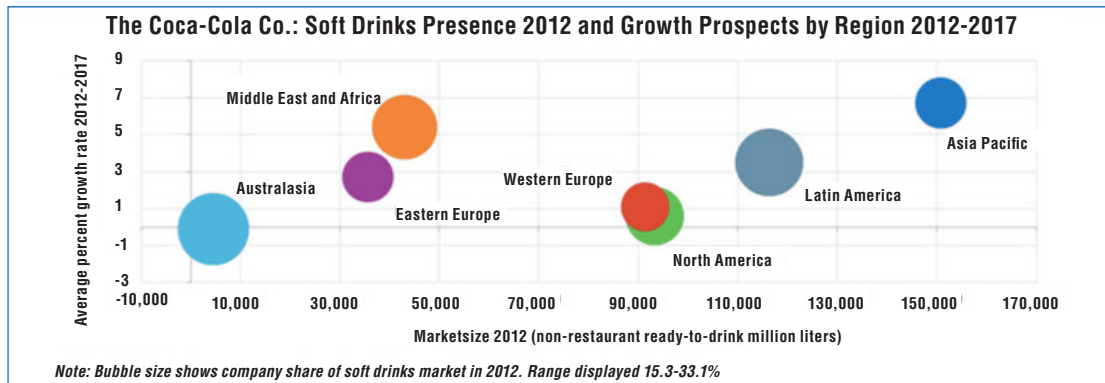
Subsidizing Coca-Cola in Africa and Asia

If there was ever a company that shouldn't need subsidies, it is Coca-Cola, which in 2014 had \$46 billion in worldwide revenues. Yet, a unit of the World Bank Group, the International Finance Corporation, has provided Coca-Cola bottlers in Africa and South Asia millions of dollars in loans and direct investments.⁸⁰ In the 2000s, the IFC provided \$70 million in loans and equity to help Coke's bottler expand sales in such countries as Vietnam, Cambodia, Laos, Nepal, and Sri Lanka. IFC said it "has played an important role in enabling Coca-Cola SABCO to expand and modernize its operations in Ethiopia, Kenya, Mozambique, Tanzania, and Uganda." In 2002, IFC provided a \$15 million loan, equity of up to \$10 million, and \$12 million in bank guarantees in Ethiopia and Tanzania. In 2013 the two entities announced a \$100 million, three-year initiative to provide access to finance for women entrepreneurs in Eurasia and Africa. (Information from IFC's and Coca-Cola's websites.)

The IFC has a long list ("Project Exclusion List") of ventures in which it won't invest—firearms, tobacco, liquor, gambling, drift-net fishing, activities involving child labor, and more⁸¹—but it does invest in soft drink, wine, and beer producers, notwithstanding the health problems associated with their products.



Source: www.coca-colaindia.com.



Source: Euromonitor Passport, Coca-Cola Co, The, SWOT Analysis, in Soft Drinks (World), March 2013.

investing more than \$30 billion in key emerging markets between 2012 and 2017 (see graphic).¹⁰¹ That mind-boggling number includes more than \$1 billion per year in China, Brazil, Mexico, and Africa and somewhat less in India and Indonesia.

Notwithstanding all of that optimism and investments, Coke's revenues slid from \$48 billion in 2012 to \$46 billion in 2014, thanks in part to decreasing sales of both Coke and Diet Coke in the United States and elsewhere.¹⁰³ That might have disappointed investors, but heartened health advocates.

PepsiCo

PepsiCo, Coca-Cola's major rival in the global soda wars, is one of the largest food and beverage companies in the world. Like its competitor, PepsiCo sells some of the world's most recognized brands in more than 200 countries.¹⁰⁴ Iconic brands include Pepsi, Mountain Dew, Sierra Mist, Sobe, and Mug. PepsiCo was formed in 1965 by the merger of the Pepsi-Cola Company and Frito-Lay, Inc., the largest snack-food maker. The multinational has expanded from its namesake product Pepsi to numerous food and beverage brands, including Tropicana (fruit drinks) in 1998 and, thanks to a merger with Quaker Oats in 2001, Gatorade and numerous breakfast cereals. PepsiCo poured \$2.3 billion into advertising in 2014, along with \$1.6

Major Soft Drink Companies: % Off-Trade (Grocery, Other Retail Stores) Value Share by Key Growth Market 2013								
	China	Brazil	Mexico	India	Nigeria	Russia	Indonesia	US
The Coca-Cola Co.	13.1	43.3	47.8	30.1	17.9	24.5	13.7	23.9
PepsiCo	3.8	6.7	14.3	24.1	5.8	24.7	0.7	19.8
Danone	1.9	0.5	8.3	—	—	0.2	17.2	0.1
Nestlé	3.1	0.6	1.7	—	0.8	2.3	0.5	4.6
Mondelez	0.1	3.3	2.4	0.1	—	—	—	—

Note: — no or negligible share in the market.

Source: Euromonitor Passport soft drinks global corporate strategy, November 2014.

billion worth of other marketing activities (some of that was for snack foods, juices, and breakfast cereals).¹⁰⁵

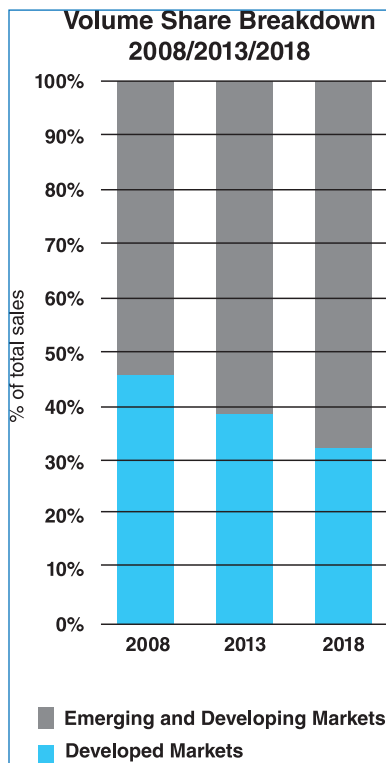
Operations outside of the United States account for about 48 percent of PepsiCo's net revenue.¹⁰⁶ PepsiCo is the leading food and beverage business in Russia, India, and the Middle East; the second-leading business in Mexico; and among the top five in Brazil and Turkey.¹⁰⁷ PepsiCo has made India a focus,¹⁰⁸ but the company has much less presence in such major markets as Brazil, China, and Nigeria.¹⁰⁹

Corporate insiders are bullish on the growth opportunities for PepsiCo in emerging markets. Further investment and expansion of operations in emerging markets is key to PepsiCo's business strategy. In its 2013 filings with the U.S. Security and Exchange Commission, PepsiCo stated:

Our operations outside of the United States, particularly in Russia, Mexico, Canada, the United Kingdom and Brazil, contribute significantly to our revenue and profitability, and we believe that these countries and emerging and developing markets, particularly China and India, and the Latin America, Africa and Middle East regions, present important future growth opportunities for us....¹¹⁰

It's difficult to estimate PepsiCo's investments for marketing sugar drinks in emerging markets, because financial statements typically include both the company's foods and its beverages.

As described further below, rising awareness of health concerns about sugar drinks has sparked a trend for "better for you" beverages globally. In addition to high-income countries, some consumers in major countries including Mexico, Brazil, and India are becoming increasingly aware of obesity and, consequently, are opting for lower-calorie products. To accommodate that trend, PepsiCo has increasingly packaged itself as a health and wellness food and beverage company. One of the company's most significant initiatives is NutritionCo, which is designed to oversee the development of PepsiCo's health and wellness business, comprised of healthier (if not always healthy) snacks and beverages ranging from dairy to soft drinks.¹¹¹



Source: Euromonitor International. Soft drinks in 2014: products, performance, prospects.

Global Trends in Soft Drink Consumption

Consumption of SSBs has been declining in many high-income nations as consumers increasingly turn to healthier alternatives, especially bottled water. In the United States, per-capita consumption of carbonated SSBs decreased by 25 percent between 1998 and 2014,¹¹² and industry analysts predict more of the same in the coming years.¹¹³ While the volumes of sales in high-income countries remain huge, those markets are saturated and the drive for further growth is leading the SSB industry to low- and middle-income countries.

The interest of corporations in investing in emerging markets is based on a simple premise: potential huge profits in countries whose economies are growing fast and current SSB consumption is low. Brazil, Russia, India, and China (BRIC nations) have been prime target markets for years.¹¹⁴ According to one industry analyst, the potential for growth in SSB consumption and revenue in the BRIC nations alone is staggering:

Based on Coca-Cola's 2012 per capita consumption report and current world populations, Coca-Cola sells just 3.5 percent the amount of beverages in India as it does in the U.S. on a per-capita basis. China only consumes about 10 percent the amount of Coca-Cola products as a U.S. citizen does on a per-capita basis. These 2 countries alone are *each about 4 times* the size of the United States.¹¹⁵

In addition to the BRIC nations, other emerging markets, such as Indonesia and South Africa, are growing fast and are being tapped into by foreign investors. Marketers talk about MIST (Mexico, Indonesia, South Korea, Turkey), BRICKS (Brazil, Russia, India, China, Korea, and South Africa), and “Chindonesia” (China, India, and Indonesia). Other large consumer markets include Poland, Argentina, Colombia, Thailand, Philippines, Venezuela, Saudi Arabia, United Arab Emirates, Egypt, Pakistan, Nigeria, Chile, Malaysia, Iran, Ukraine, and Peru.¹¹⁶

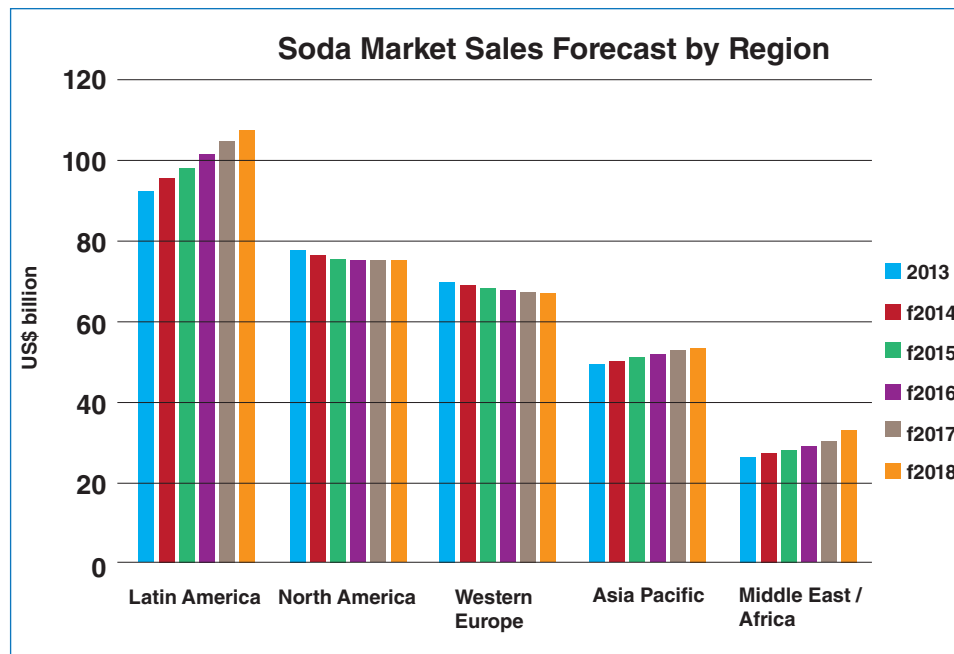
Overall, the growth of emerging markets is driving SSB consumption—and the globalization of chronic diseases. Between 2013 and 2020, emerging market economies are expected to grow almost three times faster than developed economies and will account for an average of 65 percent of global economic growth.¹¹⁷

The booming middle class is a key consumer segment for many companies, including the beverage industry. Studies show that as people move up the income scale, so does their demand for SSBs. Between 1997 and 2009, soft drink consumption per person in low- and middle-income countries grew at an annual rate of 5.2 percent.¹¹⁸ Coca Cola's

Targeting Youth

But the sparkling [carbonated] opportunity is there, because of the fact that half the world's population has not had a Coke in the last 30 days. There's 600 million teenagers who have not had a Coke in the last week.

Ahmet Bozer (executive vice president and president of Coca-Cola International, September 2014)¹²⁰



Source: <http://www.bloomberg.com/bw/articles/2014-04-10/four-reasons-why-coca-cola-will-stick-to-sweet-sodas>.

chief financial officer, Gary Fayard, has said that from 2010 to 2020, “You see a 50 percent increase in the middle class, 800 million people entering the middle class, and then with that a 70 percent increase in personal expenditures. And you see a billion teenagers today.” Fayard called the world’s 3.5 billion people in their teens and twenties “our core demographic.”¹¹⁹

That 5.2 percent annual increase in soda consumption means that soda consumption would double in just 15 years.¹²² Average production levels worldwide in 2012 for Coca-Cola beverages were 94 8-ounce servings per person per year, with much lower levels in most low- and middle-income countries (14 servings in India, 39 in China and Kenya).¹²³ (Those figures include non-caloric drinks, but they are not popular in lower-income countries.) People in higher-income countries, such as Thailand (113 servings per person per year) and the Philippines (131), consume much more. The highest production is in Latin America, with numbers as high as 219 servings per person per year in Peru, 263 in Bolivia, 416 in Panama, 486 in Chile, and 745 in Mexico, the world leader. (U.S. production was 401 servings, including diet drinks.) In practically all countries, people consume other brands of, or home-made, sugar-sweetened drinks, including fruit drinks.

But [in the United States] the obesity trend is an epidemic. And there is no question its roots are directly tied to the expansion of fast food, junk food, and soft drink consumption....But you can look at the obesity rates, and you can look at per capita consumption of sugary soft drinks and overlay those on a map, and I promise you: They correlate about 0.9999.

Michael Moss
Salt, Sugar, Fat: How the Food Giants
*Hooked Us*¹²¹

Regional Trends

With the major bottlers well-established in many Asian and Latin American countries, some market analysts predict that the Middle East and Africa will be the “next wave of long-term growth” for sugar-sweetened beverages.¹²⁴

Africa

Africa is now the second-fastest-growing region in the world according to the International Monetary Fund, and 10 of the fastest-growing economies are in Africa, including Ethiopia, Mozambique, Tanzania, Congo, Ghana, Zambia, and Nigeria.¹²⁵

Africa is the untold story, and could be the big story, of the next decade.....The presence and the significance of business in Africa is far greater than India and China even today. The relevance is much bigger.

Muhtar Kent, CEO, Coca-Cola¹²⁸

Current consumption of SSBs in Africa is low, but the possibilities for growth are staggering. Companies such as Coca-Cola are adding new products and packaging to attract the young and growing African middle-class. But the industry is also keenly interested in tapping those in poverty. According to one Coca-Cola district manager, “As any good Coke man will tell you, the first rule is to get the product ‘cold and close.’ In Alexandria, a dense township of 500,000 in Johannesburg, South

Africa, with 65 percent unemployment, Coca-Cola is sidling right up. Last year the local bottler blanketed streets with drink coolers and Coke signage. To keep the coolers full, the bottler extended credit to merchants who didn’t have the capital to pay.”¹²⁶

Distribution remains a major challenge in many African countries. The poor roads that characterize many African countries make transportation slow and costly. Political instability and conflict add dangers to the commercial calculus. However, Coca-Cola’s vast supply chain, which reaches every country in Africa, is legendary. For distant and remote locations, small trucks transport the sodas up to a certain point where locals are hired to haul the products the last few kilometers, often by bicycle or push carts.¹²⁷



Transporting Coca-Cola in Nigeria.
Source: NYU SeedProgram. Available at <http://www.icoke.cn/Default.aspx>.

Coke has been in Africa since 1929 and is now the continent’s largest employer, with 65,000 employees and 160 plants.¹²⁹ Wagering on significant growth in the region, in 2011, Coca-Cola announced plans to invest \$5 billion in sub-Saharan Africa and the Middle East over the next decade and is even bullish on conflict zones: it opened up a new facility in Somaliland, a breakaway region of Somalia.¹³⁰ Coke subsequently upped that investment plan to \$17 billion between 2010 and 2020.¹³¹

Asia

Coca-Cola accounts for 56 percent and PepsiCo 23 percent of the Asia-Pacific market for carbonated sugar drinks (keep in mind that *non*-carbonated soft drinks

and teas are big sellers in China and other countries). Asia is home to emerging brands from China and Japan, but the nearest fizzy-drink competitor to Coca-Cola and PepsiCo is Asahi, with a distant 3 percent of the regional market.¹³²

China, the world's most populous nation, is also the most alluring market, accounting for almost 33 percent of the Asia-Pacific carbonated soft-drink market.¹³³ Japan accounts for 21 percent of that market, with India (6 percent) and South Korea (4 percent) trailing behind.¹³⁴

However, no corner of the region is untouched. For instance, in Vietnam, sales soared from 587 million liters in 2010 to 836 million liters in 2014, with one analyst predicting that sales would top 1 billion liters in 2015.¹³⁵ In 2013, with the end of military rule in Myanmar, Coca-Cola began bottling in the country as part of a \$200 million investment.¹³⁶ Also in 2013, Coca-Cola announced plans to build the first bottling plant in Laos, a nation of only 6.5 million people, but no market is too small for the soda giant.¹³⁷

Latin America

In 2014, the Pan American Health Organization identified obesity among children and adolescents as reaching epidemic proportions in Latin America. About 7 percent of children under five years old (3.8 million) are estimated to be overweight or obese. Among school-age children (six to 11), rates of overweight and obesity range from 15 percent (Peru) to 34 percent (Mexico). Among adolescents (12 to 19), rates range from 17 percent (Colombia) to 35 percent (Mexico).¹³⁸

Latin America is now the largest market for soda in terms of dollar sales and was forecast to grow 17 percent between 2013 and 2018.¹³⁹ The taste for sweetened beverages, both traditional home-made drinks and then bottled drinks, is fully engrained. The Chilean market is instructive. Carbonated soft drink sales grew 6.1 percent in 2014, and Chileans are now among the leading consumers of SSBs.^{139a} While some analysts have suggested that Chile, where nutrition labeling was recently adopted to curb consumption of SSBs and junk foods,¹⁴⁰ is a saturated market, others project that increases in consumption will continue apace.¹⁴¹

Middle East

Despite political chaos in some countries, the Middle East remains highly lucrative for soft drink companies. Young populations and an emerging middle class in some



Pepsi's "emotional video clip" about "a young student in Hanoi" and the Tet holiday.

Source: <http://www.suntorypepsico.vn/en/product/activity/keep-tets-fire-program-pepsi-brand>.



Coke advertising a long way from Atlanta: a sign in Nepal.

Source: Kamana Manandhar, Resources Center for Primary Health Care, Nepal.



Coca-Cola advertisement in Jordan.

Source: <http://www.vagabondjourney.com/photos-from-ancient-city-of-petra-and-wadi-musa/>.

areas are driving SSB sales, which is already a well-developed market, in part because of the hot climate and restrictions on alcohol. Analysts estimate that the compound annual growth rate of soft drink sales between 2013 and 2018 will be 7.6 percent in Saudi Arabia and United Arab Emirates and 12.4 percent in Qatar.¹⁴²

Producers in the region have learned to work around security concerns to ensure that their fizzy beverages land in the hands of local populations. Coca-Cola Icecek, the Coke bottler in the Middle East, for example, posted a 10 percent volume growth in Iraq in the first 9 months of 2014, with 17 percent growth in the southern part of the country offsetting slumps in the northern, violence-torn part of the country.¹⁴³

Soft drinks, unsurprisingly, are popular with Middle Eastern children. Among children aged four to five in Jordan, more than 50 percent consumed carbonated sugar drinks. In some countries, over 60 percent of older children reported consuming at least one sugar drink per day.¹⁴⁴

Although Coca-Cola dominates the global beverage market, PepsiCo has a commanding lead across the Middle East. PepsiCo controls 85 percent of the soda market in Saudi Arabia, compared with 12 percent for Coca-Cola. PepsiCo's advantage is also significant in Kuwait and Lebanon.¹⁴⁵ In 2014 PepsiCo opened a Middle East R&D center in Dubai, reflecting the opportunities in the region. Meanwhile, in 2012 Coca-Cola acquired a 50 percent interest in Aujun Industries Co., a regional player with significant market share in Saudi Arabia, UAE, Egypt, and Iran.¹⁴⁶ It also purchased a 49 percent stake in a bottling and distribution

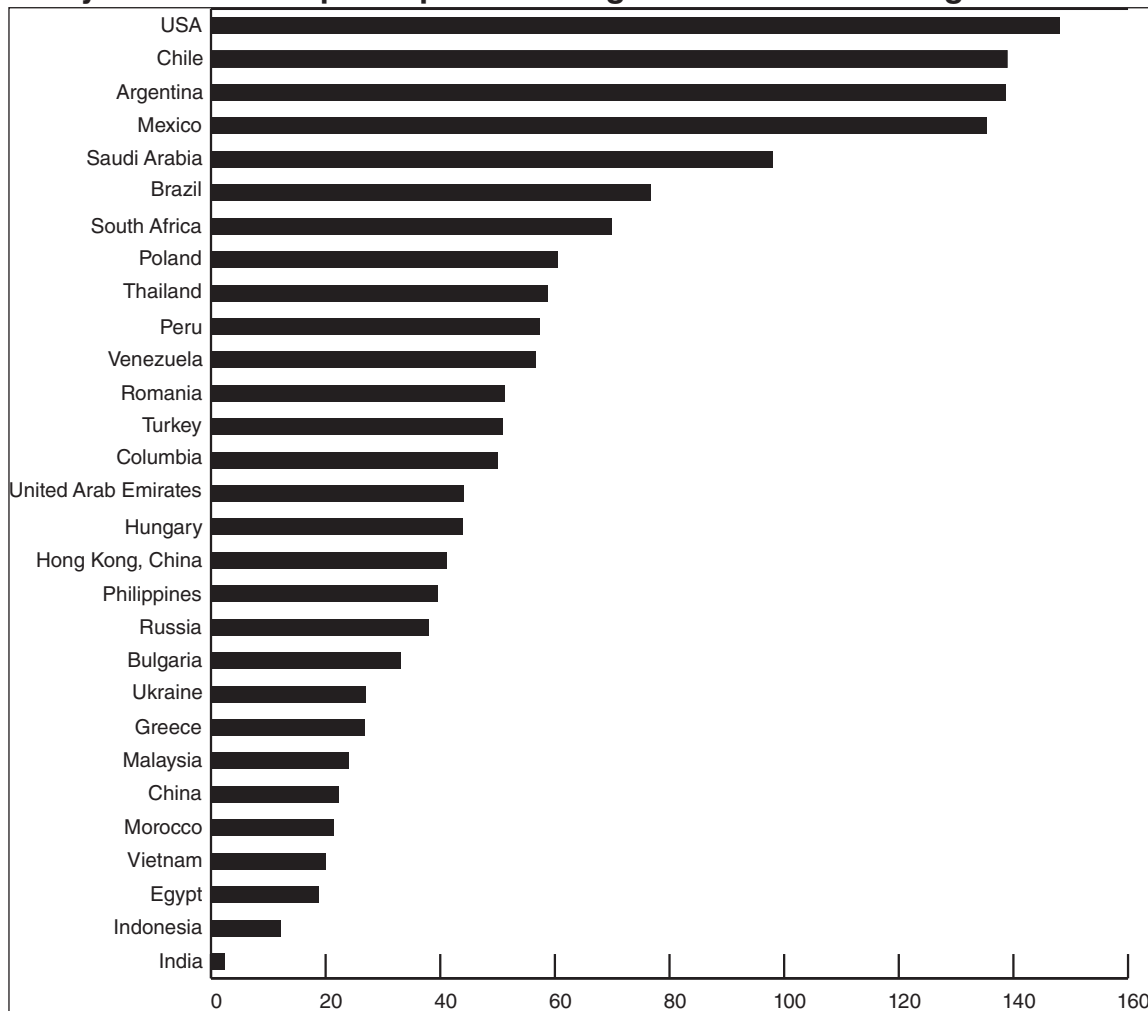
Selected Markets Carbonated Soft Drinks Value Sales

Country	Indicator	2010	2011	2012	2013e	2014f	2015f	2016f	2017f	2018f
Brazil	Carbonated soft drink sales, \$ billion	16.4	18.7	17.3	16.8	16.9	17.6	19.3	21.3	23.7
Chile	Carbonated soft drink sales, \$ billion	2.4	2.7	2.9	3.0	3.1	3.2	3.5	3.9	4.1
Colombia	Carbonated soft drink sales, \$ billion	10.2	12.5	13.8	13.7	14.7	16.0	17.3	19.0	20.9
Argentina	Carbonated soft drink sales, \$ billion	4.3	5.0	5.1	5.2	5.0	5.3	5.6	6.0	6.3

e/f = estimated/forecast. National Sources, BMI

Source: Business Monitor News& Views, Dec 16 2014.

Daily Calories Sold per Capita from Sugar-Sweetened Beverages in 2014.



These 2014 sales data include carbonated, energy, fruit, and sports drinks; bottled teas and coffees; but exclude fruit juice and juice concentrates.

Source: Euromonitor International Ltd. © 2015.

company. Coca-Cola plans to invest \$5 billion in the Middle East and North Africa over the next decade,¹⁴⁷ and Coke and Pepsi advertising alone in Arab countries soared from \$40 million in 2006 to \$400 million in 2012.¹⁴⁸

Country Trends

This section focuses on eight countries to highlight companies' marketing initiatives and the impact that SSBs—and the SSB industry—are having on health, but the impact is the same in many other countries. In a letter to the health ministers of Brazil, China, Egypt, India, Indonesia, Mexico, and South Africa, the authors asked what their countries were doing to prevent over-consumption of sugar drinks, but none of the ministers responded.

Brazil

“Brazil is one of the biggest markets for Coca Cola in the world. In the last 25 years we saw the volume of our sales in Brazil expand by about 50 times,” according Coca-Cola CEO Muhtar Kent. That has been helped along by Coke's huge investments, such as the \$7.6 billion it was plowing into Brazil in 2012–2016.¹⁴⁹ In 2012 Brazil constituted 20 percent of Coke's global growth, accounting for around \$930 million.¹⁵⁰

The increase in soda consumption over the last three decades contributed to the tripling of the number of overweight children.¹⁵¹ A 2012 study found that soda consumption increases and milk consumption decreases as children get older. SSBs contributed 156 calories, 207 calories, and 290 calories on average to the daily diets of 3- to 6-year-olds, 7- to 10-year-olds, and 11- to 17-year-olds, respectively.¹⁵² Between 1974 and 2002–2003, when the consumption of SSBs soared, the prevalence of overweight in men increased from 19 percent to 41 percent and among women from 29 percent to 39 percent.¹⁵³ An additional 13 percent of men and 17 percent of women were obese.¹⁵⁴ According to the most recent (2008–2009) national survey, nearly half of all boys or girls between five and nine years old were either overweight or obese. In addition, 35 percent and 17 percent of boys were either overweight or obese, as were 32 percent and 12 percent of girls.¹⁵⁵ Overall, 75 million Brazilians have some degree of excess weight.¹⁵⁶

The Brazilian government has a keen awareness of the problems caused by junk foods. Brazil's 2014 Dietary Guidelines states bluntly: "Ultra-processed foods such as soft drinks and various types of sweetened drinks are almost all water but contain sugar or artificial sweeteners and various additives, and should be avoided.... Their means of production, distribution, marketing, and consumption damage culture, social life, and the environment."¹⁵⁷

China

The Chinese soft drink market is vast and growing. Sales of carbonated drinks alone are expected to grow to \$16.2 billion by 2018, which would be an increase of 30 percent since 2013.¹⁵⁸ One study found that 46.1 percent of children regularly consumed SSBs. In 2014, a survey of 10,000 students in 24 schools in six Chinese cities found that a quarter of primary school pupils and 16 percent of middle-schoolers consume sugar drinks every day.¹⁵⁹

Thirty years ago, obesity was rare in China. Now, 30 percent of Chinese are either overweight or obese, and nearly 10 percent of the total population is diabetic (with an additional 15.5 percent being prediabetic). Rates of hypertension, unhealthy blood lipids, and inflammation have also risen sharply. Among youths under 20 in 2013, 23 percent of males and 14 percent of females were overweight or obese—up from less than 10 percent in 1990. The prevalence of diabetes increased 56 percent from 1990 to 2013.¹⁶⁰ In fact, according to the International Diabetes Federation, 11.6 percent of adults (114 million people) have diabetes and a stunning 493 million people have pre-diabetes.¹⁶¹

Data from the cities of Guangzhou, Shanghai, Jinan, and Harbin showed that children who regularly drank SSBs had significantly higher BMIs, waist circumferences, and LDL ("bad") cholesterol levels than those who were regular milk drinkers.¹⁶² A 2012 study reported that 46 percent of children



Child-friendly images from Coca-Cola's China website.
<http://www.icoke.cn/Default.aspx>; <http://happy.icoke.cn/campaign/cny2015/w/index.aspx>.

drank SSBs regularly, which was positively associated with obesity and abdominal obesity.¹⁶³

In 1978 Coca-Cola struck a deal to become the first consumer product to enter the Chinese market since Mao took power.¹⁶⁴ Additional marketers have since gained access to the market, and the competition between Coke and Pepsi is intense. Coca-Cola now controls 58 percent of the Chinese carbonated soft drinks market and PepsiCo 27 percent.¹⁶⁵ (Note that *non*-carbonated drinks, such as teas and fruit juices and drinks, are even more popular in China than fizzy drinks.^{165a})

In 2011 Muhtar Kent, the CEO of Coca-Cola, stressed the importance of the Chinese market: “It’s our third-largest global market, growing at double-digits... We don’t see China only as a great growth market. We see China as a future market for further innovation that will benefit our business globally.”¹⁶⁶



CEO Muhtar Kent (wearing sunglasses) celebrating the construction of Coca-Cola’s 45th production facility in China.
Source: Coca-Cola Journey, Aug. 21, 2015.

And Coke is certainly putting its money where its mouth is. From 2009 to 2011, Coke invested \$3 billion in China. And in 2015, as it broke ground on its 45th production facility, Coke said it will invest another \$4 billion for 2015–2017.¹⁶⁷ Meanwhile, PepsiCo set aside \$2.5 billion for its beverage and food investments.¹⁶⁸ The good news, though, is that, notwithstanding that marketing blitz, *China Daily* reported that market growth of carbonated drinks slowed to only 1 percent in mid-2015 and that Walmart’s sales of fizzy drinks declined by a remarkable 15 percent from 2014 to 2015.¹⁶⁹

Egypt

Egypt is another market in which strong growth in soft drinks is predictable. Given that Egypt is largely Islamic, the alcoholic-beverage industry is not a real competitor. Egypt is a market of enormous interest for multinational corporations, despite the recent political upheavals. A population in which more than 50 percent are under 19 years old, increasing urbanization, and more young women entering the workforce make Egypt an attractive market for bottlers.¹⁷⁰

Egypt’s thirsty youth population hasn’t gone unnoticed by marketers. With 65 percent of Egyptians under 30, *Advertising Age* said, “now is the time for brands to capture their hearts and wallets.” And Ahmed Nazmy, head of marketing for Coca-Cola’s Egypt franchise, said, “We have young generations who can consume any kind of food and beverage, [they’re] not caring about their health yet.”¹⁷¹

Over the last 20 years, Coke consumption tripled in Egypt,¹⁷² and soft drinks sales volumes were predicted to grow at a compound annual rate of 7.5 percent between

2013 and 2018.¹⁷³ Per-capita consumption is expected to increase from 38 to 50 liters between 2018 and 2033. And, of course, obesity follows soda consumption like night follows day. Over 20 percent of Egyptian preschool children are now obese, a figure some attribute to the ready availability of junk food, including SSBs, in schools.¹⁷⁴



A Thums Up promotion at a Hindu Durgu Puja celebration in India.

Source: Coca-India image gallery.

India

The \$10-billion-a-year soft drink industry in India is growing rapidly, at around 6 to 7 percent annually. With annual per-capita production (11 liters) still at a fraction of China's (34 liters) and about one-fiftieth Mexico's consumption, the potential for growth in the second-most-populous country is staggering.¹⁷⁵ Under 2 percent of the drinks are non-caloric "diet" drinks.¹⁷⁶

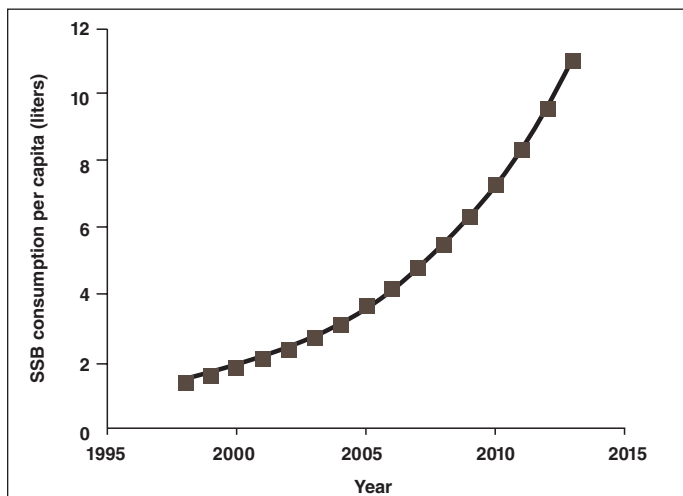
India has a complex history with global brands. Although Coca-Cola first entered the market in 1950, it fled in the 1970s along with other multinationals during a wave of nationalism. In 1989 PepsiCo launched in India and was followed a couple of years later by the return of Coca-Cola. By 2015, PepsiCo had 37 beverage bottling plants and 3 food plants.¹⁷⁷ But Coke solidified its leading market position by purchasing Thums Up, a local brand. Thums Up remains

India's number-one soft drink—making India one of a handful of countries where Coke or Pepsi brand does not rule.¹⁷⁸ While soft-drink consumption is much higher in urban areas, the SSB industry is increasingly focused on expanding into the countryside.

Major efforts are underway to attract first-time consumers in this hot climate with lower-priced drinks. In 2013 PepsiCo¹⁷⁹ (for Frito-Lay snacks and Quaker cereals, as well as drinks) and in 2012 Coca-Cola¹⁸⁰ each announced plans to invest \$5 billion in India by 2020. One marketing approach, of course, is to make soda available everywhere. A study by the Diabetic Foundation of India found that, "Importantly, sugar-sweetened beverages and other sugar-containing high calorie foods are easily available within and around school premises."¹⁸¹

In India, consumption of SSBs has increased by 13 percent each year since 1998.¹⁸² The increased availability of SSBs in both rural and urban areas promotes this consumption, with dhabas (small shops) selling SSBs along all roads and highways.¹⁸³ It hardly bears repeating, but along with higher consumption comes higher obesity. One study found that children

SSB Consumption in India (liters per capita), 1998–2013.



Source: Galati S, Misra A. *Nutrients*. Dec. 2014.

and adolescents in urban areas were consuming 1.8 cans of cola per week, sufficient, in theory, to drive a weight gain of three pounds per child per year.¹⁸⁴ In India, long the poster child for under-nutrition, the obesity rate among school-aged children in urban areas has climbed to as high as 20 percent.¹⁸⁵ While 51 million Indians already suffer from diabetes, the Diabetes Foundation fears that that number will rise to 80 million by 2025.¹⁸⁶

Indonesia

“When I think of Indonesia—a country on the Equator with 180 million people, a median age of 18, and a Muslim ban on alcohol—I feel I know what heaven looks like,” said Coca-Cola president Donald Keough in 1991.¹⁸⁷ Indonesia’s population has since grown to 255 million people, the world’s fourth-most-populous country, and has been termed a “major soft drinks growth market in the long-term.”¹⁸⁸ In the Asia-Pacific region this vast country is one of the fastest-growing soft drink markets, lagging only behind China and India in terms of growth in off-trade (mostly through grocery and convenience stores) sales volume between 2008–2013.¹⁸⁹ Sales of sweetened beverages have enjoyed double-digit growth rates over the past decade.^{189a}

The growing Indonesian market has drawn rivals to the dominance of Coca-Cola and PepsiCo, including Peru’s AJE Group, maker of Big Cola, and Japan’s Asahi Breweries, which makes carbonated and tea-based drinks.

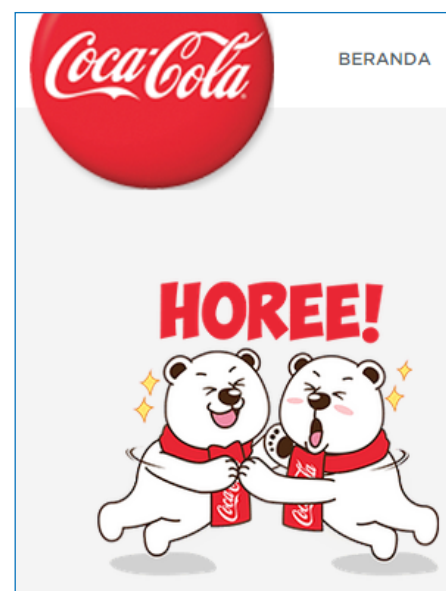
To secure its position in Indonesia, in 2014 Coca-Cola agreed to purchase a 29.4 percent stake in the Indonesian business of Coca-Cola Amatil, Coca-Cola’s only distributor in Indonesia.¹⁹⁰ According to Coca-Cola International President Ahmet Bozer, “This investment will allow us to capture the growth opportunity in one of the largest and most dynamic countries in the world.”¹⁹¹ The company intended to invest half a billion dollars in Indonesia just in 2015.¹⁹²

That “growth opportunity” will probably apply also to bariatric physicians and dialysis centers. A 2013 Health Ministry study estimated that 30 percent of children aged 5–12 years in Jakarta were overweight.¹⁹³

Mexico

In Mexico, where Coca-Cola has even launched a home-delivery service in upper-middle-class neighborhoods,¹⁹⁴ consumption of carbonated soft drinks is among the highest in the world: just below 135 liters (36 gallons) per person in 2013.¹⁹⁵ Consumption is huge, in part, because of the hot climate and relentless marketing and because people at all income levels drink soda.¹⁹⁶

Between 1999 and 2006, the consumption of calories from soft drinks doubled in some age groups and tripled



Child-friendly image from Coca-Cola’s Indonesian website.



Parents and children drinking Coca-Cola in San Pedro Chenalhó, Mexico.

Source: María Verza, “The ‘Coca-Colization’ of Mexico, the Spark of Obesity,” [Periodismo Humano](#).

in others, from 100 to 225 calories per day among adolescents and from 81 to 250 calories per day among adult women.¹⁹⁷ Furthermore, a 2008 survey of school children found that soda is one of the five most-consumed products in public primary and secondary schools throughout Mexico.¹⁹⁸ One-fifth of the calories consumed in Mexico come from beverages, mostly SSBs,¹⁹⁹ 95 percent of them full-calorie.²⁰⁰

Mexico has long been a highly profitable market for soft-drink bottlers. Major soft-drink brands, including Coca-Cola, Pepsi, and Cadbury Schweppes, dominate and together account for 90 percent of the market.²⁰¹ The local Coca-Cola bottler, Coca-Cola FEMSA, doubled its revenue between 2008 and 2013.²⁰² However, in 2014 sales dropped by at least 6 percent (9 percent among low-income groups), when a landmark tax causing about a 10 percent increase in retail prices took effect.²⁰³ (In 2015, health advocates defeated an effort to tax lower-sugar drinks at a lower rate.²⁰⁴)

Despite the introduction of the soda tax, the industry apparently believes that its long-term prospects remain rosy.²⁰⁵ After the tax took effect, PepsiCo Mexico President Pedro Padierna said that Mexico remains a “tremendous opportunity” for growth.²⁰⁶ His company announced that it will invest \$5 billion in Mexico over five years. And Coca-Cola said it plans to invest more than \$8.2 billion between 2014 and 2020.²⁰⁷ Cristina Morales, an industry analyst in Mexico City, said “There is always going to be a strong dominance of Coca-Cola here, but with new taxes the consumer is going to be more aware of the price environment if Pepsi is able to reduce prices, increase competition, or introduce new products.”²⁰⁸

Health statistics reflect SSB consumption. Mexico ranks near the top in the world in adult obesity, first in type 2 diabetes, and fourth in childhood obesity.²⁰⁹ Nearly one-third of Mexican adults are obese, seven out of ten are overweight or obese, and about one-third of children are overweight or obese.^{210,211}

Among Mexicans younger than 45, SSBs are estimated to cause 22 percent of female and 33 percent of male mortality related to diabetes, CVD, and obesity.²¹² And according to a 2015 study from the University of Washington, the prevalence of diabetes increased by 52 percent between 1990 and 2013, partly because of sugar drinks.²¹³ At least one out of eight adults suffers from diabetes.²¹⁴

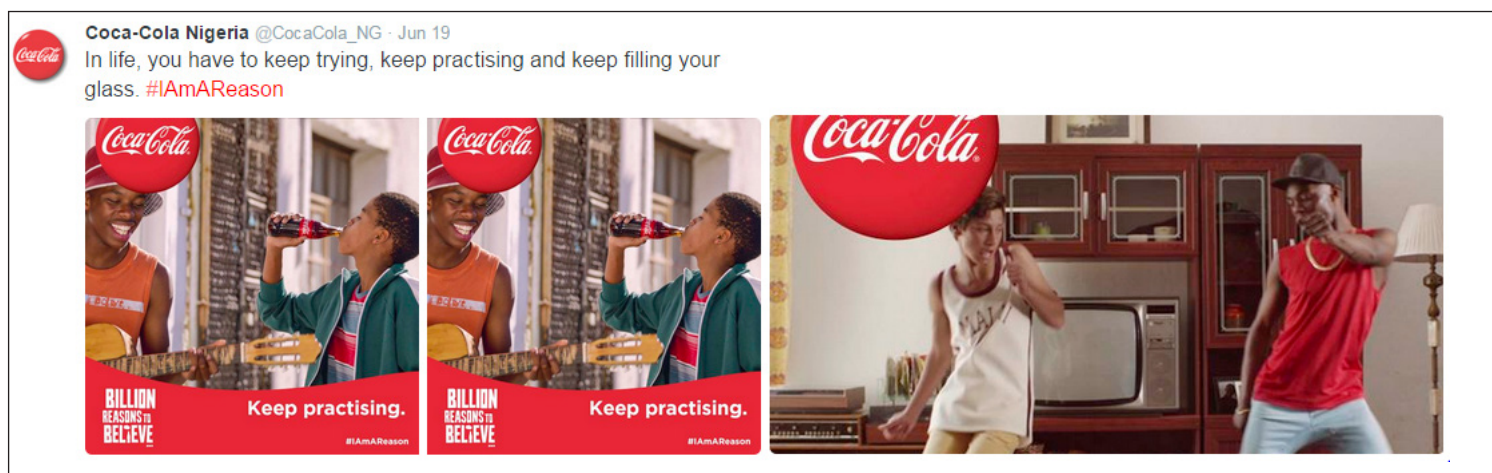
Nigeria

Nigeria is Africa’s most populous country, with a population of over 150 million of which an estimated 43 percent are under the age of 15.²¹⁵ With such a large, young population, along with an economic boom, Nigeria is expected to be a soft-drinks hotspot.²¹⁶ In 2013, Nigeria was described as an “exciting frontier” by the research firm Euromonitor.²¹⁷ Coca-Cola accounts for 40 percent of the Nigerian market and PepsiCo 12 percent.²¹⁸

With low per-capita consumption, there is tremendous potential for growth despite conflicts in the northern part of Nigeria. Notably, however, per-capita production

of Coca-Cola products has fallen in recent years, decreasing from 30 eight-ounce servings in 2002 to 27 in 2012.²¹⁹

Rising health awareness among Nigerian consumers has resulted in particularly strong growth in sales of fruit and vegetable juices and bottled water. Consequently, bottlers have been developing new reduced-sugar and sugar-free drinks, as well as products that contain more natural ingredients.²²⁰



Images from Coca-Cola's Twitter feed for Nigeria.

Source: NYU SeedProgram.

South Africa

The South African Health and Nutrition Examination Survey found that 13 percent of children aged six to 14 years in poor squatter settlements in cities are overweight or obese.²²¹ The country's prevalence of obesity among children aged two to five is twice that of children in Morocco, Swaziland, Botswana, and Nigeria.²²² Overall, nearly two-thirds of the population is overweight. Nearly 70 percent of South African females display unhealthy levels of body fat and more than four in 10 are clinically obese. With one in four girls and one in five boys overweight, the president of the South African Society for Obesity and Metabolism noted:

These are devastating figures, especially since it is such an expensive disease.... We cannot afford to spend the next decade debating this issue. The obesity problem in our country is where the HIV epidemic was 10 years ago, when we turned a blind eye to the scale of the problem in terms of health economics and became the worst in the world in terms of outcomes.²²³

South Africa is another battleground for Coca-Cola and PepsiCo. It is Coke's largest market in Africa and one of best-performing markets in the world. With 15 bottling facilities, Coca-Cola employs around 9,000 people.²²⁴

PepsiCo has long maintained that Coca-Cola's dominance was cemented when PepsiCo and many other American companies withdrew from South Africa in the apartheid era. Coca-Cola technically withdrew its direct investments as well, but

through franchisees its market share actually expanded during apartheid. By the time PepsiCo returned in 1994, Coca-Cola reigned with an 80 percent market share.²²⁵

Despite its association with apartheid, Coca-Cola has engineered its reputation as the quintessential South African brand. In an article titled “Painting South Africa Red,” Ron Irwin explained the dominance of Coca-Cola:

Coke is South Africa’s most admired brand name, available freely in Johannesburg’s posh malls as well as in the hinterlands where people must walk for miles down dirt roads to buy a Coke from the “spazza” shops that sell rural Africans their basic goods....In an October 2000 survey of South Africans, 91 percent of respondents in urban areas mentioned Coke as the number-one top-of-mind soft drink brand. Coke also owns its nearest soda-brand competitors, Fanta and Sprite.²²⁶

In South Africa, consumption of SSBs begins early: a 2007 study found that SSBs such as Coca-Cola were the third-most-commonly-consumed food or drink item among urban children aged 12–24 months.²²⁷ In rural areas, such as the KwaZulu-Natal Province, children aged 4–24 months were consuming sodas two to three times per week.²²⁸

Marketing of Sugar Drinks, Especially to Children and Youth

Massive international marketing has made the sugar-sweetened-beverage industry a worldwide economic success and a growing public health calamity. The term “marketing” goes well beyond advertising and refers to any activity designed to increase brand recognition, appeal, and ultimately purchase. As Corinna Hawkes describes in her seminal study on soft-drink and fast-food marketing,²²⁹ marketing generally includes five broad classes of activities—the “Five Ps of Marketing”:

- Promotional Activities (advertising, and sales promotions)
- Product Expansion (adapting products to local markets)
- Price and Packaging (setting prices and designing packaging to maximize sales)
- Place (maximizing availability)
- Public Relations (philanthropy, partnerships, favorable publicity)

The success of Coca-Cola and PepsiCo, as well as other companies, in dramatically expanding consumption of SSBs worldwide is based to some extent on “global localization” or “glocalization.” In other words, companies think globally and act locally. After all, customer preferences reflect local tastes, competitors vary in number and type, channels of distribution are different, and the media environment changes from country to country. In many markets glocalization means offering products specifically tailored to local tastes. In other markets glocalization involves

Sugar-sweetened-beverage corporations are expanding their market to the children of [low- and middle-income countries] by applying lessons learned through their marketing, psychological and physiological research...But corporate officials also...may adapt packaging, point-of-sales...and product placement in movies, TV, social media, apps, video games, toys, celebrity and character spokespersons; activities in school settings; word-of-mouth promotion; distribution of premiums and prizes; sponsorship of sports, arts and other national and local events; branded “philanthropic” activities, including funding research; and by forming partnerships with government agencies and non-governmental organizations.

*Professor William Wiist, Northern Arizona University*²³⁰

selling global brands, such as Pepsi, but through diverse distribution channels, such as in local street markets in Nigeria, a prime way to reach urban teens.

Beyond glocalization, marketing to young people today has become an even more targeted practice that tries to create highly *personalized* and *shareable experiences*, particularly through digital marketing. As author Graham Brown has noted, marketing today has moved beyond “brands” to “brand experience”—how companies connect with their customers and make them feel on a day-to-day basis. One key to successfully marketing to youth is making an experience shareable through social media, emails, and other approaches.

Promotional Activities

Promotional Channels Used

The SSB industry uses multifaceted techniques that are highly attractive and engaging to children, as well as adults. Marketers use many of the same promotional techniques, channels, and strategies in low- and middle-income countries that they use in high-income countries, such as traditional TV advertising, video games, billboards, point-of-sale advertising, and, increasingly, interactive digital technologies.

Traditional Media: Television, etc.

Notwithstanding the rise of the Internet, television is still a major means of advertising soft drinks, but it is increasingly interlinked with mobile technologies. While Coke and Pepsi maintain that they do not advertise to children under 12, young children certainly see advertising aimed at older children and adults, especially on family-oriented programs.

TV commercials employ the usual variety of persuasive techniques, including toy giveaways, appearances by promotional characters, health and nutrition claims, and appeals to taste and fun.²³¹ Beyond commercials, the SSB industry engages in product placement on youth and “tween” programming. That is, branded products



Coke's logo is virtually ubiquitous, including at this airport in Rio de Janeiro, Brazil.
Source: Ch'uya Lane, Neena Prasad.



Pepsi's product placement on the Vietnam Idol TV show in 2015.
<http://www.suntorypepsico.vn/en/product/activity/pepsi-accompanies-6th-vietnam-idol-program>.

such as Coke, Pepsi, or Fanta are consumed, discussed, or appear in the background or as part of a plotline of television shows or movies watched by children.²³² Research indicates that children, especially older children, are vulnerable to placements for unhealthy products promoted on television.^{233,234} In India, for example, MTV's first partnership with a brand is a three-year agreement with PepsiCo to sponsor MTV's expansion throughout the vast subcontinent with a "with a new channel about local indie and alternative culture, with a focus on music, film, art, comedy and other content."²³⁵

Public health researchers and advocates have long been concerned about junk-food advertising on children's TV. One study in India found that the highest proportion of junk-food advertisements, 47.5 percent, occurred on a child-oriented television station, the American-owned Nickelodeon. In Nepal, drinks were the most frequently advertised (60 percent) type of junk food on TV.²³⁶



Coke's "Welcome to San Juan Chamula, Mexico" sign depicts the traditional indigenous clothing that signifies a person of respect.
 Source: El Poder del Consumidor.

Despite the effectiveness of TV advertising, companies also employ other traditional forms of advertising worldwide. According to Mark Pendergrast, author of *For God, Country and Coca-Cola*, in rural Kenya "There in the middle of nowhere, Coca-Cola logos were painted on the washing stations outside the latrines."²³⁷ Coca-Cola is one of the biggest spending companies in television and billboard advertising in both China and India.^{238,239}

Internet Marketing, Social Media

Companies are taking advantage of the digital revolution and the rise of social media and mobile technology to engage youth on their own turf. For example, a growing percentage of PepsiCo's marketing expenditures is being dedicated to digital platforms, including "leveraging Facebook, Twitter, and Instagram and other channels in innovative ways to produce compelling content, drive engagement, and build brand equity." The company is also partnering with some of its retail clients to extend its brand reach to their social media platforms.²⁴⁰



Image from 7UP's India website.

Mobile marketing is so important to Coca-Cola that it has described mobile as a "sixth sense." In a YouTube video, Coca-Cola says that more than 7 billion SIM cards are fired up around the world each day—a lot more than the 1.9 billion cans of soda the company sells each day. The video states that the company is going to use mobile phones to put more Cokes in more hands: "We will make mobile an enabler of desire."²⁴¹ At another point, Coke's director for mobile technology,

Tom Daly, said, “Use the phone in one hand to put a Coke in the other by enabling desire.”²⁴² To support its vision of mobile, the company is supporting the establishment of free Wi-Fi around Coca-Cola kiosks in places such as rural South Africa.²⁴³

Mobile marketing is a key venue for advertising to children, “twens” (9- to 12-year-olds), and teens—the first generation to have direct access to this technology. In the United States, 93 percent of 12- to 13-year-olds are online, and 71 percent report having mobile access to the Internet.²⁴⁴ Kids today use a variety of social media sites, including Facebook, Instagram, Tumblr, Twitter, Vine, Snapchat, and a dozen others.²⁴⁵ A study of children in the European Union found that in 2013, 87 percent of 5- to 7-year-olds used the Internet.²⁴⁶ Kids in developing and emerging market countries are going down the same path.

Digital marketing is intense and immersive, enabling companies to fine-tune their marketing to young consumers around the world. The immersive nature of that marketing is invaluable, because it means that users spend far more time engaged with brands and brand experiences than they did through traditional media, like the 30-second TV commercial. It also means that the brand’s engagement with consumers is highly magnetic, since the digital marketing enables youths to create their own characters, design their own cans, and mix their own drinks, all through mobile technology. And, perhaps most importantly, marketers can collect data on every click a child or adolescent makes, enhancing their ability to more effectively target their marketing to the interests of individual consumers.

Brand Websites

Coca-Cola and PepsiCo have created websites in many countries to promote their products. Many of the websites used by Coca-Cola and PepsiCo feature interactive promotions, games, and downloadable goods, as well as cartoons and other characters designed to appeal directly to children and teens. Coca-Cola’s page for



Pepsi launched the “Great India Catch”—a game that can be logged on in Facebook.
Source: NYU SeedProgram.

China features small children playing with a ball, while another page includes an interactive cartoon world. Coca-Cola's Indonesian page encourages children to "join the official Coca-Cola account of Indonesia and get [an] exclusive sticker set" complete with images of happy Coca-Cola polar bears. Coke's page for India features images of a young girl listening to music with her headphones and calls on youth to "catch the multiproducer episode" of Cokestudio's #musicmeetshappiness. During the World Cup, Coca-Cola encouraged teens to share 15-second videos of their football (soccer) skills for a chance to win prizes.²⁴⁷

Websites are an important tool that the SSB industry uses to counter the public health message that its beverages contribute to obesity. Visitors to the Coca-Cola Brazil website, for example, can find information on "Truths and Rumors" about Coca-Cola products, with the pages having multiple boxes that include a short "truth" along with a picture. Such "truths" Coca-Cola seeks to promulgate include the message that "any food or beverage may be part of a secure and balanced diet," explanations of product ingredients, and how "low or no calorie sweeteners are safe." Coke India's website features many initiatives relating to health and fitness in India, including links to the work of Anandana, the Coca-Cola India Foundation, which focuses on issues relating to water, the environment, and healthy living — some of the most prominent issues on which the company is being criticized.

In addition to advertising on their own websites, SSB producers also advertise on third-party websites. One recent study estimated that 98 percent of children's websites permit advertising and more than two-thirds of youth-targeted sites rely primarily on advertising for revenue. According to the UConn Rudd Center for Food Policy and Obesity, "Child-targeted display advertisements are highly engaging and eye-catching; they commonly use large text, bright colors, dynamic images, animation or games and interactive activities embedded within the ad to attract attention" and often contain links that drive children to the advertiser's website.²⁴⁸

Facebook

Facebook, the most popular social networking site in the world, is a key marketing platform for Coca-Cola and PepsiCo in emerging countries. As of April 1, 2015, Facebook had over 900 million visitors accessing the site each month²⁴⁹ and is the



Pepsi Nigeria Facebook page.

Source: NYU SeedProgram. Available at <http://www.icoke.cn/Default.aspx>.

most popular social networking website in a range of countries, including India and Brazil.²⁵⁰ Although most Facebook users are individuals, Facebook embraces brands as well, such as Coca-Cola and PepsiCo. Coca-Cola's Facebook page has more than 93 million likes.

Companies post images, videos, games, links, contests, offers, applications, polls, quizzes, and other digital and interactive media to their Facebook timelines. The pages are also highly interactive. Those users who "like" brand pages can engage by sharing their own content such as pictures or videos, commenting on page posts, and sharing page content with their own Facebook networks.

Significantly, if users engage in any activity on brand pages, that activity may then appear in the news feed of the users' "friends"—even those who have not "liked" the company's page—seamlessly spreading marketing messages across social networks. Consequently, youths that engage on the Facebook pages of soft-drink companies not only willingly engage and entertain themselves with brands, but also create free word-of-mouth advertising.²⁵¹ That kind of viral consumer involvement is unique to social media and helps spread marketing messages far and wide.

Facebook can be used to amplify traditional TV advertising. For example, ahead of the Cricket World Cup in 2011, PepsiCo India rolled out a video campaign that used a Facebook Reach Block featuring video ads for 24 hours. A Reach Block is a type of Facebook media buy that is guaranteed to reach 100 percent of a target demographic at least once (and at most five times) on a given day.²⁵² The first ad featured a video, the second was a video-like ad that encouraged people to watch a Pepsi TV spot, and the third drove people to an application that enabled users to create an avatar of themselves. The avatar could share a soda with its creator's "friends." The Reach Block ads were viewed more than 19 million times—145 percent more than projected.²⁵³

Other Social Media Platforms: Instagram, Twitter, Vine

Coca-Cola (and other companies) leap to take advantage of every new social media platform, including Instagram (Coke has more than one million followers), Twitter (more than three million followers), and Vine (2 million + views).²⁵⁴ Those new platforms are highly engaging and attractive to youths. For example, companies use Instagram by soliciting users' photos and videos for contests or posting on it to promote sponsorships, new products, and other promotions. Companies can "regram," which is posting others' content that reflects well on their brands. Importantly, people can get a bit of fame, because regrams acknowledge the source of the original Instagram post by crediting the source's Instagram handle.

Companies use Vine for marketing by soliciting users' six-second-long videos for contests or by posting videos promoting their sponsorships, new products, and other promotions. Companies can also "revine" by posting others' content. As with regrams, revines acknowledge the source of the original Vine post.

Not surprisingly, Coca-Cola and Pepsi maintain individualized Twitter accounts for

various countries. Recent Coca-Cola tweets illustrate the appeal of this forum to youths, including instructions on how to access the “latest happenings in the RnB and HipHop World? Click here.”

Creative Strategies

The expansion of traditional media and explosion of social media channels globally has created new opportunities for Coca-Cola and PepsiCo to launch creative strategies to increase consumption. For over 100 years Coca-Cola has been an unrivaled leader in creating visions and brands that connect with consumers. Today, Coca-Cola is expanding its traditional, and extraordinarily effective, marketing campaigns to better engage young people. In particular, it is

Facebook, YouTube, and Twitter are all blocked in the world’s most populous nation. Coca-Cola, however, has found a way around this social media outage by tapping into Weixin’s (a popular Chinese social networking app) built-in reader for QR codes to start its Lyric Coke campaign. Coke bottles featured famous Chinese lyrics like “Baby, I’m sorry” and “I love summer.” The company then encouraged youths to share a 10-second clip of a song with friends by scanning the QR code on bottles. Between May and December 2014, the Coca-Cola campaign generated over three billion views.²⁵⁵

Xu Lin, of the Institute for Nutritional Sciences at the Chinese Academy of Sciences in Shanghai, who researched marketing in China for this report, found that in 2005 Coke launched the first major promotion event in China with an online game called “World of Warcraft.” Also, the Share a Coke campaign has extended to China. Since 2013, Chinese can develop customized labels—nicknames, lyrics, or whatever else—on their bottles.²⁵⁶



Chinese ad features South Korean movie star Kim Soo-hyun.
Source: Xu Lin

exploiting the new digital eco-systems to advance from what it has called “One Way Story Telling” (traditional advertising) to “Dynamic Story Telling” through social media.

Coca Cola’s advertising strategy, “Liquid and Linked: Content 2020,” is a key case study on how Coca-Cola has employed social media forums, including Twitter, YouTube, Facebook, mobile apps, and social gaming, to firmly embed its brands into youth culture. The idea behind “Liquid and Linked,” according to Coca-Cola’s marketing team, was to create dynamic “ideas” that are so compelling that they become “liquid”—contagiously shared by people through social media—and “linked”—connected to the brand to foster “conversations.” The goal is to get young people buzzing around Coca-Cola content and, importantly, to embed the Coca-Cola brand in their minds. “Everyone loves a great story and teens are no exception to that rule,” says Coca-Cola. By July 2012 the YouTube video launching the “Liquid and Linked” campaign is said to have generated 45 million conversations and 3 billion impressions.²⁵⁷

Brand engagement, interactive personalized content, shareable experiences, and dynamic storytelling are highly appealing to youth who have time to surf the

Web and interact on social media. The Share a Coke campaign, which features people's names on bottles and cans, is a key example of the way in which the industry is creating shareable brand experiences as well as personalizing campaigns.²⁵⁸ The Share a Coke campaign earned over 18 million media impressions, and traffic on Coca-Cola's Facebook page increased by 870 percent.²⁵⁹ Coca-Cola has also employed social media in the campaign: using the hashtag #shareacoke, people are Facebooking and Instagramming photos of their personalized bottles.²⁶⁰ Such efforts to directly contact consumers, build emotional connections, and start conversations are all aimed at building Coca-Cola's bottom line.

Cartoon Characters

Companies use tried and true traditional marketing techniques, such as cartoon characters and celebrity endorsements, to entice people of all ages. The animated Coca-Cola polar bears are one of the most iconic corporate cartoon characters of all time. Directly inspired by creator Ken Stewart's puppy, Coca-Cola transmuted a bunch of lovable, furry characters into an effective brand experience. According to Stewart, "That's really what we were trying to do—create a character that's innocent, fun, and reflects the best attributes we like to call 'human.' The bears are cute, mischievous, playful, and filled with fun." Not only do the grown-up polar bears, with their winter scarves and Coke-induced antics, appeal to kids—so do the cubs, which over the years have been seen in Coca-Cola ads selecting a Christmas tree and playing with a seal cub.²⁶¹ Coke's polar bears have permeated the global market along with Coke itself. In Indonesia, for instance, virtual stickers feature polar bear cubs wearing Coca-Cola scarves and Coca-Cola party hats, playing with each other, and talking on a mobile phone.²⁶²

Coke and Pepsi have developed a panoply of cartoon characters to connect their brands to children in different countries. Studies in countries such as Brazil, India, Russia, and Guatemala document that the companies use culturally tailored mascots and cartoons to attract children.²⁶³

- In China, clay dolls A Fu and A Jiao, a boy and girl toddler duo, are pictured riding a Coca-Cola bottle flying over an amusement park.²⁶⁴
- On the 7UP website in India, elementary-school-aged cartoon children with lemons for heads frolic about in a world submerged in 7UP, with a stadium and shopping center atop floating lemon halves.²⁶⁵ 7UP was launched in India in 1990, and its international mascot Fido Dido was used to position the brand as a cool drink for youngsters.
- In a Brazilian ad for Pepsi Twist Zero, animated limes can be seen playing a claw machine while sitting on a can of the drink, trying to retrieve a stuffed lime from amongst the other stuffed animals.²⁶⁶
- Cartoon characters, such as animated lions dressed in tunics and a young female hiker traversing a field of strawberries, are featured on cartons of some Brazilian juice drinks.^{267,268}

- In South Africa, a cartoon Pepsi bottle and pizza sit at a romantic candle-lit table with hearts in their eyes, and on Pizza Hut's Facebook page, a "Life Event" is listed for when Pepsi and Pizza Hut became "friends."^{269,270}



Popular Indian film personality, Vishal, goes to work for Thums Up.
Source: Coca-Cola India image gallery.

Celebrity Endorsements

Celebrity endorsements are a key element of promotion. In the United States, for example, PepsiCo has aggressively employed celebrity endorsements, signing artists like Michael Jackson and Beyoncé to endorsement deals, while Coca-Cola has brokered deals with rapper 50 Cent and basketball star LeBron James. In global marketing campaigns, companies work with locally relevant celebrities.²⁷¹ Olympic medalists and music stars are frequently included in marketing efforts.^{272,273} For example, during the 2012 London Olympic Games, Coca-Cola included Chinese Olympic medalists like Xiang Liu and Yang Sun as spokespersons, while PepsiCo involved several famous football (soccer) players to make a dream team during the 2014 FIFA World Cup in Brazil.

Thums Up commercials in India sometimes showcase Bollywood stars. One ad features Bollywood star Akshay Kumar in a dashing, James Bond-type car chase in pursuit of a bottle of Thums Up. Says Vikas Gupta, Vice-President of Marketing for Coca-Cola India, "The 'Thums Up Taste The Thunder' series portrays every person's hidden yearning—to dare and win over the impossible; to set unbelievable targets and to have the power to accomplish them."²⁷⁴ Daredevil commercials have proven highly controversial: Mumbai police called for a ban on them, because children might try to pull off the stunts. The India Advertising Council stepped in and pulled 14 ads because they included stunt activities, in some cases featuring celebrities from cricket.



Prizes in a Kenyan contest sponsored by Pepsi include dinner dates with music stars.
Source: <http://www.promonigeria.co/2014/11/pepsi-top-ten-vote-and-win-contest.html>.

Online Gaming, Prizes, and Discounts

As access to mobile devices becomes more prevalent, it is no surprise that kids are increasingly playing online games. Coca-Cola, PepsiCo, and many other companies are using the meteoric rise of online video games and other digital and social media applications to engage children. The child entertainment market is global: the "global child" downloads about 11 apps every six months according to industry strategists.²⁷⁵ In addition to games, online promotions reward consumers with such gifts or prizes as toys, computers, and musical and sports equipment in return for brand loyalty.²⁷⁶

- In Nicaragua, a Pepsi ad entices consumers to triple their telephone airtime through Pepsi product purchases.
- In Korea, Coca-Cola PLAY is a real and virtual playground for young people to connect with one another by using mobile devices that incorporate voice recognition, location, and motion-detecting technologies for games and activities.

Because 80 percent of Korean teens exceed their wireless data capacity each month, Coke PLAY awards additional data as prizes.²⁷⁷

- In Hong Kong, Coca-Cola created a mobile app game that enabled teens to “chok” (a slang word used by Hong Kong teens, meaning rapid motion) the cameras on their phones to catch the tumbling bottle caps from the TV ad at 10 p.m. each night and win instant prizes. The app became the number-one download in Hong Kong within one day of its release.²⁷⁸
- In Thailand, the owner of Ichitan bottled sweetened teas (with 15 teaspoons of sugar in a 0.5-liter (17 oz.) bottle), a genius for publicity, has run daily lotteries that pay out 1 million baht (\$30,000) and a monthly lottery with such prizes as a \$100,000 Porsche or Mercedes or a free trip abroad. The lotteries are very popular—and helped the brand capture the lion’s share of the market in just a few years because the payouts are as great as or greater than in the national lottery.^{279,280}



Ichitan’s lottery to promote sales of its sweetened teas offers prizes including expensive sports cars.

Source: Thaksaphon Thamarangsi.

Music

Coca-Cola and PepsiCo both make music a centerpiece of their marketing campaigns to create buzz around their brands and connect with youth. According to industry observers, both companies “work to protect their image and seek to recruit new and younger customers. Music is their go-between.”²⁸¹ In 2012, Spotify, the global music-streaming service, announced a partnership with Coca-Cola. Daniel Ek, the CEO of Spotify, said, “We want music to be like water, everywhere; but when you think about it, we want music to be like Coke, which really is everywhere.” Shortly thereafter, PepsiCo announced a “Live for Now Music” campaign, which included free music downloads by means of a deal with Twitter.

Coca-Cola has launched numerous music-oriented campaigns to cash in on the youth market globally. In 2013, it launched the “Year of Music,” and music was central to its marketing efforts during the 2014 FIFA World Cup football (soccer) tournament. The Coca-Cola “anthem” for the World Cup was translated into 22 languages. Coke Studios, which features performances by local musicians and was developed in partnership with MTV, has been launched in various parts of the world, including India, Pakistan, and the Middle East. Music has also been at the heart of Coca-Cola’s most memorable ads, starting with the iconic “I’d Like to Buy the World a Coke” commercial that was launched in 1971. More recently, music is featured in Share a Coke campaigns, including one in South Africa where a sweet dog named Bobby searches, to the song “That’s Not my Name” from the Ting Tings, all over Cape Town for his personalized bottle of Coke.²⁸²



A music-themed Coca-Cola ad in Pekanbaru, Indonesia.

Source: Wikimedia.



Filipino celebrities Daniel Padilla and Kathryn Bernardo help sell Pepsi.



Case Study: Coca-Cola's Global "Open Happiness" Campaign

Coca-Cola works hard to associate its brands with fun and happiness, especially with youths and families. In 2009 Coca-Cola rolled out its integrated global "Open Happiness" campaign. "Happiness to us," the Coca-Cola website announces, "is anything that can bring a smile to someone's face. We're in the business of spreading smiles and opening happiness every day all across the world. We know we might not change the world overnight, but if we can add just a few smiles to the world, then we've done our job."²⁸³ The Open Happiness campaign shows how viral marketing drives children and youth all over the world to websites, Facebook pages, and other online marketing applications.

A year after the "Open Happiness" campaign was launched, a "Happiness Vending Machine" showed up in a common room at St. Johns University in New York and dispensed flowers, pizza, and a six-foot-long submarine sandwich to eager and startled students. That video has now received over 6 million hits,²⁸⁴ and different versions of the Happiness Vending Machine have popped up at Live Happiness events around the globe, including in India, Argentina, Turkey, and Kenya.^{285,286} In Panama, a giant Coke vending machine encourages friends and families to cooperate happily together, even sitting on each other's shoulders, to retrieve their sodas.²⁸⁷ While some machines give away Coke and other items for free, others require specific action: a happiness vending machine in Singapore requires a hug, and one in Brazil is activated by dancing. In India and Pakistan, Coca-Cola's "Small World Machines" seek to bring Indians and Pakistanis together by calling on them to touch hands, and draw peace, love, and happiness symbols together in order to receive a Coke.²⁸⁸

Beyond the vending machines, YouTube videos feature the Coca-Cola Happiness truck delivering doses of happiness around the world, including to the Philippines,²⁸⁹ Ecuador,²⁹⁰ Armenia,²⁹¹ Indonesia,²⁹² and Kenya.²⁹³ In the United Arab Emirates, doses of happiness are dispensed to workers in five special phone booths at Dubai labor camps in a Coca-Cola Happiness Phone Booth commercial,²⁹⁴ allowing laborers to exchange a Coca-Cola cap bottle for a three-minute international call. In Brazil, a "Happy Beep" at supermarket checkout lines plays a happy tune whenever a bottle of Coca-Cola is scanned.²⁹⁵ All of the scenes within those videos engage the viewer emotionally—communicating feelings of happiness and enjoyment in the moment. The elements of fun, surprise, and unique locations kept the series interesting and relevant to a wide variety of young audiences around the world.

As in other Coca-Cola campaigns, digital music is central to the Open Happiness campaign. For example, Coke rolled out "52 Songs of Happiness" a collection of original music from emerging artists all over the world. As part of the campaign, each artist was called upon to create a unique song for Coca-Cola, and every artist had the opportunity to have their music heard by Coca-Cola's online community networks around the world.

Product Expansion

Regional and Local Brands

The “glocalization” of SSBs also involves fine-tuning products to suit local palates. As a business strategy, Coca-Cola and PepsiCo have created beverages designed to meet local tastes or scooped up existing brands. PepsiCo, for example, has research centers around the world, including in Brazil, China, Germany, India, Mexico, Russia, the United Arab Emirates, the United Kingdom, and the United States²⁹⁶ to innovate drinks and foods suited to local tastes. Thus, PepsiCo has produced Pepsi Fire (hot cinnamon) and Pepsi Ice (cool mint) for Guam, Thailand, Malaysia, and Singapore and Pepsi Baobab (monkey bread fruit flavor) for Japan.²⁹⁷

Purchasing of local brands or developing new SSBs targeted to local preferences helps insinuate Coca-Cola and PepsiCo—and other companies—seamlessly into the local market, making it difficult for consumers to distinguish local from foreign products.

Coca-Cola alone markets over 3,500 products.²⁹⁸ “A small sampling of “glocalized” beverages made by Coke, Pepsi, or other companies includes:

- In 1999 Coca-Cola spent over \$200 million to purchase half of Peru’s Inca-Kola, a yellow fizz made from local flavors, including the herb lemon verbena. Since the 1970s the drink has been tied up with national identity and is claimed to be “the flavor that unites Peru.”²⁹⁹
- In the 1990s Coca-Cola purchased Thums Up, India’s top brand, for \$50 million.³⁰⁰ Thums Up reportedly is a little spicy, making it the “perfect pairing” for Indian food.³⁰¹
- In Venezuela, Coca-Cola produces Fescolita, a popular local beverage with a taste similar to chewing gum.
- While Coca-Cola sells many different brands in the Philippines, Jaz Cola was specifically designed for consumers living in the Visayan Islands—the main middle island of the country—and has, reportedly, “fueled Visayan pride among its teen consumers.”³⁰²
- Coca-Cola markets Stoney Ginger Beer, which has a tangy taste, in South Africa and other African countries.
- Kwat, produced in Brazil and now owned by Coca-Cola, features the local guarana berry, which has the caffeine that makes it popular in energy drinks. One ad for the soda features boys around 6–8 playing soccer.



Inca Kola, partly owned by Coca-Cola, has as much sugar as a Coke.
Source: Fast Foods Gone Global, Travel Channel.



Source: Coca-Cola Journey, Jan. 2, 2013.



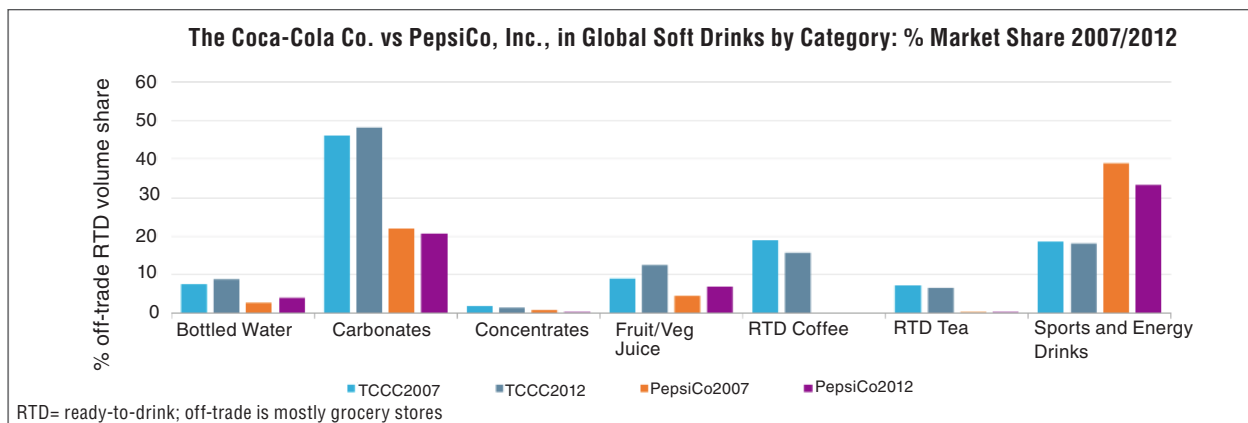
Source: <https://www.youtube.com/watch?v=HJIAeWQmGRo>.

Through flagship and localized brands and huge marketing campaigns, Coca-Cola and PepsiCo products get woven into the fabric of the local culture. In Morocco, for example, it is reported that Coke is as popular as tea, and a visitor will be offered a choice when visiting a local's home.³⁰³

Coca-Cola and PepsiCo are not the only players in regional brands. Other companies, including from lower-income countries, are grabbing their share of the market. For example, AJE Group, the Peru-based maker of Big Cola, sells in over 20 markets in Africa, Asia, and Latin America. It has focused “mainly on young consumers from medium to lower socio-economic groups” in its target markets.³⁰⁴

Product Diversification

The soft-drink beverage marketplace, once dominated by full-calorie colas, is becoming more complex as companies diversify their product portfolios. Growing consumer awareness of SSBs' contribution to obesity, diabetes, and other health problems are shifting demand in many countries. Some analysts predict that by 2019 emerging markets will account for 49 percent of “health and wellness” sales, up from 28 percent since 2002 in food and drinks as a whole.³⁰⁵ Developing new drinks, including juices, energy drinks, and low-calorie alternatives, is an important part of companies' growth strategies. From a public health perspective, however, the health impact of “healthier”—or healthier-sounding—drinks is often the same as for SSBs, because many energy drinks and juices are high in sugar, both naturally occurring and added.



Source: Euromonitor Passport: Coca-Cola Co The, SWOT analysis, in soft drinks (world), March 2013.

Juices and Juice Drinks

Juice is a core growth realm in many emerging markets, partly because some consumers are avoiding carbonated drinks. In Brazil, for example, SSBs are increasingly struggling with an image of unhealthfulness, while other products, such as juices, are believed to be healthy.³⁰⁶

While fruit juice has a modicum of vitamins and minerals, the health impact of excessive juice consumption is similar to that of SSBs. Despite that, juices receive far less attention than SSBs in part because juices and their sugars are considered

“natural.” “But make no mistake,” say Credit Suisse analysts, “Our forefathers did not drink fruit juices (certainly not in the quantity that we do)—they simply ate the fruit.”³⁰⁷ As we’ve noted earlier, fruit and juice may contain the same amounts of sugar, but juice is likelier to add extra calories to the diet, while fruit is likelier to displace other foods or beverages.

In addition, many of the juice drinks marketed around the world contain added sugar. A fruit juice, as defined in the United States, is either 100 percent natural or 100 percent concentrate with no added sweeteners. Anything less is technically a “drink.” Fruit drinks are defined as beverages with less than 100 percent fruit juice. For example, Slice, a popular PepsiCo mango drink in India, consists of water, sugar, and mango pulp.³⁰⁸

Juice and juice drinks are especially popular with children, with marketing directed to adults or directly at children and adolescents, including:³⁰⁹

- Smart, which Coca-Cola created for Chinese children and teens, is designed to have a “fun, non-conforming personality” and is available in Mandarin, Apple, Grape, Peach, and Watermelon.
- Qoo, with a blue cartoon mascot that looks like a cat, is a popular Coca-Cola beverage among young children in Asian markets. Qoo is available in a wide variety of flavors such as Acerola Lemon, Blackcurrant, Grape Lemon, Honey Quince, Mango Milk, and Peach Plum. It is currently available in China, Hong Kong, Japan, Macau, the Republic of Korea, and Singapore.
- In Brazil, research conducted by the Instituto Brasileiro de Defesa do Consumidor (IDEC, the Brazilian Institute for Consumer Protection) has exposed how sugary fruit juices are heavily advertised to young children. For example, fruit juices marketed under the brand name Maguary featured cartoon characters such as Barbie. That brand is high in added sugar, including 21 grams per 200 ml (6.7 oz.), about the same as a Coke.³¹⁰

Expansion into the juice and juice-drink business is continuing for the beverage giants. PepsiCo formed a strategic alliance with Ocean Spray Cranberries in 2012. As part of the partnership, PepsiCo gained exclusive rights to manufacture and distribute a portfolio of cranberry- and blueberry-based beverages in Latin America.³¹¹

Energy Drinks

As in the United States, energy drinks are the fastest-growing segment in the beverage industry in important emerging markets, including China, Mexico, India, Chile, and Brazil. In India, for example, analysts forecast that sales of energy drinks through supermarkets and other retail locations will grow by 11 percent per year,



Zesto Slice is a fruit juice drink marketed in the Philippines.

Source: Agnes Cororaton.



In Brazil, this high-sugar fruit drink is clearly marketed to young girls.

Source: Ana Paula Bortoletto, IDEC.

in part due to new products, marketing blitzes, and rising incomes.³¹² Through advertising campaigns on social media and TV, as well as at sporting events, bottlers are driving energy drinks into the mainstream.³¹³

In 2013, Coca-Cola purchased a minority share in Monster Energy, a deal that is expected to dramatically increase the sale of energy drinks in markets around the world and sweeten the revenue of both companies. Under the agreement, Coca-Cola traded all of its energy brands and markets in exchange for Monster's non-energy brands and a 16.7 percent stake in Monster Energy. Prior to the deal, Monster was only available in 40 countries. Partnering with Coca-Cola gives Monster greater access to distribution channels in the more than 200 countries in which Coke does business.³¹⁴

The increasing popularity of energy drinks among youths has raised concerns among public health authorities.³¹⁵ Energy drinks contain higher levels of caffeine than typical sugar drinks (though usually less than a comparable amount of coffee), along with sugar, nutrients, and other ingredients. Monster Energy, for example, includes 54 grams of added sugar (13 teaspoons) per 16-ounce serving, about the same as a 16-oz. Pepsi.

The American Academy of Pediatrics has stated that "energy drinks have no place in the diet of children and adolescents" due to their stimulant content.³¹⁶ A study by the U.S. Department of Health and Human Services reported that emergency-room visits involving energy drinks (alone or mixed with other substances) increased 10-fold from 2005 to 2009.³¹⁷ Lawsuits have been filed by parents of several youths who died shortly after drinking energy drinks.³¹⁸

Despite such concerns, energy drinks are marketed heavily around the world to adolescents through online media and other campaigns. Some countries, however, are beginning to respond to concerns about energy drinks. In Mexico, energy drink consumption has exploded, reaching nearly \$615 million in sales in 2011.³¹⁹ Studies by the Federal Commission for Protection Against Sanitary Risks identified physical and mental health problems associated with energy drinks, leading the Mexican government to tax energy drinks at the same rate as beer and wine. In 2012, the Mexican Senate voted to prohibit the sale of energy drinks to anyone under 18, the same as alcoholic beverages.³²⁰ In March 2014, Saudi Arabia banned all advertising of energy drinks; the sale of energy drinks in government, health, and education facilities; sponsorship of sporting, social, and cultural events; and a ban on free distribution to people of any age.³²¹ In November 2014, Lithuania banned the sale of energy drinks to anyone under 18.³²²

Low-Calorie Alternatives

Reducing sugar content is increasingly important in some, but not all, emerging markets. In Brazil for example, (mostly full-calorie) carbonated drinks control over 61 percent of the total soft drink market, but are seen by industry observers as struggling because of their unhealthy image and public health campaigns encouraging people to reduce sugar consumption.³²³

Industry insiders see “health” as a new buzz word, and Coca-Cola and PepsiCo are responding with new products, including ones made with non-caloric sweeteners. In 2012 in Australia, PepsiCo launched Pepsi Next its first product sweetened by a mixture of sugar and the naturally derived sweetener stevia. Coca-Cola responded the next year by launching Coca-Cola Life, beginning in Argentina. Life, too, is sweetened by a mixture of sugar and stevia leaf extract. Both Coca-Cola Life and Pepsi Next reduce calories by only 30 percent because using too much stevia leads to an unpleasant aftertaste. PepsiCo CEO Indra Nooyi lamented that “stevia unfortunately does not work well with colas.”³²⁴

Developing a new soda with a natural sweetener that tastes as good as the iconic Coke or Pepsi, but with zero calories, is regarded as the industry’s “holy grail.”

Consumers in the United States are staying away from sweeteners such as aspartame and sucralose, because they are artificial and linked to health problems.³²⁵ Overall, however, Coke’s reduced-calorie drinks have not performed well in emerging markets, except in Brazil.³²⁶ Consumers in many countries are not interested in diet alternatives, presumably because obesity is not yet understood as a big problem or people simply don’t like their taste. In China, for example Diet Coke accounts for only 10 percent of the entire brand’s sales.³²⁷ In India, diet sodas account for less than 2 percent of cola sales.³²⁸ Diet soda sales in the United States are about 26 percent of all carbonated drinks.³²⁹

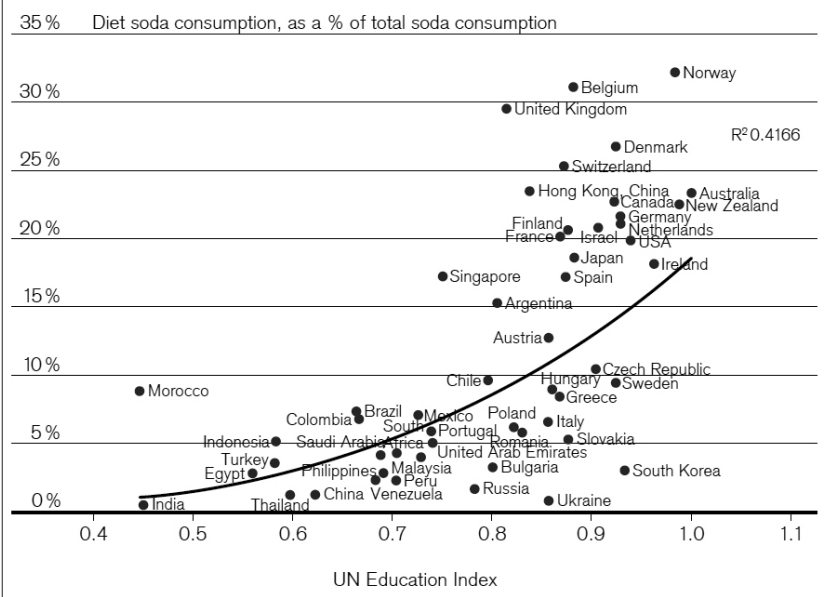
Price and Packaging

Coca-Cola is highly strategic at the local level by pricing its products to be competitive and accessible. In Kenya, for example, Coca-Cola cut its prices when PepsiCo reentered the market and is also packaging its products to reach the poor. A 200 ml (6.7 oz.) bottle of Coca-Cola costs only about 17 U.S. cents.³³⁰ In Latin America, Coca-Cola’s FEMSA bottler has used a strategy of “Magic Price Points” to lure consumers.³³¹ So in Colombia, Coca-Cola rolled out a 6.5 oz. returnable glass bottle for “on-the-go-consumption” at 500 Colombian pesos³³² (around 19 U.S. cents). In Brazil, Coca-Cola “continued to reinforce the availability of Coca-Cola, Coca-Cola Zero, and Fanta in our 200 ml one-way presentation at R\$1” (about 31 U.S. cents).

In celebration of the 100th anniversary of its iconic “hobble-skirt” bottle, Coca-Cola has reintroduced that curvy bottle, originally patented in 1915, as part of an ad campaign that ran in more than 140 countries. One ad includes the “Tale of the

Diet soda consumption (as a % of total soda consumption) vs. relative educational standard

Source: Euromonitor, Nielsen XAOC, Credit Suisse estimates



Source: Credit Suisse Research Institute. *Sugar: consumption at a crossroads*. Zurich: Credit Suisse; 2013.

Contour,” a mythical story of how the curvy bottle was created, while others include cartoons. The campaign, the second-largest in the company’s history, also gives Coke a strategic opportunity to spotlight its 7.5- and 8-ounce glass and aluminum bottles.³³³

In 2014 PepsiCo launched “Drinkfinity” in Brazil, a “personal hydration system” that consists of reusable drink bottles that can be flavored with a “pod” consisting of flavors, aromas, and other ingredients.³³⁴ Upon its launch, the president of PepsiCo’s global beverage group asserted that the creation of Drinkfinity “truly connects with consumers’ desires for greater choice and personalization, and it dovetails with our goals to not only give consumers many fantastic beverage brands to choose from, but also the ability to choose the way they consume them both in and out of the home.”³³⁵ The system is positioned, in part, to address consumer concerns about the environmental impact of plastic bottles while maximizing PepsiCo’s bottom line.



The Share a Coke campaign struck a chord with kids and adults in Ghana. But an American critic thought that an “obesity” label would be more truthful.

Sources: NYU SeedProgram; Mike Howard, Lumenati.co.

Although only currently available in Brazil, it will be coming soon to more countries.³³⁶ Pepsi also is working with SodaStream to provide in-home soda.

Meanwhile, Coca-Cola has started selling Coke products by means of an in-home countertop-soda machine made by Keurig—Coke’s latest attempt to put its cola within what it has long called an “arm’s reach of desire.”³³⁷

Attractive packaging also remains a key venue for product advertising. In many low-income communities, low literacy rates and a lack of access to television mean that packaging plays an outsized role in marketing.³³⁸ Containers with bright colors, cartoon or celebrity characters, or offers of free gifts or games on the product packaging are common. Numerous studies show that a product’s packaging contributes to children’s purchasing decisions, as well as influences the decisions that parents make for their children.

The global “Share a Coke” campaign is a quintessential example of the way in which companies are personalizing campaigns; structuring them as shareable experiences to get people, especially children, to feel closer to their products; and using packaging creatively. Thus, personalized 12-ounce Coke cans sporting more than 300 different names—including “Mom” and “Dad”—blanketed Mexico from July through October of 2014. Coca-Cola FEMSA subsequently launched “Share a Coke” campaigns in Brazil, Argentina, Colombia, Costa Rica, Nicaragua, Guatemala, Panama, and the Philippines.³³⁹

Place

Marketing In and Around Schools

Soda companies advertise at or near schools in many countries. According to Kamana Manandhar, from the Resource Centre for Primary Health Care in Nepal's Urban Health Department, "Sponsorship boards advertising junk food products near school areas are abundant in Nepal," and "it's clear their major target group is children."³⁴⁰ In countries from Ghana to South Africa, advertisements for SSBs are even found on school entrance signs. Thus, children are repeatedly exposed to SSB advertising each and every school day. In effect, the schools are endorsing the beverages.

Studies have documented the prevalence of advertising near schools in several countries. In Mongolia and the Philippines, more than half of food and beverage advertisements around schools promoted sugar drinks. Of those, the most frequently promoted brand was Coca-Cola—35 percent of all promotions in Mongolia and 32 percent in the Philippines. In addition, the density of advertising within 250 meters of schools was almost double that of locations farther away.³⁴¹

In India, Coca-Cola sponsors the Coca-Cola Cup, a cricket tournament for children 12 to 16 and "the largest inter-school cricket championships in India."³⁴² Coca-Cola also launched the Support My School campaign, which focuses on bringing water, sanitation facilities, and infrastructure to schools in poor communities.³⁴³ PepsiCo started the Get Active program for children, a school program aimed at building awareness among school children of the importance of physical activity.³⁴⁴ Another PepsiCo campaign, Project Asha, is aimed at educating girls and women about nutrition.³⁴⁵ But with every "good deed" comes a logo.

Retail Space

Space planning is integral to retail marketing, and soft-drink companies work to ensure that every store that carries its products, whether it is a supermarket, convenience store, or kiosk, displays them in the most effective way. According to the director of space planning services for Coca-Cola Enterprises (CCE), one of the world's largest Coca-Cola bottlers, "The space in the store is like really valuable real estate, and the efficiency and productivity of that space can make or break the store and also the manufacturer."³⁴⁶

Distributing coolers for the cold drinks is also central to this strategy. In 2012 Coca-Cola reported that it had placed more than 1.3 million units of cold-drink equipment that year



Children 5–10 are a marketing target of Pepsi, as here in the Philippines. Pepsigla means Pepsi-joy.
Source: www.pepsiphilippines.com/news-article.php?id=101.



Coca-Cola school sign in South Africa.
Source: Brian Cook.



Coca-Cola's Global Education Partnership sign at a school in Ghana.
Source: NYU SeedProgram.



Scene at an RT-Mart supermarket in Xinhua, China.
Source: Sanwuisusp, Wikimedia.



KFC India offers this “group” meal. PepsiCo also expands its presence and boosts sales to youths by collaborating with fast-food companies, including Burger King. The link between PepsiCo and Burger King is publicized to youth in a variety of social media, including Twitter.

Source: Pepsi and Burger King advertising together https://twitter.com/pepsi_sa.

globally, which helped boost the volume of drinks consumed immediately by 5 percent.^{347,348} In 2014 Coca-Cola FEMSA reported that it had installed an additional 68,000 coolers in its territory, especially in Brazil, Central America, and Colombia.³⁴⁹

To keep cold drinks in front of people wherever they go, companies turn to vending machines. The king of vending, of course, is Coca-Cola. Coke products are sold from 10 million machines worldwide.³⁵⁰

Fast-food Restaurants

Partnerships with global fast-food chains are a major way that SSB manufacturers reach children (and others). Most significantly, Coca-Cola and McDonald’s have been central to each other’s success, helping each other expand and grow around the world since 1955. McDonald’s is Coca-Cola’s largest customer, and the two companies maintain what has been described as a “unique, symbiotic relationship.”³⁵¹ Coca-Cola views McDonald’s as so critical to its operations that it is the only customer that has its own division. Headed by Javier Goizueta, the son of a former Coke CEO, the McDonald’s Division is responsible for “building the strategies alliance with McDonald’s in over 31,000 restaurants and over 100 countries.”³⁵²

Bundling kids meals with Coca-Cola products has been an important part of the relationship between Coca-Cola and McDonald’s. It was Coca-Cola that, in 1993, recommended that McDonald’s bundle burgers, fries, and a Coke during a promotion for the movie “Jurassic Park,” thereby creating the first “Extra Value Meal.”³⁵³ But in 2013, following

prodding by the Center for Science in the Public Interest, McDonald’s pledged that it would stop listing soda as a beverage option with its Happy Meals and only promote water, milk, and juice (though parents could still order a soft drink). The pledge, however, only covered McDonald’s 20 largest markets³⁵⁴ and not all of the 119 countries in which it operates.³⁵⁵ Consequently, children in many emerging markets around the world will still be subject to the bundling of Coca-Cola products with their Happy Meals while their counterparts in the United States and 19 other countries will not.

Public Relations

Sports Sponsorship

SSB producers sponsor every kind of sports event—from major international events like the FIFA World Cup to local youth teams—in an effort to associate their products with healthy living.

Coca-Cola sponsors the Olympics, the FIFA World Cup, Formula 1, and Moto GP. Coca-Cola's bottling partner HBC, which operates in 28 countries stretching from Nigeria to Russia, launched its promotional activities around the Sochi Winter Olympics in November 2013, at the start of the global Coca-Cola Olympic Torch Relay.³⁵⁶ HBC used the global sponsorship to generate 76,000 store displays featuring the relay, 105,000 displays featuring the Olympics Polar Bears, and almost 200,000 displays using 1.5 million Olympic glasses and 81,000 collectible cans.³⁵⁷

Coca-Cola has been a partner of the Special Olympics since 1968 and supports the organization through product sales, donations, services, and equipment. Other partners include the toymaker Mattel and toy retailer Toys “R” Us. The Special Olympics advertises the partnership on its website, and Coca-Cola has aired television commercials celebrating its partnership with the Special Olympics.³⁶²

The Olympics itself, of course, has been a prime marketing opportunity for beverage companies (see Celebrity Endorsements), and Coca-Cola has been a prime sponsor since 1928.³⁶³ But the companies are also involved at the grass-roots level with local sports teams. In 2014, Coca-Cola HBC, the multinational bottler, launched an “active lifestyles” program designed to engage 6.7 million people by 2020. One of the programs includes “Coca-Cola Wake Your Body,” a lifestyle program that incorporates sports and physical activity events. The program is designed to target the “broadest participation possible in terms of age, gender, physical fitness, and ability.”³⁶⁴

In India, Coca-Cola has successfully integrated itself in the immensely popular worlds of cricket and football and has sometimes clearly targeted children. Coca-Cola Under 16 Cricket is a program open to all young cricketers age 12–16.³⁶⁵ Many hopeful young cricket players first participate in the Coca-Cola Inter-State Challenge, a tournament at the end of which 20 of the most talented players are selected to attend a coaching clinic taught by prominent Indian former cricketers. At the end of the clinic, the final team is selected to play in a tournament against a team from another cricket-playing nation. Though not as prominent in India as Coke,



As this demonstration in Times Square, New York, suggests, Coca-Cola's sponsorship of the 2014 Winter Olympics in Russia was controversial.

Source: http://www.huffingtonpost.co.uk/2013/08/29/russia-gay-coke_n_3838633.html.



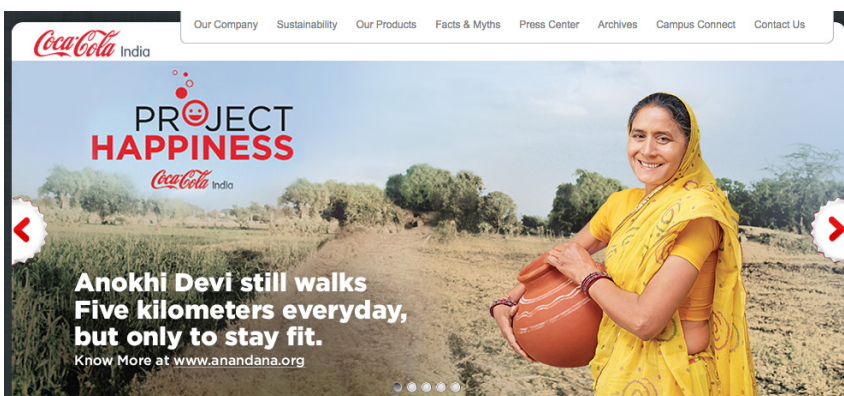
Girls at a school in West Bengal, India, supported by Coke's philanthro-marketing program, Support My School.

PepsiCo also reaches out to youth with images of young cricket players and a tag that invites consumer interaction with the brand, “when life gives you a moment, do you live it or leave it? Tell us how you #Liveitabhi.”

Coke’s 2014 World Cup Sponsorship Goes “Glocal” and Personal

Coca-Cola’s sponsorship of the FIFA 2014 Football World Cup in Brazil, which it said was its largest-ever marketing program, brought both the World Cup and the Coca-Cola brand to 175 countries.³⁵⁸ Expansive marketing efforts included the following:

- World Cup Trophy Tour by Coca-Cola. The Trophy Tour traveled to 89 countries; promotions allowed customers to win tickets to games.
- Coca-Cola Anthem. The original anthem featured a Brazilian-American singer, David Correy, and a Brazilian percussion group, Monobloco. Other versions featured other musicians and translations in 22 languages, thereby weaving global with local.
- Happiness Flag. Coke drinkers submitted photos that were made into a 3,015-square-meter (32,450-square-foot) Happiness Flag. The flag, said to be composed of 220,000 photos³⁵⁹ of fans in 207 countries, was unveiled before an audience estimated at more than one billion people.³⁶⁰
- Coca-Cola Collector Mini Bottles. In Brazil, Coca-Cola produced a collectors’ series of 20 mini bottles, 18 featuring the flags of countries that have hosted the World Cup. For fans around the globe, Coke developed an app that allowed users to create photo avatars and messages that were embedded in the mini bottles.
- Other Digital and Social Media included an online film, a World Cup-themed documentary, and a Coca-Cola micro-site that launched a Tumblr interactive timeline of World Cup videos and photos featuring Coca-Cola.³⁶¹



Coca-Cola India’s Anandana Foundation encourages exercise as the primary way to stay in shape.

Source: NYU SeedProgram.



The Coca-Cola polar bear was depicted in this 1995 ad wearing a soccer shirt to support Brazil’s national team.

Not only is sports sponsorship by soda companies harmful because it is an effective means of advertising to children, but it also suggests that drinking soda contributes to athletic success. At the very least, it sends children contradictory messages about what actually constitutes a healthy lifestyle—exaggerating the role of exercise and ignoring the importance of a healthy diet—despite the fact that diet and not lack of exercise is the major cause of obesity. Children in particular need nutrient-rich diets to facilitate proper physical growth and mental development.

Philanthro-Marketing

Like the tobacco and oil industries, Coca-Cola and Pepsi invest heavily in corporate social responsibility campaigns. After all, such activities can both contribute to communities or protect the environment, as well as gain popular support, increase sales, and may even fend off regulation.³⁶⁶ Many, if not all, of the SSB industry's philanthropic endeavors not only indirectly help their bottom line through good PR, but directly help their bottom line through boosting sales.

Since 2005, for example, Coca-Cola has conducted 286 community water projects in 94 countries, working with local governments and other groups.³⁶⁸ In 2012 Coca-Cola began a partnership with the Peace Corps and the U.S. Agency for International Development (USAID) that focuses on water development, conservation, and sanitation. Teaching materials about water conservation, sanitation, and hygiene have been distributed in 20 countries, and many clean water projects have been established.³⁶⁹

In Ethiopia, with its Replenish Africa Initiative, Coca-Cola has spent about \$430,000 to support water-supply improvement, sanitation, and health in schools and households and to empower women through water-related economic activities. One of the Coca-Cola plants even shares its water with the community through an external collection point. According to Kevin Balogun of the Nigerian Coca-Cola franchise,³⁷⁰ “The beauty of this type of inclusive business model is that it makes sense for both business and development reasons.”³⁷¹ Notably, Coca-Cola is a significant user of the clean water resources in developing countries³⁷² and has faced heated accusations of severe water depletion in many of them. Coca-Cola's water conservation activities are a good example of how a company can “burnish [its] public image” and “improv[e] the overall business climate,” as well as do bona fide good deeds.³⁷³

The SSB industry has also mounted women's empowerment initiatives, which come in all shapes and sizes. However, some of the programs are directly tied to increasing SSB sales. As one example, in India, Coca-Cola has deployed 1,500 solar coolers

The suggestion that our community philanthropic efforts are motivated by something other than goodwill is grossly inaccurate.³⁶⁷

Coca-Cola spokesman

In fact, not only have we joined with America's food and beverage industry to promote moderation and healthy eating across the United States, we are doing this globally.

*Ed Hays, Chief Technical Officer
The Coca-Cola Co.
Coca-Cola Journey, Aug. 10, 2015*

in retail outlets owned by women with the clear goal of selling more Coke.³⁷⁴ In 2014, Coca-Cola gave \$2 million to programs that support girls and women, up from \$1.67 million in 2013. The Coca-Cola Foundation's media release explained, "We know that empowering women to be entrepreneurs and leaders yields dividends of community growth, prosperity, and sustainability." Coca-Cola India's CEO, Venkatesh Kini, perhaps explained its women's empowerment initiatives more candidly, "A lot of our products get consumed at home where women are the decision makers."³⁷⁵

While philanthro-marketing projects certainly help some people in low- and middle-income countries, they certainly also win the political connections and public and private goodwill that provides strong protection from criticism and regulation. Those charitable acts come with a hefty price tag in terms of a nation's health, and underlying each act is the company's bottom line. No matter how much good these programs may do, at bottom they are done more for marketing than philanthropic purposes.³⁷⁶

The Public Health Response

Industry Self-Regulation

In response to increasing public concerns and calls for regulatory interventions, Coca-Cola and Pepsi have adopted voluntary agreements pledging to advertise and sell responsibly to children in order to fend off legislation. Notably, industries that market controversial products, such as tobacco and alcoholic beverages, have a long history of such voluntary pledges. And, to date, in most countries voluntary self-regulation remains the dominant response to the public health risks posed by sugar drinks, too. Voluntary standards are largely industry developed, implemented, and monitored.

Voluntary self-regulation eliminates pressure and the potential for negative publicity that could result from external monitoring and violations of legal standards, as well as penalties for violating such standards. At the same time, self-regulation gives industry a plausible basis on which to claim that it is protecting public health. However, Derek Yach, a former executive director at the WHO and also a former head of global health at PepsiCo, has acknowledged “failed corporate pledges to address marketing and sales of full-calorie soda to children in several countries.”³⁷⁷ Both Pepsi and Coke have adopted global policies on responsible advertising to children. They have pledged not to advertise sugar drinks in media with audiences that consist of 35 percent or more children under the age of 12.^{378,379} PepsiCo has pledged to advertise to children under 12 only those products that meet the company’s Global Nutrition Criteria.³⁸⁰ However, Pepsi excludes beverages from those criteria, indicating that they continue to be covered by looser guidelines developed by the International Council of Beverages Association (ICBA).³⁸¹

Both Coke and Pepsi have developed global policies on the sale of beverages in schools. Coke’s policy is the weaker. While it will not offer its beverages in primary schools (unless requested to do so by parents and caregivers or school authorities), Coke offers its full range of beverages for sale in secondary schools.³⁸² Pepsi will sell water, non-fat or low-fat milk, and fruit juice in primary schools, as well as locally relevant and accepted beverages such as nectars or coconut water. However, Pepsi applies the same policy to secondary schools as it does to primary schools,³⁸³ meaning that it reaches children up to age 18 and has a far greater impact than Coke’s policy.

The limited effectiveness of voluntary marketing standards is due to many factors. Industry pledges are restricted to young children (under the age of 12 or 14), and voluntary restraints may



Ad for Coca-Cola’s PowerAde at a Cape Town, South Africa, primary school.
Source: Brian Cook.



School in Yitic, Mexico.
Source: Maria Verza, The “Coca-Colization” of Mexico, the Spark of Obesity, [Periodismo Humano](#).

be confined to certain media, such as print, broadcast, and the Internet, thereby omitting endorsements by athletes and celebrities, kid-friendly packaging, and product placements in movies or on television. Furthermore, voluntary agreements may exempt corporate brand-equity characters,^{384,385} allowing such characters as Coke's famous polar bears to appear in marketing. The use of celebrities, toys, and sponsorships may be similarly unregulated. Finally, companies may opt in and out of the pledges at will since they are not binding.³⁸⁶

Even seemingly firm age standards can be artfully circumvented. For instance, members of the ICBA promise not to advertise to children under 12, but the standard does not apply when young children make up under 50 percent of an audience.³⁸⁷ A similar group, the International Food and Beverage Alliance (IFBA), set up a similar self-regulatory program, which also used the 50-percent-of-audience standard for not advertising to kids. In fact, most media, even children's TV programs, don't have that many young viewers. Marlene Schwartz, of the UConn Rudd Center for Food Policy and Obesity, told the authors that the 50 percent standard is "ridiculously high." She noted that, at least in 2010 in the United States, half of food and beverage ads viewed by children appeared during programming with a child-audience share of less than 35 percent, let alone 50 percent.³⁸⁸ Indeed, none of the top ten child-targeting websites qualify as child-directed, including Disney Channel and CartoonNetwork.com.³⁸⁹ None of the most popular child-targeted advergaming quality as "child-directed" either, including McDonald's HappyMeal.com.³⁹⁰ Moreover, most children watch TV shows (or see other marketing efforts) that are not directed specifically at them, and so, by airing advertisements that appeal to children during non-child programming, beverage companies still reach kids.

Another loophole is that the nutrition criteria established for products marketed to children, such as PepsiCo's corporate policy, only apply to the specific product being advertised. That is problematic because many marketing efforts are not aimed at selling an individual product, but rather at building brand recognition and brand loyalty from an early age.³⁹¹ For example, a brand logo might be on a school vending machine that only sells only healthier products, but when children go to the grocery store, they will see unhealthy products with the same logo.³⁹²

Beyond their own independent "self-regulation," both Coca-Cola and PepsiCo say they adhere to voluntary agreements at the national and international levels, but monitoring and enforcing such agreements is tough, especially in LMIC. However, industry advocates contend that "[t]he value of self-regulation is especially great in countries with weak to absent government regulatory capacity"³⁹³—essentially, self-regulation is better than no regulation.

National-level voluntary pledges can be equally toothless.³⁹⁴ For example, both Pepsi and Coca-Cola have endorsed the India Pledge, which bars advertising for foods that do not meet unspecified nutrition criteria in media with audiences of 50 percent or more children under 12. That almost-worthless standard is far looser than either Coca-Cola's or Pepsi's corporate pledges.³⁹⁵ Signatories also commit not to place any

communication related to unhealthy products in primary schools unless the school administration either specifically requests or agrees with the communication.³⁹⁶ Given the pervasive advertising, promotions, and sponsorships in India, the commitment to that pledge is dubious.

In India, as noted above, Coca-Cola sponsors the Coca-Cola Cup cricket tournament and the Support My School campaign.³⁹⁷ PepsiCo's Get Active program encourages physical activity,³⁹⁸ as well as Project Asha, which educates girls and women about nutrition.³⁹⁹ As Nandita Murukutla of the World Lung Foundation in Delhi has noted sarcastically, "The whole commitment not to advertise to children under 12 is just so scurrilous. When Pepsi sponsors the Indian Premier League [cricket], I suppose their target audience is the adults."⁴⁰⁰

In India, Coke and Pepsi use professional cricket players attractive to young boys, glamorous Bollywood stars attractive to young girls, and the latest pop music sensations to promote their brands.⁴⁰¹ Moreover, both companies sponsor contests and award prizes that play on every child's dream of becoming like the celebrities endorsing the brands.⁴⁰²



Ad for 7UP, distributed in India by PepsiCo, uses a cartoon character (this image is from a non-PepsiCo website). Source: <http://www.imagekb.com/7up-website>.

Coke and Pepsi also adhere to guidelines adopted by the Advertising Standards Council of India (ASCI), another self-regulatory organization that purports to fill regulatory gaps and aims to fend off governmental oversight of advertising.^{403,404} With respect to marketing SSBs to children, ASCI's guidelines say only: "Advertisement should not undermine the role of parental care and guidance in ensuring proper food choices are made by children."⁴⁰⁵ While the ASCI monitors ads itself, it also relies heavily on consumers to lodge complaints. However, there is low consumer awareness of the ASCI.⁴⁰⁶

In 2009, in Mexico, like in India, industry created ineffective voluntary standards called the PABI Code.⁴⁰⁷ Today, 34 companies, including Coca-Cola, PepsiCo, Kellogg, and Nestle, are parties to the code, which ostensibly establishes principles, regulations, and verifications to regulate the marketing of foods and beverages sold to children.⁴⁰⁸ But the code is weak, and its implementation almost non-existent. As Alianza por la Salud Alimentaria documented, the Code does not even establish nutrition criteria for products that may be advertised.^{409,410} The code also allows companies to use marketing strategies that particularly appeal to children, such as gifts and contests. Moreover, aside from television, its primary

To the best of our knowledge, the Chinese government has not specifically made any policy and regulation to deal with SSBs so far. The latest Dietary Guidelines for Chinese (2011) by the Chinese Nutrition Society just mentioned that children should drink less SSBs, but more water, without specifying quantity of drinks.

*Professor Xu Lin, Institute for Nutritional Sciences,
Shanghai Institute for Biological Sciences,
Chinese Academy of Sciences*

focus, the code is ambiguous about which media it covers.⁴¹¹ Lastly, there are no serious sanctions for violating the code. CONAR, the institution that supervises compliance, cannot even publicize a violation of the Code until a company's second violation.⁴¹²



Coca-Cola marketing in high school canteen in Santiago, Chile.
Photo by Municipality of Santiago, Chile.

In response to criticisms of the PABI Code, in 2010 the food and beverage industry entered into a voluntary agreement (ANSA) with the Mexican government. However, that, too, proved to be ineffective. ANSA included 10 highly general recommendations, including commitments to reformulate products and restrict marketing to children. El Poder del Consumidor (Consumer Power), a nonprofit organization, found that neither the Mexican government nor industry complied with even ANSA's limited obligations.

Studies have documented the failure of voluntary approaches in Mexico. In a 2013 national Alianza survey, 77 percent of parents of children aged six to 16 said that their

children's schools allowed the sale of junk food, including SSBs.⁴¹³ In another Alianza survey, 38 percent of parents reported that junk-food advertising was allowed in their children's schools, with 46 percent of the ads being for SSBs.⁴¹⁴ In addition, a National Institute of Public Health study found that junk-food advertising was present in 25 percent of schools, of which 68 percent was for SSBs.⁴¹⁵

The sheer ineffectiveness of voluntary measures led El Poder to advocate for binding legislation controlling advertising in a 2014 regulation to the General Health Law that was adopted in conjunction with a national decree on overweight and obesity.^{416,417} But the SSB industry's support for weak voluntary initiatives effectively delayed the adoption of legislation and the protection of public health in Mexico for years.

Occasional voluntary agreements *have* been effective, at least in high-income countries with the political will to monitor industry conduct. One prominent example is the U.S. School Beverage Guidelines.⁴¹⁸ In 2006, the Alliance for a Healthier Generation, a partnership between the William J. Clinton Foundation and the American Heart Association, worked with the soda industry's trade association, the American Beverage Association, on the guidelines. The guidelines, which came on the heels of bans on soda in schools in California and other states and cities, limited portion sizes and set standards for the nutrient content of beverages, with the strongest restrictions in elementary and middle schools. Though the agreement omitted sports drinks (which have about half the calorie content of regular soft drinks), the industry did, in fact, remove sugar drinks from virtually all schools.⁴¹⁹

(The companies were spurred to act, in part, by their desire to avoid an imminent lawsuit by the Center for Science in the Public Interest and others, with whom they were negotiating, for marketing sugar drinks in schools.)

Legislative Strategies

As evidence has mounted on the harmfulness of SSBs and the ineffectiveness of voluntary reforms, advocates and policymakers have increasingly called for regulatory actions to protect the public. There is wide consensus, based upon research and practice, on the effectiveness of regulatory approaches to discourage excessive consumption of unhealthy beverages and foods.^{420,421} Laws and regulations, backed by monitoring and enforcement, are necessary to protect the public health. However, while some countries have begun to address the impact of SSBs on public health, few countries have implemented legislation or regulation.

Latin America is an exception, with several countries trying to rein in soda and junk-food consumption. *The Wall Street Journal* has observed that:

Latin America is becoming a laboratory for public policies meant to steer consumers away from processed food. Since 2012, Peru, Uruguay and Costa Rica have banned junk food from public schools. Ecuador recently mandated a nutritional label system inspired by a traffic light....Industrial food makers in Ecuador will also be barred from using images of animal characters, cartoon personalities, or celebrities to promote products high in salt, sugar or fat.⁴²²

The Appendix to this report (available at www.cspi.net/carbonating-appendix) details some of the measures undertaken by Latin American countries to discourage excessive consumption of unhealthy foods.

Progress in other countries has been much slower or non-existent. China, for example, has recognized obesity as a major public health challenge, but has yet to introduce any meaningful regulatory or other public policy initiatives to discourage SSB consumption.⁴²³ According to author and food activist Raj Patel, “neither Asia nor Africa is taking the problem seriously.”⁴²⁴ In India, despite efforts of civil society to bring attention and action to this issue, governments have yet to introduce any significant regulatory programs.

School-based Restrictions

Uruguay prohibits all junk-food and SSB advertising in schools, including posters, billboards, logos on school supplies, sponsorships, distribution of prizes, and free samples on school premises.⁴³³

Even where regulatory standards do exist, monitoring and evaluation may be major concerns. In Brazil, for example, the government has carried out strong evaluations for many national welfare programs, but no significant evaluation system has been established for obesity-related initiatives in schools.⁴²⁵ Mauricio Hernandez-Avila, the Director-General of Mexico’s National Institute of Public Health, believes that the lack of effective evaluation studies is a critical drawback of recent legislative

initiatives.⁴²⁶ Overall, the absence of effective evaluations of existing programs is a major gap in obesity policy worldwide.

In a comprehensive national program to reduce SSB consumption, different types of regulatory strategies can be employed. The following approaches have been adopted in some countries, and they are often opposed vigorously by industry.

Restrictions on Marketing and Advertising

SSB producers invest heavily in sophisticated marketing campaigns to encourage people, including youths, to drink their sugary potions, but only a few countries (at any level of development) are curbing advertising.⁴²⁷ South Korea, in addition to restricting TV advertising to children under 18, has prohibited Internet advertising that includes incentives, such as free toys. In 2013, Uruguay banned the advertising and marketing of foods and drinks that do not meet certain nutrition standards. Iran has prohibited all broadcast advertising of SSBs since 2004. And in 2013 Peru adopted a law designed to discourage unhealthy diets, including warnings in advertising for foods high in saturated fat, added sugars, or salt or containing trans fats.

Packaging, Labeling, and Health Warnings

Several countries have required food labels to highlight a high content of added sugars, saturated fat, or sodium. Sugar drinks may not look so appetizing when they have a big “high in sugar” label, as in Ecuador (see illustration). Chile has adopted a similar system, but it had not yet taken effect in mid-2015. A different approach, used at least by some manufacturers and supermarkets in the United States, uses “better for you” symbols on food labels. Research is needed on whether, or which of, these new labeling schemes improve purchasing patterns or health.⁴²⁸

Countries’ efforts to introduce mandatory labeling programs could possibly be challenged in the World Trade Organization as a violation of the WTO’s Technical Barriers to Trade (TBT) Agreement. The TBT Agreement aims to prevent countries’ regulations and standards from impeding trade. To pass muster, regulations must not be more trade restrictive than necessary to achieve their health objective.

Different nutrition labeling schemes in different countries arguably might impede trade, because they could require exporters to use specific labels to meet importing countries’ requirements. Recently, the United States, Mexico, and several other countries raised questions in the WTO’s TBT Committee about—but did not formally challenge—Chile’s mandatory labeling scheme to counter the obesity epidemic.^{429,430} (Chile has not bowed to the pressure to adopt a weaker measure, such as education campaigns.)

Opponents of labeling and other strategies for reducing SSB consumption might also try to invoke bilateral and regional trade agreements. In Asia, there are various regulations on nutrition labeling, and industry has



Food labels in Ecuador highlight a high or low content of key nutrients.

Source: Rebecca Kanter.

argued that such variations in labeling constitute an illegal trade barrier. In Malaysia, for example, nutrition labeling is mandatory on soft drinks, but in other countries, such as Singapore, labels are only required if a product bears a nutrition claim.⁴³¹ The food industry has supported weaker, voluntary initiatives at the regional level.⁴³²

Taxation

Governments have long used taxation to discourage consumption of unhealthy products—especially tobacco and alcoholic beverages. As an interim WHO report stated,

The rationale for and effectiveness of taxation measures to influence consumption are well-supported by the available evidence. The available evidence makes a case for applying this approach to products such as sugar-sweetened non-alcoholic beverages and energy-dense, nutrient-poor foods.⁴³⁴

Today, many countries at all levels of development impose taxes to discourage consumption of alcohol and tobacco products, and similar results could be achieved with soda taxes. Several countries, including Mexico, Samoa, Finland, and French Polynesia, have imposed SSB taxes.⁴³⁵ Taxes may also be levied at the local level. For example, in its 2013/2014 budget, India's Punjab region increased the value-added tax (VAT) on soft drinks from 13 percent to 20.5 percent.⁴³⁶

In 2013 Mexico adopted an excise tax on SSBs of one peso (about eight U.S. cents) per liter. Mexico's National Institute of Public Health found that that resulted in a 10 percent decline in SSB consumption during the first three months of 2014, compared with the same period the previous year, and a second study suggested that the tax reduced consumption by 6 percent in its first year.⁴³⁷ Consumption among the lowest socioeconomic group declined by an impressive 17 percent by the end of 2014.⁴³⁸ The research also reported a 7 percent rise in purchases of untaxed beverages, such as bottled water and milk.⁴³⁹ Whatever the exact reduction, the Center for Studies on Public Financing notes that the decreased consumption won't stop Mexico from being one of the hottest markets for SSBs (176.2 liters produced per capita), seven times the global average (22 liters).⁴⁴⁰

Of course, as Hernandez-Avila has noted, a higher tax would have led to greater reductions in consumption and greater revenues. Also, he and other health advocates were disappointed that the tax revenues were not automatically applied to obesity control or to expand access to potable water, though some of the revenues are being used in that way.⁴⁴¹

Middle- and lower-income countries need to focus on preventing chronic diseases so that health-care costs don't eat up their national budgets... Excise taxes, restrictions on marketing to children (including on television, at schools, and through other channels), warning labels, and public education campaigns are important measures that should be considered by governments that want to curb sugary drink consumption and its health and economic consequences.

Professor Frank Chaloupka, University of Illinois at Chicago

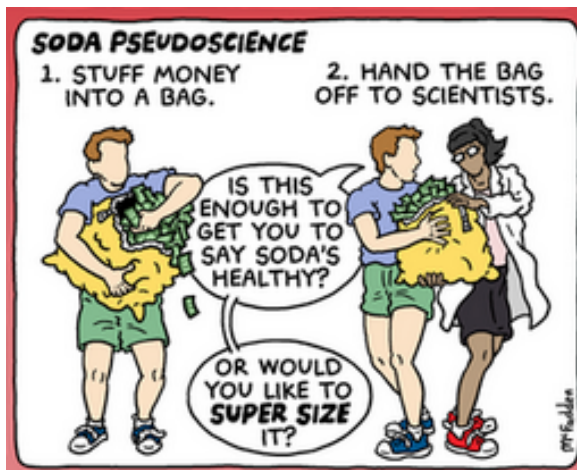
Chile, one of the world's top consumers of sugar-sweetened drinks,^{441a} adopted a soda tax in 2015, and Brazil, Colombia, and Peru are considering taxes.^{441b} On the other side of the world, Suahasil Nazara, Indonesia's top finance official, has asked whether sugar drinks constitute a health threat, and Iskan Qolba Lubis, a member of parliament, who has advocated a tax, said, "This is to keep our people healthy."^{441c} And India has been considering a tax rate as high as 40 percent.^{441d}

Industry Opposition

Industry works hard to fend off legislation. According to Barry Popkin, a professor at the University of North Carolina who has worked with foreign governments on soft-drink policies, "Governments see the rising tsunami of obesity flooding over their countries, but as soon as they put up serious policies to create healthier food environments, they get hammered by the food industry."⁴⁴² As Bill Wiist and others have observed, the industry uses a variety of tactics—a "corporate playbook"—

similar to those used by the tobacco industry to block legislation. Such tactics include influencing political debates and legislators, using scientists and science funding to raise doubts about harm,⁴⁴³ using public relations firms to form coalitions, arguing that corporate products create jobs, and hiring top health professionals.⁴⁴⁴

A common industry tactic is to cast doubt on the science base. David Stuckler, a professor at the University of Oxford, says that the SSB industry uses tobacco-industry-like tactics to divert the agenda and bias the science.⁴⁴⁵ For example, a 2013 systematic review found that industry-funded studies on the relationship between SSBs and weight gain or obesity were "five times more likely to present a conclusion of no positive association" than independently funded studies.⁴⁴⁶



Source: Excerpt of cartoon in *The New York Times*, Aug. 16, 2015.

Companies push back hard when countries try to regulate SSBs.⁴⁴⁷ Such efforts include everything from advocating weak voluntary guidelines, as in Mexico, to infiltrating committees established by courts, as in India. Likewise, a 2013 Brazilian law restricting the marketing of unhealthy food and beverages to children was struck down by the attorney general under pressure from industry, which argued that the law was unconstitutional.⁴⁴⁸

Mexico has been a major battleground for SSB lobbyists. For example, in August 2010 the Ministries of Education and Health published binding regulations to govern the sale of food and beverages in schools.⁴⁴⁹ According to the Alianza por la Salud Alimentaria, the original guidelines were considerably watered down two weeks after being published because of industry pressure. In particular, the guidelines changed from having a detailed list banning certain foods and beverages in schools, to laying out a series of conditions that processed products, including SSBs, should have.⁴⁵⁰ In some cases, the SSB industry was able to skirt the restrictions simply by

changing the sizes of the packaging.⁴⁵¹

Industry also battled Mexico's efforts to tax sugar drinks. The television duopoly refused to carry ads from the civil society alliance favoring the soda tax. That forced the Alianza to run their campaign on cable TV and select radio stations, and proclaiming on digital media, "See the ads Televisa and TV Azteca don't want you to see. What's more important: public health or the soda industry's interests?" The summer prior to the soda tax debate, the Alianza (with support from Bloomberg Philanthropies) had run a smaller mass-media campaign on billboards, buses, and radio asking, "Would you eat 12 spoonfuls of sugar? Why do you drink soda?" and "Soda is sweet. Diabetes isn't."⁴⁵²

Alejandro Calvillo, director of Poder, says that corporations have fought especially hard against legislation in Mexico, because a Mexican law could create a precedent for other Latin American countries. "Their fear is not the economic impact, nor the loss of jobs; that doesn't interest them. What interests them is how this could affect the region."⁴⁵³

In addition, at the global as well as the national level, the industry may employ prominent public health experts to promote their policies. In one such case, PepsiCo hired Derek Yach, the former WHO official, to oversee the company's global health activities.⁴⁵⁴ During Yach's tenure, PepsiCo continued to emphasize self-regulation and public-private partnerships, but it may be too much to expect one new official to quickly change a huge corporation's long-standing policies.⁴⁵⁵



Alejandro Calvillo, director of El Poder del Consumidor, campaigns in Mexico City for public policies to reduce consumption of sugar drinks.

Source: El Poder del Consumidor.

The Role of Civil Society

Civil society nonprofit organizations typically play a leadership role in demanding policy reforms, including restrictions on SSBs. According to food activist Raj Patel, "citizen activism is driving policy" in countries such as Mexico, Brazil, and India.⁴⁵⁶ Patel has observed that citizen activism is directly linked to policy innovation, and neither exists in Africa and Asia.⁴⁵⁷ Author and activist Amit Srivastava adds:

The efforts in India to restrict and regulate junk food—so that we do not go down the road of obesity as a public health epidemic such as in the United States—are just beginning, and we can expect more interference from the junk-food companies on our food, nutrition, and public health policies....Groups in India are beginning to make alliances...to stop the power and influence of junk food companies to get us hooked on their products.⁴⁵⁸

While civil society organizations are usually hampered by limited funding and lack of political connections, they can employ a wide variety of tactics, fueled by limitless imagination, to publicize problems and create a climate that inspires legislators and governments to tackle big problems.

Conclusions and Recommendations

Soft-drink companies are betting billions of dollars annually that they can increase sales in low- and middle-income countries throughout the world. Governments worldwide have taken only limited steps to regulate the industry. Temo Waqanivalu, a team leader in the Prevention of Noncommunicable Diseases Department at the WHO, said, “Few countries, especially low-income ones, have recognized the enormous health harm that soft drinks will cause as consumption increases. The economic costs due to obesity and diabetes will dwarf the economic benefits from soda sales.”⁴⁵⁹ And the WHO’s Francesco Branca emphasizes that “making policy changes to support this will be key if countries are to live up to their commitments to reduce the burden of noncommunicable diseases.”⁴⁶⁰

In 2010 the World Health Assembly of the WHO adopted a broad set of recommendations to countries around the world to reduce the marketing of foods and non-alcoholic beverages high in added sugars, fat, or salt directed at children. The WHO now needs to press countries to implement those recommendations⁴⁶¹ and promote the adoption and implementation of more concrete standards.

With a beverage industry that can wine and dine officials, and promise finance ministers that their investments will create much-needed jobs and boost incomes, there seems to be little political will in most countries to take the deliberate actions that are needed to counter the health impact of sugar drinks and protect present and future populations. Public health measures are most needed in countries where SSB consumption is already high. But discouraging increases in low-consuming countries would also be smart policy to prevent future SSB-related problems.

Countries should:

- Make improved nutrition (regarding SSBs and other parts of the diet) a top priority, especially in light of the global obesity and chronic-disease epidemics. Health ministries should work with other relevant ministries (including education, taxation, agriculture, justice, and trade), as well as with civil society organizations.
- Mount well-funded, mass-media, dietary-change campaigns, especially among parents, children, and health-care providers, to discourage consumption of sugar drinks (and other unhealthy foods).
- Protect children by barring the advertising and sale of sugar drinks (and other unhealthy foods) in schools and barring advertisements for sugar drinks in all media directed at children, including television, Internet sites, signage in and around schools, text messages and other mobile media, and magazines.
- Bar or limit sugar drinks (and other unhealthy foods) on the government’s own property, such as schools, office buildings, prisons, and parks.⁴⁶² Government facilities should set an example for healthy eating and can take action without legislation and with minimal industry opposition.

- Levy excise taxes on sugar drinks that would boost prices by at least 10 to 20 percent. The revenues from the taxes should be used to educate the public, especially children, about the harm that heavy consumption of sugar drinks can cause, as well as sponsor health initiatives and subsidies for healthful foods.
- Require a cautionary statement on labels for foods high in added sugars (or sodium or saturated fat). Ecuador's new food labels highlight the high ("alto") or low ("bajo") content of sugar ("azúcar") and other nutrients. Chile's new law will only require labels to have a warning when the calorie, sodium, sugar, or saturated fat content is high.⁴⁶³
- Require warning labels on SSB containers, as has been proposed in California and New York State. The New York proposal would require a notice stating: "SAFETY WARNING: DRINKING BEVERAGES WITH ADDED SUGAR CONTRIBUTES TO OBESITY, DIABETES AND TOOTH DECAY."⁴⁶⁴
- Require warning notices in advertising on government property for SSBs. In 2015, the city of San Francisco required the following notice: "Warning: Drinking beverages with added sugar(s) contributes to obesity, diabetes, and tooth decay. This is a message from the City and County of San Francisco."⁴⁶⁵
- Restrict the sugar content of beverages. For instance, the Center for Science in the Public Interest has formally petitioned the U.S. Food and Drug Administration to limit added sugars in beverages to about one-fourth of current levels, or about 11 grams per 100 ml.⁴⁶⁶ Limiting the sugar content would probably be the most effective way to prevent health problems related to added sugars.
- Conduct research on the likely effectiveness of measures proposed to reduce SSB and junk-food consumption and on the impact of measures that have been adopted.
- Bar sugar drinks on children's restaurant menus, and ensure safe, free water at all public places where children study and play.

The World Health Organization should:

- Hold trainings at the WHO regional offices for national health officials and provide technical assistance to help countries strengthen policies, including establishing legal frameworks to discourage consumption of SSBs.
- Establish a global database of laws and implementing regulations that countries have adopted to discourage the consumption of SSBs, especially by youths, along with evidence of the effectiveness of such policies.⁴⁶⁷
- Provide countries with toolkits and technical assistance for reducing the consumption of sugar drinks; the toolkits should include fact sheets on projected consumption levels, the health effects of sugar drinks, and model legislative language.

- Hold consultations on the development of a treaty or non-binding international legal instrument to establish global standards on the labeling and marketing of sugar drinks and other unhealthy foods and beverages.⁴⁶⁸
- Support research on the comparative effectiveness of legislative approaches to discourage youth consumption of SSBs in order to strengthen the evidence base for effective action.
- Set an example by removing sugar drinks from WHO facilities in Geneva and elsewhere—as well as at all other units of the United Nations—and not serving sugar drinks at meetings and conferences.

Beverage companies should:

- Acknowledge that heavy consumption of their full-calorie products contributes to obesity and other health problems.
- Enforce their policy of not marketing sugar drinks to children under 12 in any way.
- Reduce container sizes (for instance, no container larger than 1.5 liters, with smaller containers reduced in size).
- Include notice on containers disclosing adverse health effects.
- Reduce the calorie content of SSBs to no more than 40 calories per 355 ml (12 oz.).
- Stop opposing governmental measures aimed at reducing the harm from sugar drinks.
- Discontinue advertising and indirect promotions of caloric beverages.

Restaurants should:

- Drop sugar drinks from kids menus.
- List the calorie content next to each dish.
- Limit serving sizes of drinks to about 500 ml.

Civil society organizations should:

- Educate the public and policy makers about the health impact of SSBs and behavior of SSB marketers.
- Obtain funding from international development donors to conduct awareness campaigns, advocate legislation, and evaluate policy actions.
- Advocate for laws and policies at the local, national, and international levels,

using such tactics as education, legislation, litigation, and shareholder actions, to prevent health harm from SSBs.

- Monitor the activities of industry and its compliance with voluntary commitments and with laws.
- Evaluate the impact of voluntary and legal measures.
- Advocate for the recognition of SSBs as a global-health and -development issue and discourage international financial institutions from subsidizing the SSB industry.
- Discourage athletes, celebrities, and sports organizations from promoting SSBs.
- Create an international coalition of health, public interest, and research organizations to collect country-level data on public and private actions and advocate for strong international, national, and local actions to reduce the health harm from unhealthy beverages and foods and oppose the westernization of traditional diets.

Notes

(Some corporate URLs might not work, because companies frequently update and remove pages from their websites.)

- 1 Cohen R. Coke's world view—a special report; for Coke, world is its oyster. The New York Times. Nov. 21, 1991. <http://www.nytimes.com/1991/11/21/business/coke-s-world-view-a-special-report-for-coke-world-is-its-oyster.html>. [Thanks to Nestle M. Soda Politics. Oxford Univ. Press. Ch. 15. 2015.]
- 2 Gelski J. Coke sees \$300 billion international opportunity. FoodBusinessNews. Sept. 5, 2014. [Thanks to Nestle M. Soda Politics. Oxford Univ. Press. Ch. 15. 2015.] http://www.foodbusinessnews.net/articles/news_home/Business_News/2014/09/Coke_sees_300_billion_internat.aspx?ID=%7B59470C92-3A30-4941-8E73-8EFEE5C1E1A6%7D&cck=1.
- 3 Moss M. The extraordinary science of addictive junk food. The New York Times. Feb. 20, 2013.
- 4 Ng M, Fleming T, Robinson M, et al. Global, regional, and national prevalence of overweight and obesity in children and adults during 1980-2013: a systematic analysis for the Global Burden of Disease Study 2013. The Lancet. 2014;384(9945):766-81.
- 5 Popkin B, Slining M. New dynamics in global obesity facing low- and middle-income countries. Obes Rev. 2013;14:11–20.
- 6 Ng, Fleming, Robinson, et al., op. cit.
- 7 Ng, Fleming, Robinson, et al., op. cit.
- 8 Ng, Fleming, Robinson, et al., op. cit.
- 9 Ng, Fleming, Robinson, et al., op. cit.
- 10 Ng, Fleming, Robinson, et al., op. cit.
- 11 Ng, Fleming, Robinson, et al., op. cit.
- 12 Global Burden of Disease Study 2013 Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. The Lancet. 2015 Aug. 22;386(9995):743–800. doi: [http://dx.doi.org/10.1016/S0140-6736\(15\)60692-4](http://dx.doi.org/10.1016/S0140-6736(15)60692-4).
- 13 WHO. Obesity and overweight. 2015. <http://www.who.int/mediacentre/factsheets/fs311/en/>.
- 14 OECD. Health at a glance 2011: OECD indicators. [http://www.oecd-ilibrary.org/sites/health_glance-2011-en/02/04/index.html?contentType=&itemId=%2Fcontent%2Fchapter%2Fhealth_glance-2011-19-en&mimeType=text%2Fhtml&containerItemId=%2Fcontent%2Fserial%2F19991312&accessItemIds=.](http://www.oecd-ilibrary.org/sites/health_glance-2011-en/02/04/index.html?contentType=&itemId=%2Fcontent%2Fchapter%2Fhealth_glance-2011-19-en&mimeType=text%2Fhtml&containerItemId=%2Fcontent%2Fserial%2F19991312&accessItemIds=)
- 15 Inst for Health Metrics and Evaluation. Nearly one-third of the world's population is obese or overweight, new data show. <http://www.healthdata.org/news-release/nearly-one-third-world%E2%80%99s-population-obese-or-overweight-new-data-show>.
- 16 Ibid.
- 17 Ng, Fleming, Robinson, et al., op. cit.
- 18 Commission on Ending Childhood Obesity. World Health Organization. <http://www.who.int/end-childhood-obesity/facts/en/>; http://apps.who.int/iris/bitstream/10665/204176/1/9789241510066_eng.pdf?ua=1.
- 19 Institute for Health Metrics, op. cit..
- 20 Ezzati M, Vander Hoorn S, Lawes C, Leach R, James WP, Lopez AD, et al. Rethinking the “diseases of affluence” paradigm: global patterns of nutritional risks in relation to economic development. PLoS Med. 2005;2(5):e133.
- 21 Perlberg S. Incredible presentation from Wall Street bank shows how sugar is destroying the world. Business Insider. Oct. 22, 2013. <http://www.businessinsider.com/credit-suisse-the-global-sugar-epidemic-2013-10?op=1#ixzz2pEtiZttx>.

- 22 Malik V, Willett W, Hu F. Global obesity: trends, risk factors and policy implications. *Nat Rev Endocrinol*. 2012;9(1):13-27. doi: 10.1038/nrendo.2012.199.
- 23 Swinburn BA, Sacks G, Hall KD, et al. The global obesity pandemic: shaped by global drivers and local environments. *The Lancet*. 2011;378(9793):804–14. doi: 10.1016/S0140-6736(11)60813-1.
- 24 De Schutter, Olivier. Email to the authors. Jan. 4, 2015.
- 25 Credit Suisse Research Institute. *Sugar: Consumption at a Crossroads*. Zurich: Credit Suisse; 2013.
- 26 U.S. Department of Agriculture and U.S. Department of Health and Human Services. *Dietary Guidelines for Americans, 2010*. 7th Edition, Washington, DC: U.S. Government Printing Office. Dec. 2010.
- 27 Perlberg, op. cit.
- 28 World Health Organization. WHO calls on countries to reduce sugars intake among adults and children. March 4, 2015. <http://www.who.int/mediacentre/news/releases/2015/sugar-guideline/en/>.
- 29 Popkin B. Sugary beverages represent a threat to global health. *Trends Endocrinol Metab*. 2012;23(12):591–3. doi: 10.1016/j.tem.2012.07.003.
- 30 Lang T, Rayner G. Overcoming policy cacophony on obesity: an ecological public health framework for policymakers. *Obes Rev*. 2007;8(s1):165–181. doi: 10.1111/j.1467-789X.2007.00338.x.
- 31 *Wallstreetdaily.com*. Is Coca-Cola killing thousands of Indians? Dec. 9, 2014.
- 32 The Nutrition Source. Sugary drinks and obesity fact sheet. Harvard T.H. Chan School of Public Health. <http://www.hsph.harvard.edu/nutritionsource/sugary-drinks-fact-sheet/>.
- 33 Ogden CL, Carroll MD, Curtin LR, et al. Prevalence of high body mass index in US children and adolescents, 2007-2008. *JAMA*. 2010;303(3): 242–9. doi: 10.1001/jama.2009.2012.
- 34 Te Morenga L, Mallard S, Mann J. Dietary sugars and body weight: systematic review and meta-analyses of randomised controlled trials and cohort studies. *BMJ*. 2013;346:e7492. doi: 10.1136/bmj.e7492.
- 35 Malik VS, Pan A, Willett WC, Hu FB. Sugar-sweetened beverages and weight gain in children and adults: a systematic review and meta-analysis. *Am J Clin Nutr*. 2013;98(4):1084–102. doi: 10.3945/ajcn.113.058362.
- 36 Ibid.
- 37 Yale Rudd Center for Food Policy and Obesity. Study synopses: sugar-sweetened beverages (SSBs) and child obesity. Sept. 20, 2013. http://www.yaleruddcenter.org/resources/upload/docs/what/policy/SSBTaxes/SSB-Studies_ChildObesity.pdf.
- 38 Hu FB. Resolved: there is sufficient scientific evidence that decreasing sugar-sweetened beverage consumption will reduce the prevalence of obesity and obesity-related diseases. *Obes Rev*. 2013;14(8):606–619. doi: 10.1111/obr.12040.
- 39 de Ruyter JC, Olthof MR, Seidell JC, et al. A trial of sugar-free or sugar-sweetened beverages and body weight in children. *New Engl J Med*. 2012;367(15):1397–406. doi: 10.1056/NEJMoa1203034.
- 40 Ebbeling C, Feldman H, Chomitz V, et al. A Randomized Trial of Sugar-Sweetened Beverages and Adolescent Body Weight. *N Engl J Med*. 2012;367(15):1407-16. doi: 10.1056/NEJMoa1203034.
- 41 Roberts S. Researchers find evidence that soda causes childhood obesity. *Frugivore*. Aug. 5, 2013 <http://frugivoremag.com/2013/08/researchers-find-evidence-that-soda-cause-childhood-obesity>.
- 42 European Association for the Study of Obesity. Obesity facts and figures. <http://easo.org/obesity-facts-figures>.
- 43 Ibid.
- 44 Pan A, Hu FB. Effects of carbohydrates on satiety: differences between liquid and solid food. *Curr Opin Clin Nutr Metab Care*. 2011;14:385-90.
- 45 Ludwig DS, Peterson KE, Gortmaker SL. Relation between consumption of sugar-sweetened drinks and childhood obesity: a prospective, observational analysis. *The Lancet* 2001;357:505–8.
- 46 Babey SH, Jones M, Yu H, Goldstein H. Bubbling over: soda consumption and its link to obesity in Cali-

- fornia. Policy Brief. UCLA Center Health Policy Res. Sept. 2009(PB2009-5):1-8.
- 47 de Ruyter, Olothof, Seidell, et al., op. cit.
- 48 Ebbeling, Feldman, Chomitz, et al., op. cit.
- 49 Hu FB, Malik VS. Sugar-sweetened beverages and risk of obesity and type 2 diabetes: epidemiologic evidence. *Physiol Behav.* 2010;100(1):47–54. doi: 10.1016/j.physbeh.2010.01.036.
- 50 Malik VS, Schulze MB, Hu FB. Intake of sugar-sweetened beverages and weight gain: a systematic review. *Am J Clin Nutr.* 2006;84:274–88.
- 51 Schulze MB, Manson JE, Ludwig DS, et al. Sugar-sweetened beverages, weight gain, and incidence of type 2 diabetes in young and middle-aged women. *JAMA.* 2004;292:927–34.
- 52 Dhingra R, Sullivan L, Jacques PF, Wang TJ, Fox CS, Meigs JB, et al. Soft drink consumption and risk of developing cardiometabolic risk factors and the metabolic syndrome in middle-aged adults in the community. *Circulation.* 2007;116(5):480–8.
- 53 Global Burden of Disease Study 2013 Collaborators, op. cit.
- 54 Lambert V. Sweet poison: why sugar is ruining our health. *The Telegraph.* Dec. 11, 2014. <http://www.telegraph.co.uk/foodanddrink/healthyating/9987825/Sweet-poison-why-sugar-is-ruining-our-health.html>.
- 55 Schulze, op. cit.
- 56 Odegaard AO, Koh W, Arakawa K, et al. Soft drink and juice consumption and risk of physician-diagnosed incident type 2 diabetes; the Singapore Chinese health study. *Am J Epidemiol.* 2010;171:701–8. doi: 10.1093/aje/kwp452.
- 57 Malik VS, Popkin BM, Bray GA, et al. Sugar-sweetened beverages and risk of metabolic syndrome and type 2 diabetes: a meta-analysis. *Diabetes Care.* 2010;33(11):2477–83. doi: 10.2337/dc10-1079.
- 58 De Koning L, Malik VS, Kellogg MD, Rimm EB, Willett WC, Hu FB. Sweetened beverage consumption, incident coronary heart disease, and biomarkers of risk in men. *Circulation.* 2012;125(14):1735–41. doi: 10.1161/CIRCULATIONAHA.111.067017.
- 59 Fung TT, Malik V, Rexrode KM, Manson JE, Willett WC, Hu FB. Sweetened beverage consumption and risk of coronary heart disease in women. *Am J Clin Nutr.* 2009;89(4):1037–42. doi: 10.3945/ajcn.2008.27140.
- 60 Fabbrini E, Magkos F, Mohammed BS, Pietka T, Abumrad NA, Patterson BW, et al. Intrahepatic fat, not visceral fat, is linked with metabolic complications of obesity. *Proc Nat Acad Sci USA.* 209;106(36):15430–5. doi: 10.1073/pnas.0904944106.
- 61 Peterson KF, Dufour S, Befroy D, et al. Reversal of nonalcoholic hepatic steatosis, hepatic insulin resistance, and hyperglycemia by moderate weight reduction in patients with type 2 diabetes. *Diabetes.* 2005;54(3):603–8.
- 62 Stanhope K, Bremer AA, Medici V, et al. Consumption of fructose and high fructose corn syrup increase postprandial triglycerides, LDL-cholesterol, and apolipoprotein-B in young men and women. *J Clin Endocrinol Metab.* 2011;96(10):E1596–605. doi: 10.1210/jc.2011-1251.
- 63 Ibid.
- 64 Maersk M, Belza A, Stødkilde-Jørgensen H, et al. Sucrose-sweetened beverages increase fat storage in the liver, muscle, and visceral fat depot: a 6-mo randomized intervention study. *Am J Clin Nutr.* 2012;95(2):283–9. doi: 10.3945/ajcn.111.022533.
- 65 Aeberli I, Gerber PA, Hochuli M, Kohler S, Halie SR, Gouni-Berthold I, et al. Low to moderate sugar-sweetened beverage consumption impairs glucose and lipid metabolism and promotes inflammation in healthy young men: a randomized controlled trial. *Am J Clin Nutr.* 2011;94(2):479–85. doi: 10.3945/ajcn.111.013540.
- 66 Khan SH, Talukder SH. Nutrition transition in Bangladesh: is the country ready for this double burden. *Obes Rev.* 2013;14(S2):126–33. doi: 10.1111/obr.12100.
- 67 Chavasit V, Kasemsup V, Tontisirin K. Thailand conquered under-nutrition very successfully but has not

- slowed obesity. *Obes Rev.* 2013;14(S2):96–105. doi: 10.1111/obr.12091.
- 68 Monyeki MA, Awotidebe A, Strydom GL, et al. The challenges of underweight and overweight in South African children: Are we winning or losing the battle? A systematic review. *Int J Environ Res Public Health.* 2015;12(2):1156–1173. doi: 10.3390/ijerph120201156.
- 69 Singh GM, Micha R, Khatibzadeh S, et al. Global, regional, and national consumption of sugar-sweetened beverages, fruit juices, and milk: a systematic assessment of beverage intake in 187 countries. *PLOS ONE.* Aug. 5, 2015. doi:10.1371/journal.pone.0124845.
- 70 Ibid.
- 71 Horovitz B. Coke says obesity grew as sugar drink consumption fell. *USA Today.* June 7, 2012. <http://usatoday30.usatoday.com/money/industries/food/story/2012-06-07/mayor-bloomberg-coca-cola/55452558/1>.
- 72 Fottrell Q. 10 things Coke, Pepsi and the soda industry won't say. *MarketWatch.* Aug. 10, 2015. <http://www.marketwatch.com/story/10-things-the-soda-business-wont-tell-you-2013-04-12>.
- 73 Mangalindan JP. PepsiCo CEO: 'If all consumers exercised...obesity wouldn't exist'. *Fortune.* April 27, 2010. http://archive.fortune.com/2010/04/27/news/companies/indra_nooyi_pepsico.fortune/index.htm.
- 74 Shaefer M. Soft drinks 2014: a world in flux. *Euromonitor International.* Feb. 10, 2014. <http://blog.euromonitor.com/2014/02/soft-drinks-in-2014-a-world-in-flux.html>.
- 75 Fox J. Still sweet on Coke and Pepsi? *Bloomberg View.* Jan. 21, 2015. <http://www.bloombergview.com/articles/2015-01-21/still-sweet-on-coke-and-pepsi->
- 76 Bailey S. A guide to the non-alcoholic beverage industry. Nov. 20, 2014. <http://marketrealist.com/2014/11/guide-non-alcoholic-beverage-industry/>.
- 77 Euromonitor International. Global briefing: soft drinks global corporate strategy. Nov 2014.
- 78 Fox, op. cit.
- 79 Global briefing: soft drinks global corporate strategy, op. cit. p. 9.
- 80 International Finance Corp. IFC, Coca-Cola join forces to support thousands of women-owned businesses in emerging markets. http://www.ifc.org/wps/wcm/connect/region__ext_content/regions/sub-saharan+africa/news/ifc_and_cocacola.
- 81 International Finance Corp. IFC project exclusion list. http://www.ifc.org/wps/wcm/connect/corp_ext_content/ifc_external_corporate_site/ifc+projects+database/projects/aips+added+value/ifc_project_exclusion_list.
- 82 The Coca-Cola Company. The Coca-Cola Company 10-K report to the U.S. Securities and Exchange Commission 2013. Feb. 27, 2014. <http://assets.coca-colacompany.com/d0/c1/7afc6e6949c8ad-f1168a3328b2ad/2013-annual-report-on-form-10-k.pdf>.
- 83 The Coca-Cola Company. Who we are. <http://www.coca-colacompany.com/careers/who-we-are-info-graphic>.
- 84 Hebblethwaite, C. Who, what, why: In which countries is Coca-Cola not sold? *BBC News.* Sep. 11, 2012. <http://www.bbc.co.uk/news/magazine-19550067>.
- 85 The Coca-Cola Company. Coca-Cola Annual Review 2013. http://www.coca-colacompany.com/annual-review/2013/img/TCCC_2013_Annual_Review.pdf.
- 86 VanderMey A. Keeping a sparkle, as soda fizzes. *Fortune.* May 1, 2014. <http://fortune.com/2014/05/01/keeping-a-sparkle-as-soda-fizzes/>.
- 87 Coca-Cola Annual Review 2013. op. cit.
- 88 Bansal S. Making medicine as easy to find as a can of Coke. *The New York Times.* July 3, 2013. http://opinionator.blogs.nytimes.com/2013/07/03/making-medicine-as-easy-to-get-as-a-can-of-coke/?_r=0.
- 89 The Coca-Cola Company 10-K report to the U.S. Securities and Exchange Commission 2013, op. cit. p. 30.
- 90 Coca-Cola Annual Review 2013. op. cit.

- 91 The Coca-Cola Company. The Coca-Cola Company 10-K report to the U.S. Securities and Exchange Commission 2014. Feb. 25, 2015. <http://www.coca-colacompany.com/content/dam/journey/us/en/private/file-assets/pdf/2015/02/2014-annual-report-on-form-10-k.pdf>
- 92 Id. p. 80.
- 93 The Coca-Cola Company 10-K report to the U.S. Securities and Exchange Commission 2013, op. cit., p. 17.
- 94 Euromonitor, Passport: Coca-Cola Co The, SWOT Analysis, in Soft Drinks (World), March 2013, p. 5. <http://www.doc4net.com/doc/3083548580846>.
- 95 Id. p. 19.
- 96 Id. p. 18.
- 97 The Coca-Cola Company 10-K report to the U.S. Securities and Exchange Commission 2013, op. cit., p. 43.
- 98 Coca-Cola Annual Review 2013, op. cit. p. 2.
- 99 Wong V. Four reasons why Coca-Cola will stick to sweet sodas. Bloomberg Businessweek. April 10, 2014. <http://www.bloomberg.com/bw/articles/2014-04-10/four-reasons-why-coca-cola-will-stick-to-sweet-sodas>.
- 100 Coca-Cola Annual Review 2013, op. cit. p. 4.
- 101 Stafford L. Coca-Cola to spend \$30 billion to grow globally. The Atlanta Journal-Constitution. Sept. 9, 2012. <http://www.ajc.com/news/business/coca-cola-to-spend-30-billion-to-grow-globally/nR6YS/>.
- 102 Africa: Coca-Cola Journey. Coca-Cola invests an additional US\$5 billion for long-term sustainable growth in Africa. August 5, 2014. <http://www.coca-colacompany.com/press-center/press-releases/coca-cola-invests-an-additional-us-5-billion-for-long-term-sustainable-growth-in-africa/>. Brazil: Coca-Cola pours Into Brazil and China, pushes PepsiCo aside in the U.S. Trefis. April 10, 2012. <http://www.trefis.com/stock/ko/articles/112833/coca-cola-displays-financial-muscle-dunks-pepsico/2012-04-10>. China: Coca-Cola to invest more than \$4 billion in China from 2015-2017. Bloomberg Business. November 7, 2013. <http://www.bloomberg.com/news/articles/2013-11-07/coca-cola-to-invest-more-than-4-billion-in-china-from-2015-2017>. India: Coca-Cola targeting additional US\$3 billion investment to support long-term, sustainable growth in India. Coca-Cola India. June 26, 2012. <http://www.coca-colaindia.com/coca-cola-targeting-additional-us-3-billion-investment-support-long-term-sustainable-growth-india/>. Indonesia: Coca-Cola Journey. Coca-Cola expands capacity in fast-growing Indonesian market with opening of two production lines. March 31, 2015. <http://www.coca-colacompany.com/press-center/press-releases/coca-cola-expands-capacity-in-fast-growing-indonesian-market-with-opening-of-two-production-lines/>. Mexico: Schroeder E. Coca-Cola to invest billions in Mexico. Food Business News. July 17, 2014. http://www.foodbusinessnews.net/articles/news_home/International/2014/07/Coca-Cola_to_invest_billions_i.aspx?ID=%7BB05FFD4B-578B-4F8D-AFF3-405233A91A2B%7D&ccck=1. Philippines: Mercurio RS. Coca-Cola pouring in additional \$1.2B in Philippines. The Philippine Star. August 20, 2015. <http://www.philstar.com/business/2015/08/20/1489923/coca-cola-pouring-additional-1.2-b-philippines>.
- 103 The Coca-Cola Company. Coca-Cola Annual Review 2014. p. 31. <http://www.coca-colacompany.com/year-in-review-2014/downloads>.
- 104 PepsiCo, Inc. PepsiCo, Inc. 10-K report to the U.S. Securities and Exchange Commission 2013. Feb. 14, 2014. p. 32. https://www.pepsico.com/Annual-Reports/annual13/media/PepsiCo_10K_20140214.pdf.
- 105 PepsiCo, Inc. PepsiCo, Inc. 10K report to the U.S. Securities and Exchange Commission 2014. Feb. 12, 2105. p. 78. <http://phx.corporate-ir.net/phoenix.zhtml?c=78265&p=irol-SECText&TEXT=aHR0cDovL2F-waS0ZW5rd2l6YXJkLmNvbS9maWxpbnmcueG1sP2lwYWdlPTlEwMDY1MDUxJkRTRVE9MCZTRVE9M-CZTUURFU0M9U0VDVEIPTl9FTIRJkUmc3Vic2lkPTU3>.
- 106 PepsiCo, Inc. 10-K report to the U.S. Securities and Exchange Commission 2013, op. cit. p. 27.
- 107 PepsiCo, Inc. 2012 PepsiCo Annual Report. <http://www.pepsico.com/AnnualReports/annual12/index.html>.

- 108 Global briefing: soft drinks global corporate strategy, op. cit. p. 52.
- 109 Id. p. 15.
- 110 PepsiCo, Inc. 10-K report to the U.S. Securities and Exchange Commission 2013, op. cit. p. 14.
- 111 Euromonitor, Passport: Coca-Cola Co The, SWOT Analysis, op. cit. p. 8.
- 112 CSPI calculations based on Beverage Digest. Special issue: U.S. beverage business results for 2014. March 26, 2015. http://www.beverage-digest.com/pdf/top-10_2015.pdf.
- 113 Fox, op. cit.
- 114 Boumphrey S, Bevis E. Reaching the emerging middle classes beyond BRIC. Euromonitor International; 2013:4.
- 115 Sure Dividend. Coca-Cola's growth potential & dividend analysis. Sure Dividend. Aug. 6, 2015. <http://www.suredividend.com/coca-colas-growth-potential-dividend-analysis/>.
- 116 Boumphrey, op. cit. p.11.
- 117 Boumphrey, op. cit.
- 118 Moodie R, Stuckler D, Monteiro C, et al. Profits and pandemics: prevention of harmful effects of tobacco, alcohol, and ultra-processed food and drink industries. *The Lancet*. 2013;381(9867):670-9. doi: 10.1016/S0140-6736(12)62089-3.
- 119 Wong, op. cit.
- 120 Barclays 2014 Back-to-School Consumer Conference. Sept. 4, 2014. (No longer available at http://cc.talkpoint.com/barc002/090314a_bc/?entity=38_ICXR6TJ.)
- 121 Moss M. Salt sugar fat: how the food giants hooked us. Random House. 2013.
- 122 Moodie, op. cit.
- 123 Coca-Cola per capita consumption of company beverage products, op. cit.
- 124 Euromonitor, Passport: Coca-Cola Co The, SWOT Analysis, op. cit. p. 31.
- 125 Berman LR, Balde S. Business Challenges and Opportunities in Africa, Euromonitor International, 2013.
- 126 Stanford D. Africa: Coke's last frontier. *BloombergBusiness*. Oct. 28, 2010. http://www.bloomberg.com/bw/magazine/content/10_45/b4202054144294.htm.
- 127 Berman, op. cit. p. 8.
- 128 Stanford, op. cit.
- 129 Stanford, op. cit.
- 130 Euromonitor, Passport: Coca-Cola Co The, SWOT Analysis, op. cit., p. 31.
- 131 The Coca-Cola Company. Journey. Coca-Cola invests an additional US\$5 billion for long-term sustainable growth in Africa. Aug. 5, 2014. <http://www.coca-colacompany.com/press-center/press-releases/coca-cola-invests-an-additional-us-5-billion-for-long-term-sustainable-growth-in-africa/>.
- 132 Marketline. Carbonated soft drinks in Asia-Pacific. *MarketResearch.com* Aug. 29, 2014, p. 12. <http://www.marketresearch.com/MarketLine-v3883/Carbonated-Soft-Drinks-Asia-Pacific-8403578/> Marketline Industry Profile Asia at 12.
- 133 Id. p. 2.
- 134 Id. p. 11.
- 135 Carbonates consumption to hit 1 billion litres in Vietnam this year. *Canadean*. Aug. 25, 2015. <http://www.canadean.com/news/carbonates-consumption-to-hit-1-billion-litres-in-vietnam-this-year/>.
- 136 Associated Press. Coca-Cola open Yangon bottling plant in US\$200m five-year deal. *South China Morning Post*. Jun 5, 2013. <http://www.scmp.com/news/asia/article/1253563/coca-cola-opens-yangon-bottling-plant-us200m-five-year-deal>.

- 137 Otto J. Foreign money pours into Laos. *The Wall Street Journal*. Jan. 28, 2013. <http://www.wsj.com/articles/SB10001424127887323874204578220013585429702>.
- 138 Pan American Health Organization. 154th session of the executive committee, Prov. agenda item 4.7 plan of action for the prevention of obesity in children and adolescents. CE 154/16 Rev. 1*, June 3, 2014. <http://iris.paho.org/xmlui/bitstream/handle/123456789/4627/CE154-16-e.pdf?sequence=1>.
- 139 Wong, *op. cit.*
- 139a Beverage Digest Fact Book 2015
- 140 World Nutrition. Vol. 5 (11). Nov. 2014.
- 141 Business Monitor International. Chile: Country Risk Report Q2 215, at 42.
- 142 Business Monitor News and Views. Oct. 7, 2014. Saudi Arabia, UAE & Qatar: top picks for soft drinks investment.
- 143 Bourckley B. Security is a concern, but soft drinks growth is still strong in MENA - Euromonitor International. *Beverage Daily*. Feb. 11, 2015. <http://www.beveragedaily.com/Manufacturers/Security-is-a-concern-but-soft-drinks-growth-is-still-strong-in-MENA-Euromonitor-International>.
- 144 Lobstein T, WHO Eastern Mediterranean Regional Office. Preventing child obesity and promoting child health Situation analysis and roadmap for WHO EMRO. Cairo: EMRO; 2013. (Available on request) at 8.
- 145 Knickmeyer E, Ziobro P. Coca-Cola to expand in Mideast. *The Wall Street Journal*. Dec. 5, 2011. <http://www.wsj.com/articles/SB10001424052970203893404577098353454598834>.
- 146 Euromonitor, Passport: Coca-Cola Co The, SWOT Analysis, *op. cit.* p. 31.
- 147 Knickmeyer, *op. cit.*
- 148 McNeil DG Jr. Food habits getting worse around the world. *The New York Times*. Feb. 23, 2015. http://www.nytimes.com/2015/02/24/health/food-habits-getting-worse-around-the-world.html?_r=0.
- 149 Costa P. Coca-Cola to invest BRL14 billion in Brazil through 2016. 2012. <http://www.theinformation-company.net/coca-cola-to-invest-brl14-billion-in-brazil-through-2016/>.
- 150 Euromonitor, Passport: Coca-Cola Co The, SWOT Analysis, *op. cit.* p. 19.
- 151 Monteiro C, Benicio M, Ortiz L. Tendência secular do peso ao nascer na cidade de São Paulo (1976–1998). *Revista de Saúde Pública*. 2000;34(6):26–40. doi.org/10.1590/S0034-89102000000700006.
- 152 Feferbaum R, de Abreu LC, Leone C. Fluid intake patterns: an epidemiological study among children and adolescents in Brazil. *BMC Public Health*. 2012;12(1):1005. doi:10.1186/1471-2458-12-1005.
- 153 Instituto Brasileiro de Geografia e Estatística. Pesquisa de Orçamentos Familiares 2002-2003: Análise da disponibilidade domiciliar de alimentos e do estado nutricional no Brasil. Rio de Janeiro; 2004. <http://www.abeso.org.br/uploads/downloads/71/553a2408c2702.pdf>.
- 154 Jaime PC, et al. Brazilian obesity prevention and control initiatives. *Obesity Reviews* 2013; 14(Suppl. 2): 88-95.
- 155 Ministério do Planejamento, Orçamento e Gestão, Instituto Brasileiro de Geografia e Estatística — IBGE, Pesquisa de Orçamentos Familiares 2008-2009 Antropometria e Estado Nutricional de Crianças, Adolescentes e Adultos no Brasil, IBGE, 2010.
- 156 Instituto Brasileiro de Geografia e Estatística. Pesquisa de orçamentos familiares 2008–2009: Antropometria e estado nutricional de crianças, adolescentes e adultos no Brasil. Rio de Janeiro: IBGE, 2010. [WWW document]. <http://www.abeso.org.br/uploads/downloads/70/553a23f27da68.pdf>. Cited by PC Jaime, ACF da Silva, Gentil PC, et al. *Obesity Reviews*. 2013;14 (Suppl. 2), 88-95.
- 157 Ministry of Health of Brazil. Dietary guidelines for the Brazilian population. 2nd ed. 2014. http://bvsm.sau.gov.br/bvs/publicacoes/dietary_guidelines_brazilian_population.pdf.
- 158 MarketLine. Carbonated soft drinks in China. Aug. 2014, p. 2.
- 159 Roberts D. Chinese kids gorge on junk food, with familiar consequences. *Bloomberg Business*. Sept. 14,

2014. <http://www.bloomberg.com/bw/articles/2014-09-04/chinas-child-obesity-problem-has-familiar-cause-junk-food>.
- 160 Global Burden of Disease Study 2013 Collaborators, op. cit.
- 161 International Diabetes Federation. China: did you know? <https://www.idf.org/BRIDGES/map/china>.
- 162 Ma, et al. National Institute for Nutrition and Food Safety, Chinese CDC; noted in Lui report to CSPI; 2015.
- 163 Shang XW, Liu AL, Zhang Q, Hu XQ, Du SM, Ma J, et al. Report on childhood obesity in China(9): sugar-sweetened beverages consumption and obesity. *Biomed Environ Sci.* 2012;25(2):125–132.
- 164 Donovan T. *Fizz: How soda shook up the world*. Chicago, IL: Chicago Review Press Inc. 2014:147.
- 165 Carbonated soft drinks in China, op. cit. p. 12.
- 165a Popkin, Hawkes, op cit.
- 166 Areddy JT, Esterl M. Coca-Cola plans \$4 billion China investment. *The Wall Street Journal*. Aug. 19, 2011 <http://online.wsj.com/article/SB10001424053111903596904576515553953471040.html>.
- 167 The Coca-Cola Co. Journey. Coke breaks ground on 45th plant in China as part of \$4 billion investment. Aug. 21, 2015. <http://www.coca-colacompany.com/stories/cole-breaks-ground-on-45th-plant-in-china-as-part-of-4-billion-investment>.
- 168 Areddy, op. cit.
- 169 China Daily. Carbonated drinks lose ground in China. Oct. 4, 2015. http://m.chinadaily.com.cn/en/2015-10/04/content_22075589.htm.
- 170 Euromonitor International. Executive Summary. Soft drinks in Egypt. Feb.2015. <http://www.euromonitor.com/soft-drinks-in-egypt/report..>
- 171 Advertising Age. March 23, 2015, p. 14.
- 172 McNeil, op. cit.
- 173 Soft drinks growth to bubble up in Egypt. BMI Research. Oct. 15, 2014. <http://www.businessmonitor.com/news-and-views/soft-drinks-growth-to-bubble-up-in-egypt#sthash.wofwHfqZ.dpuf>.
- 174 ElMeshad S. Childhood obesity: An increasingly common problem. *Egypt Independent*. Oct. 16, 2011. <http://www.egyptindependent.com/news/childhood-obesity-increasingly-common-problem>.
- 175 Arora, T. Fizz gets bigger for Indian soft drink makers, *The Bangkok Post*. Oct. 21, 2013. <http://www.bangkokpost.com/business/news/375646/fizz-gets-bigger-for-indian-soft-drink-makers>.
- 176 Bhushan R. PepsiCo to cut down salt, sugar content in packaged foods. *The Economic Times*. June 22, 2015. <http://economictimes.indiatimes.com/industry/cons-products/food/pepsico-to-cut-down-salt-sugar-content-in-packaged-foods/articleshow/47762685.cms?prtpage=1>.
- 177 PepsiCo India. Lay's spins the chip this Cricket World Cup. Jan 13, 2015. http://www.pepsicoindia.co.in/media/Press-Releases/release-13_01_2015.aspx.
- 178 Donovan, op. cit. p. 154.
- 179 Cordeiro A. PepsiCo to invest more than \$5 billion in India. *Bloomberg Business*. Nov. 11, 2013. <http://www.bloomberg.com/news/articles/2013-11-11/pepsico-to-invest-over-5-billion-with-partners-in-india-by-2020>.
- 180 Gulati N, Ahmed R. India has 1.2 billion people but not enough drink Coke. *The Wall Street Journal*. Jul. 13, 2012. <http://www.wsj.com/articles/SB10001424052702304870304577490092413939410>.
- 181 Dey S. Indians take to “unhealthy” sugary beverages in a big way. *The Times of India*. July 14, 2015.
- 182 Gulati S, Misra A. Sugar intake, obesity, and diabetes in India. *Nutrients*. 2014;6(12): 5955–74. doi:10.3390/nu6125955.

- 183 Ibid.
- 184 Ibid.
- 185 Khadilkar VV, Khadilkar AV, Cole TJ, et al. Overweight and obesity prevalence and body mass index trends in Indian children. *Int J Pediatr Obes*. 2011;6(2–2):e216–e224. doi: 10.3109/17477166.2010.541463.
- 186 Diabetes Foundation India. <http://www.diabetesfoundationindia.org/about.aspx>.
- 187 Cohen, op. cit.
- 188 Global briefing: soft drinks global corporate strategy, op. cit. p. 10.
- 189 Feliciano J. Thin wall packaging key to affordable beverages in Indonesia. Euromonitor International. March 7, 2014. <http://blog.euromonitor.com/2014/03/thin-wall-packaging-key-to-affordable-beverages-in-indonesia.html>.
- 189a Otto B, Rachman A. Indonesian sugar-tax talk chills drinks industry. *The Wall Street Journal*. Nov. 27, 2015.
- 190 Thurlow R. Coca-Cola to buy 29.4% of Coca-Cola Amatil's Indonesian business. *The Wall Street Journal*. Oct. 30, 2014. <http://www.wsj.com/articles/coca-cola-to-buy-29-4-of-coca-cola-amatils-indonesian-business-1414622347>.
- 191 Ibid.
- 192 The Coca-Cola Co. Journey. Coca-Cola expands capacity in fast-growing Indonesian market with opening of two production lines. March 31, 2015. <http://www.coca-colacompany.com/press-center/press-releases/coca-cola-expands-capacity-in-fast-growing-indonesian-market-with-opening-of-two-production-lines/>.
- 193 Wardhani DA. High prevalence of child obesity in Jakarta sparks concerns. *The Jakarta Post*. Oct. 16, 2014. <http://www.thejakartapost.com/news/2014/10/16/high-prevalence-child-obesity-jakarta-sparks-concerns.html#sthash.08ymSszB.dpu>.
- 194 Id. p. 21.
- 195 Business Monitor News and View, Brazil and Mexico's carbonated soft drinks sweeter than Colombia's, Nov. 18 2014.
- 196 Business Monitor International, Mexico Food and Drink Report Q1 2015. Nov. 2014, p. 56.
- 197 Barquera S, Hernandez-Barrera L, Tolentino ML, et al. Energy intake from beverages is increasing among Mexican adolescents and adults. *J Nutr*. 2008;138(12): 2454–2461. doi: 10.3945/jn.108.092163.
- 198 Gutiérrez JP, et al. Encuesta Nacional de Salud y Nutrición 2012. Resultados nacionales. 2nd ed. Cuernavaca, México: Instituto Nacional de Salud Pública (MX), 2013. <http://ensanut.insp.mx/informes/ENSANUT2012ResultadosNacionales2Ed.pdf>.
- 199 Bonilla-Chacin ME. Sugar-sweetened beverages and snack taxes: All eyes on Mexico (and Hungary). *The World Bank Blog*. Aug. 20, 2014. <http://blogs.worldbank.org/health/sugar-sweetened-beverages-and-snack-taxes-all-eyes-mexico-and-hungary>.
- 200 Credit Suisse Research Institute, op. cit.
- 201 Mexico Food and Drink Report, op. cit.
- 202 Brazil and Mexico's carbonated soft drinks sweeter than Colombia's. BMI Research. Nov. 18, 2014. <http://www.bmiresearch.com/news-and-views/brazil-and-mexicos-carbonated-soft-drinks-sweeter-than-colombias>.
- 203 Instituto Nacional de Salud Pública. Reduction in consumption of taxed beverages after the implementation of the tax in Mexico. June 2015.
- 204 Graham D. Mexican Senate committees eliminate cut in sugary drink tax. *Reuters*. Oct. 29, 2015. <http://www.reuters.com/article/2015/10/29/mexico-beverages-idUSL1N12T0AZ20151029>.
- 205 Brazil and Mexico's carbonated soft drinks sweeter than Colombia's, op. cit.
- 206 Martin E, Case B. PepsiCo to Nestle invest in Mexico as growth trumps higher taxes. *Bloomberg Business*. Jan. 24, 2014. <http://www.bloomberg.com/news/articles/2014-01-24/pepsico-to-nestle-invest-in-mexico-as-growth-trumps-higher-taxes>.

- 207 Schroeder E. Coca-Cola to invest billions in Mexico. FoodBusinessNews. July 17, 2014. http://www.foodbusinessnews.net/articles/news_home/International/2014/07/Coca-Cola_to_invest_billions_i.aspx?ID=%7BB05FFD4B-578B-4F8D-AFF3-405233A91A2B%7D&cck=1.
- 208 Basak S. Coca-Cola Femsas Falls to 22-Month Low on PepsiCo Investment. BloombergBusiness. Jan. 27, 2014. <http://www.bloomberg.com/news/articles/2014-01-27/coca-cola-femsa-reaches-21-month-low-as-pepsi-co-plans-investment>.
- 209 Credit Suisse Research Institute, op. cit.
- 210 Bonilla-Chacin, op. cit.
- 211 Instituto Nacional de Salud Pública. Encuesta nacional de salud y nutrición 2012. http://ensanut.insp.mx/doctos/ENSANUT2012_Nutricion.pdf.
- 212 Presentation by D. Mozaffarian, Dean of the Friedman School of Nutrition Science & Policy, Tufts University, at the Mexican National Institute of Public Health-INSP. Nov. 11, 2014. http://www.insp.mx/images/stories/INSP/evidencia/docs/141120_mortalityConference.pdf.
- 213 Ibid.
- 214 International Diabetes Federation. Mexico. <https://www.idf.org/membership/nac/mexico>.
- 215 Mcleay FJ, Oglethorpe D. Social marketing, parental purchasing decisions, and unhealthy food in developing countries: A Nigerian typology. *J Cons Behav.* 2013;12: 232–242. doi: 10.1002/cb.1426.
- 216 Euromonitor, Passport: Coca-Cola Co The, SWOT Analysis, op. cit. p. 31.
- 217 Global briefing: soft drinks global corporate strategy op .cit. p. 10.
- 218 Euromonitor, Passport: Coca-Cola Co The, SWOT Analysis, op. cit. p. 31.
- 219 The Coca-Cola Company. Coca-Cola per capita consumption of company beverage products. 2012. <http://assets.coca-colacompany.com/b2/9a/cdcd7b7541a3b25e2dfb0c665c37/2011-per-capita-consumption.pdf>.
- 220 Sector report: Fast moving consumer goods in Africa. KPMG Industries. Sept. 13, 2012. <http://www.kpmg.com/Africa/en/IssuesAndInsights/Articles-Publications/General-Industries-Publications/Documents/Fast-moving%20Consumer%20Goods%20in%20Africa.pdf>.
- 221 Ground Up. South Africa's childhood obesity "a huge problem." The South African.com. Aug. 26, 2014. <http://www.thesouthafrican.com/south-africas-childhood-obesity-a-huge-problem/>.
- 222 Ibid.
- 223 Birrell I. Obesity: Africa's new crisis. The Guardian. Sept. 21, 2014. <http://www.theguardian.com/society/2014/sep/21/obesity-africas-new-crisis>.
- 224 Cocacola.co.za. Coca-Cola - Our Company. 2015. <http://www.cocacola.co.za/ourCompany.html>.
- 225 Maykuth A. In S. Africa, Pepsi pays for pullout it left during Apartheid. Coke found a way to keep a foot in the door. Philly.com. Mar. 26, 1998. http://articles.philly.com/1998-03-26/news/25745092_1_sanctions-pepsi-companies.
- 226 Irwin R. Painting South Africa red. Brandchannel. http://www.brandchannel.com/features_effect.asp?pfid=40.
- 227 Theron M, Amisshah A, Kleynhans I, et al. Inadequate dietary intake is not the cause of stunting amongst young children living in an informal settlement in Gauteng and rural Limpopo Province in South Africa: the NutriGro study. *Public Health Nutr.* 2007;10(4):379–89.
- 228 MacKeown JM, Faber M. Frequency of consumption of cariogenic food items by 4-month-old to 24-month-old children: comparison between two rural communities in KwaZulu-Natal, South Africa. *Int J Food Sci Nutr.* 2005;56(2):95–103.
- 229 Hawkes C. Marketing activities of global soft drink and fast food companies in emerging markets: a review. In WHO, *Globalization, Diets and Non-Communicable Diseases.* 23–76 (2002).

- 230 Wiist WH, editor. *The bottom line or public health: Tactics corporations use to influence health and health policy, and what we can do to counter them.* USA: Oxford University Press; 2010.
- 231 Jenkin G, Madhvani N, Signal L, et al. A systematic review of persuasive marketing techniques to promote food to children on television. *Obes Rev.* 2014;15(4):281–93. doi: 10.1111/obr.12141.
- 232 Roseman MG, Poor M, Stephenson TJ. A content analysis of food references in television programming specifically targeting young audiences aged 11 to 14 years. *J Nutr Educ Behav.* 2014;46(1):20–5. doi:10.1016/j.jneb.2013.09.003.
- 233 Hudson S, Elliot C. Measuring the impact of product placement on children using digital brand integration. *J Food Prod Mark.* 2013;19(3):176–200. doi:10.1080/10454446.2013.724370.
- 234 Cairns G, Angus K, Hastings G, et al. Systematic reviews of the evidence on the nature, extent and effects of food marketing to children. A retrospective summary. *Appetite.* 2013;62:209–15. doi: 10.1016/j.appet.2012.04.017.
- 235 Bhushan N. MTV launches indie-culture channel in India. Feb. 5, 2014. <http://www.hollywoodreporter.com/news/mtv-india-launches-indie-channel-677302>.
- 236 Resource Center for Primary Health Care (RECPHEC). Rapid assessment on media coverage of junk food and its content analysis: Nepali and India television channels. Dec. 24, 2012. http://healthbridge.ca/images/uploads/library/Final_Junk_Food_Study.pdf.
- 237 Pendergrast M. *For God, Country, and Coca-Cola.* New York, NY: Basic Books; 2013. p. 483.
- 238 BRIC report: Top 10 television advertisers. BrandRepublic. June 6, 2011. <http://www.brandrepublic.com/article/1059875/bric-report-top-10-television-advertisers>.
- 239 Ibid.
- 240 PepsiCo Inc. 2014 PepsiCo Annual Report. p. 9. https://www.pepsico.com/docs/album/default-document-library/pepsico-2014-annual-report_final.pdf.
- 241 The Coca-Cola Co. Enabling Desire: Mobile As Coke’s ‘6Th Sense’.; 2014. <https://www.youtube.com/watch?v=C51OFCQZCrk>.
- 242 Daly T. Mobile strategy: mobile brings you closer to your customer. Speech at Mobile Marketing Association. May 6-7, 2014. <http://www.mmaglobal.com/events/sites/default/files/coca-cola.pdf>.
- 243 Moye, J Bridging the digital divide: Coca-Cola, BT deliver WiFi across rural communities in South Africa. *Coca-Cola Journey.* Oct 22, 2014. <http://www.coca-colacompany.com/stories/bridging-the-digital-divide-coca-cola-bt-deliver-wifi-access-to-rural-communities-in-south-africa>.
- 244 Madden M, Lenhart A, Duggan M, et al. *Teens and technology 2013.* Washington, D.C.: Pew Internet & American Life Project. 2013.
- 245 Conway, P. 15 apps and websites kids are heading to after Facebook. *Common Sense Media.* Mar. 4, 2015. <https://www.commonsensemedia.org/blog/15-apps-and-websites-kids-are-heading-to-after-facebook>.
- 246 Holloway D, Green L, Livingstone S. Zero to eight: Young children and their internet use. LSE, London: EU Kids Online; 2013. http://eprints.lse.ac.uk/52630/1/Zero_to_eight.pdf.
- 247 Hepburn M. How we scored for Coke during the World Cup. *This is Zone.* Aug. 26, 2014. <http://www.thisiszone.com/news/scored-coke-world-cup/>.
- 248 Ustjanauskas AE, Harris JL, Schwartz MB. Food and beverage advertising on children’s websites. *Pediatr Obes.* 2014;9(5):362–72. doi: 10.1111/j.2047-6310.2013.00185.x.
- 249 Ebizmba.com. Top 15 most popular social networking sites. September 2015. <http://www.ebizmba.com/articles/social-networking-websites>.
- 250 Alexa.com. Alexa top 500 global sites. 2015. <http://www.alexa.com/topsites>.
- 251 UNICEF. *Child safety online: Global strategies and challenges.* Florence (Italy): UNICEF Innocenti Research Centre; 2012. <http://www.unicef-irc.org/publications/650>.

- 252 Taylor J. What is reach block advertising on Facebook. Quora. Feb. 2, 2011. <http://www.quora.com/What-is-reach-block-advertising-on-Facebook>.
- 253 How PepsiCo India uses Facebook reach block to get 19 million video ad views. Digital Strategy Consulting. July 14, 2012 http://www.digitalstrategyconsulting.com/intelligence/2012/07/how_pepsico_india_uses_facebook.php.
- 254 Rudd Center for Food Policy and Obesity. Sugary drink FACTS 2014. Nov. 2014. p. 72. http://www.sugarydrinkfacts.org/resources/SugaryDrinkFACTS_Report.pdf
- 255 Stevenson A. In China, a rapid jump to mobile advertising. The New York Times. Dec. 21, 2014. <http://www.nytimes.com/2014/12/22/technology/a-rapid-jump-to-mobile-ads-in-china.html>.
- 256 Lin X. Sugar-Sweetened Beverages in China (report on file).
- 257 The Secret is out there: How Coca Cola used a multi-channel advertising campaign to engage the teen age market. Digital Strategy Consulting. July 14, 2012. http://www.digitalstrategyconsulting.com/intelligence/2012/07/the_secret_is_out_there_how_co_1.php.
- 258 Bachai S. “Share a Coke” How beverage giant Coca-Cola uses emotional marketing to get children to make unhealthy choices. Medical Daily. Jul 15, 2014. <http://www.medicaldaily.com/share-coke-how-beverage-giant-coca-cola-uses-emotional-marketing-get-consumers-make-unhealthy-293040>.
- 259 Ibid.
- 260 Ibid.
- 261 Ryan T. The enduring history of Coca-Cola’s polar bears. The Coca-Cola Journey. Jan. 1, 2012. <http://www.coca-colacompany.com/holidays/the-enduring-history-of-coca-colas-polar-bears>.
- 262 Linevpn.org. Best VPN to get free line stickers: Indonesia. 2015. <http://www.linevpn.org/p/indonesia.html#.Vf7XZulN3zI>
- 263 Kraak VI, Story M. Influence of food companies’ brand mascots and entertainment companies’ cartoon media characters on children’s diet and health: a systematic review and research needs. *Obes Rev*. 2015;16(2):107–26. doi: 10.1111/obr.12237.
- 264 Wallcoo.net. Chinese New Year ar - Coca-Cola design wallpaper 32. 2015. <http://wallcoo.net/ad/icoke/html/wallpaper32.html>.
- 265 7up.in. 7UP. <http://7up.in/>
- 266 Sujeitosimples.wordpress.com. Toma que o limão é seu. Mar. 3, 2007. Sujeito Simples. <https://sujeitosimples.wordpress.com/2007/03/>.
- 267 “Young female hiker traversing a field of strawberries.” (jpg image on file)
- 268 “Animated lions dressed in tunics.” (jpg image on file)
- 269 “Pepsi bottle and pizza sitting at romantic candle-lit table.” (png image on file)
- 270 “Life event on Pizza Hut’s Facebook page for becoming friends with Pepsi.” (png image on file)
- 271 Soompi. Kim Soo Hyun chosen as the face of Coca-Cola in China [Internet]. 2014. <http://www.soompi.com/2014/03/27/kim-soo-hyun-chosen-as-the-face-of-coca-cola-in-china/>.
- 272 Madden N. Coca-Cola rolls out largest ad campaign ahead of Olympics. 2015. <http://adage.com/china/article/china-news/cocacola-rolls-out-largest-ad-campaign-ahead-of-olympics/123082/>.
- 273 YouTube. Coca-Cola commercial featuring Chinese pop stars. 2015. <https://www.youtube.com/watch?v=6v-5y8PNnQk>.
- 274 Mukherjee R. Irresponsible, did you say? - Business Today. 2015. <http://www.businesstoday.in/magazine/trends/irresponsible,-did-you-say/story/2070.html>.
- 275 Pope G. The Global Child. *Kidscreen*. 2013;18(4):44.
- 276 Savut M. Coca-Cola’s storytelling: three lessons on content marketing and creativity. Econsultancy. Nov. 27, 2013. <https://econsultancy.com/blog/63884-coca-cola-s-storytelling-three-lessons-on-content-marketing-and-creativity/>.

- 277 Digitaltrainingacademy.com. Digital marketing case study - mobile loyalty through gaming: Coca-Cola game rewards players with more mobile data - Digital Training Academy. 2015. http://www.digitaltrainingacademy.com/casestudies/2014/06/cocacola_game_rewards_players_with_more_mobile_data.php.
- 278 Ibid.
- 279 Cunningham S. Marketing genius Tan Passakornnatee lists Ichitan tea drinks in Thailand. Forbes Asia. Apr 26, 2014. <http://www.forbes.com/sites/susancunningham/2014/04/26/marketing-genius-tan-passakornnatee-lists-ichitan-in-thailand/>.
- 280 Thamarangsi T. Health Promotion Policy Research Center, Thailand. Pers. Comm. May 16, 2015.
- 281 Bogrand E. Soda brands tap music well. Berklee College of Music: Music Business Journal. July 2012. <http://www.thembj.org/2012/07/soda-brands-tap-music-well/>.
- 282 YouTube. Coca Cola – Bobby [Internet]. 2013. <http://www.youtube.com/watch?v=YhzEct5iHAK>.
- 283 <http://us.coca-cola.com/home/>. 2015 [cited 2015 Sep 20]. <http://us.coca-cola.com/happiness/>.
- 284 YouTube. Coca-Cola happiness machine. 2010. https://www.youtube.com/watch?v=lqT_dPApj9U&feature=youtu.be.
- 285 Sayon S. Coca-Cola continues to Open Happiness from Coke machine to truck to table. Brandchannel. Sept. 18, 2012. <http://brandchannel.com/2012/09/19/coca-cola-continues-to-open-happiness-from-coke-machine-to-truck-to-table/>.
- 286 YouTube. Coca-Cola Happiness Machine. 2010. https://www.youtube.com/watch?v=lqT_dPApj9U.
- 287 YouTube. La Máquina de la Amistad. 2011. <https://www.youtube.com/watch?v=doNSOLDJyKU>.
- 288 YouTube. Coca-Cola Small World Machines - Bringing India & Pakistan Together. 2013. https://www.youtube.com/watch?v=ts_4vOUDIImE.
- 289 YouTube. Coca-Cola Happiness Truck Philippines. 2011. <https://www.youtube.com/watch?v=oiu9PcEy-Q5Y>.
- 290 YouTube. Coca Cola Camión de la Felicidad Ecuador Guayaquil. 2011. <https://www.youtube.com/watch?v=SdtHvZKplgM>.
- 291 YouTube. Coca-Cola Happiness Truck Armenia. 2014. <https://www.youtube.com/watch?v=oD7jkP4x-ems>.
- 292 YouTube. Coca-Cola Happiness Machine Indonesia. 2010. <https://www.youtube.com/watch?v=gtQOSao-24Qk>.
- 293 YouTube. Happiness Truck - Salvador. 2011. <https://www.youtube.com/watch?v=unmmrFRJyhC>.
- 294 YouTube. Coca-Cola Hello Happiness. 2014. <https://www.youtube.com/watch?v=zIA9tXYxD8g>.
- 295 YouTube. Coca-Cola Happy Beep. 2014. <https://www.youtube.com/watch?v=vOBgl772BkcIN>.
- 296 PepsiCo. Inc. 10K report to the U.S. Securities and Exchange Commission 2014, op. cit. p. 8.
- 297 Hgrant. 19 Pepsi flavors you've probably never heard of. BuzzFeed. Feb 24, 2012. <http://www.buzzfeed.com/hgrant/19-pepsi-flavors-youve-probably-never-heard-of>.
- 298 Journey Staff. The Coca-Cola Company. Fast foods gone global. Jan 2, 2013. <http://www.coca-colacompany.com/stories/fast-foods-gone-global/>.
- 299 Donovan, op. cit. p. 154.
- 300 Ibid.
- 301 Culture M. Moroccan Coca-Cola Culture. Travel Channel. 2015. <http://www.travelchannel.com/shows/fast-foods-gone-global/video/moroccan-coca-cola-culture>.
- 302 Garrison LT. The quick 10: 10 Coca-Cola beverages you won't find on the U.S. shelves. Mental_floss. Nov. 18, 2011. <http://mentalfloss.com/article/29294/quick-10-10-coca-cola-beverages-you-won%E2%80%99t-find-us-shelves>.

- 303 Culture, op. cit.
- 304 Bouckley B. BIG Cola meets BIG Buddhism. Beverage Daily Digest. April 17, 2014. <http://www.beveragedaily.com/Manufacturers/BIG-Cola-meets-BIG-Buddhism-AJE-isn-t-your-typical-capitalist-company>.
- 305 Euromonitor. Corporate Strategies in Health and Wellness: Part 2 — Focus — Emerging Markets. <http://www.euromonitor.com/corporate-strategies-in-health-and-wellness-part-2-focus-emerging-markets/report>.
- 306 Martins R. Diversification Key to Soft Drink Market in Brazil. Euromonitor International. 2015. Available at: <http://blog.euromonitor.com/2015/02/diversification-key-to-soft-drink-market-in-brazil.html>.
- 307 Credit Suisse Research Institute, op. cit.
- 308 Fitho. Which is the Healthiest Mango drink?. 2015. <http://www.fitho.in/healthiest-mango-drink/>.
- 309 Garrison, op. cit.
- 310 From IDEC, Bortoletto A.
- 311 Marketline. Company profile PepsiCo., Jan. 10, 2014, p. 14.
- 312 Dawer, I. Unlocking the potential of India's nascent energy drinks market. Euromonitor International. Jan. 22, 2015. <http://blog.euromonitor.com/2015/01/unlocking-the-potential-of-indias-nascent-energy-drinks-market.html#more>.
- 313 Ibid.
- 314 Euromonitor International. Global briefing: soft drinks global corporate strategy, op. cit.
- 315 Pomeranz JL, Munsell CR, Harris JL. Energy drinks: An emerging public health hazard. J Public Health Policy. 2013;34(2):254–71. doi: 10.1057/jphp.2013.6.
- 316 Committee on Nutrition and the Council on Sports Medicine and Fitness. Sports drinks and energy drinks for children and adolescents: Are they appropriate? Pediatrics. 2011;127(6): 1182–9. doi: 10.1542/peds.2011-0965.
- 317 Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2011) The DAWN report: Emergency department visits involving energy drinks. 22 Nov., Rockville, MD.
- 318 Center for Science in the Public Interest. Documents link more deaths to energy drinks. June 25, 2014. <http://www.cspinet.org/new/201406251.html>.
- 319 Gordon L. Will increasing regulation slow the growth of energy drinks in Mexico? Euromonitor International. Oct. 9, 2012. <http://blog.euromonitor.com/2012/10/will-increasing-regulation-slow-growth-of-energy-drinks-in-mexico.html>.
- 320 Ibid.
- 321 Saudi Arabia declares war on energy drinks. Al Arabiya News. <http://english.alarabiya.net/en/News/middle-east/2014/03/03/Saudi-bans-sale-promotion-of-energy-drinks.html>.
- 322 Thrastardottir A. A country in Europe bans energy drinks for minors. Business Insider. Nov. 3, 2014. <http://www.businessinsider.com/lithuania-bans-energy-drinks-for-minors-2014-11>.
- 323 <http://blog.euromonitor.com/2015/02/diversification-key-to-soft-drink-market-in-brazil.html#more>.
- 324 Euromonitor Passport, Soft drinks global corporate strategy, op. cit.
- 325 Bloomberg Businessweek. Coke's unlikely savior, companies/industries. March 23–April 5, 2015.
- 326 Euromonitor Passport, Soft drinks global corporate strategy, op. cit.
- 327 Xu Lui report to CSPI.
- 328 Williams SN. The growth of the soft drinks industry in middle-income countries: current trends and implication in China and India. Perspect Public Health. 2014;134(4):198–9.
- 329 Beverage Digest. April 17, 2015. <http://www.beverage-digest.com/editorial/archive15.php#150417>. [subscription required].

- 330 The Pepsi Challenge — drinks giant returns to Kenya after 4 decades. March 4, 2013. The South African. <http://www.thesouthafrican.com/the-pepsi-challenge-drinks-giant-returns-to-kenya-after-40-years/>.
- 331 Coca-Cola FEMSA. Annual Report 2014, p. 7. <http://www.annualreport.femsa.com/downloads.html>.
- 332 Coca-Cola FEMSA. Annual Report 2014, op. cit. p. 23.
- 333 Shultz EJ. See the spots: preview cokes new global bottle campaign. Feb. 26, 2015. Advertising Age. <http://adage.com/article/see-the-spot/watch-ads-coke-s-big-global-bottle-campaign/297325/>
- 334 Arthur R. To drinkfinity—and way beyond! BeverageDaily.com. March 18, 2015. www.beveragedaily.com/Markets/To-Drinkfinity-and-way-beyond!-Technology-evolves-to-meet-demand-for-personalized-drinks.
- 335 Ibid.
- 336 Ibid.
- 337 Areddy, op. cit.
- 338 Mclay, op. cit.
- 338 Euromonitor, Passport: Coca-Cola Co The, SWOT Analysis in Soft Drinks, op. cit. p. 31.
- 339 Coca-Cola FEMSA. Annual Report 2014, op. cit. p. 22.
- 340 Personal correspondence, Dec. 23, 2014.
- 341 Kelly B, King L, Jamiyan B, et al. Density of outdoor food and beverage advertising around schools in Ulaanbaatar (Mongolia) and Manila (The Philippines) and implications for policy. Crit Public Health. 2015;25(3):280–90. doi:10.1080/09581596.2014.940850.
- 342 <http://www.coca-colaindia.com/sustainability/me-u16cricket.html>.
- 343 <http://www.coca-colaindia.com/sustainability/we-supportmyschool.html>.
- 344 Pepsicoindia.co.in. PepsiCo India - Healthy Kids. 2015. <http://pepsicoindia.co.in/purpose/human-sustainability/healthy-kids.html>.
- 345 PepsiCo India. Performance with a Purpose (PWP) brochure, Human Sustainability, p. 7. <http://pepsicoindia.co.in/Download/Human-final%20file.pdf>.
- 346 Wailgum, T. The art, science and software behind placing Coca-Cola products on store shelves. CIO. Mar. 30, 2009. <http://www.cio.com/article/2429652/enterprise-software/the-art--science-and-software-behind-placing-coca-cola-products-on-store-shelves.html>.
- 347 The Coca-Cola Company. The Coca-Cola Company reports first quarter 2013 results. Apr. 16, 2013. p. 3. <http://assets.coca-colacompany.com/c8/1b/08fe8ee24d2483a56d32753203c1/first-quarter-2013-financial-results-pdf.pdf>.
- 348 The Coca-Cola Company. The Coca-Cola Company reports full-year and fourth quarter 2012 results. Feb. 12, 2013. pp. 2–3. http://assets.coca-colacompany.com/9a/50/f56e7b17483890521c2dd8a-3cee8/2012%20Q4%20Earnings%20Release_FINAL.pdf.
- 349 Coca-Cola FEMSA. Annual Report 2014, op. cit. 19.
- 350 della Cava M. Coke taps into start-up mojo. USA Today. May 26, 2015. <http://www.usatoday.com/story/tech/2015/05/22/coca-cola-founders-program-funds-entrepreneurs-to-solve-coke-business-problems/27601931/>
- 351 Gelles D. Coke and McDonald's, growing together since 1955. The New York Times. May 15, 2014. <http://www.nytimes.com/2014/05/16/business/coke-and-mcdonalds-working-hand-in-hand-since-1955.html?r=0>.
- 352 The Coca-Cola Company. Vice Presidents: Javier C. Goizueta. <http://www.coca-colacompany.com/our-company/operations-leadership-javier-c-goizueta/>.
- 353 Gelles D, op. cit.
- 354 Clinton Global Initiative. 2013 CGI Commitment to Action, ID: 1620022. <https://www.healthiergenera->

- [tion.org/_asset/t5xpix/2013-AM_Health_McDonalds_Happier-Happy-Meals_1620022_Final_AB.pdf](#).
- 355 FoxNews. Countries without McDonalds. FoxNews. Aug. 8, 2013. <http://www.foxnews.com/leisure/2013/08/08/countries-without-mcdonald/>.
- 356 Coca-Cola Hellenic Bottling Company. 2014 Integrated annual report. p. 29. <http://www.coca-colahellenic.com/-/media/Files/C/CCHBC/Annual%20Reports/Coca-Cola%20HBC%20-%202014%20Integrated%20annual%20report.pdf>
- 357 Id. p. 44.
- 358 World Cup 2014 Sponsor Profile: FIFA Partner–Coca-Cola. <http://www.sponsorship.com/Sponsorship-Consulting/2014-FIFA-World-Cup-Brazil-Sponsorship-Insights/Coca-Cola.aspx>.
- 359 <http://www2.happinessflag.com/?l=en>.
- 360 Journey staff. Coke unveils happiness flag before World Cup opening March. The Coca-Cola Company. June 12, 2014. <http://www.coca-colacompany.com/fifa-world-cup/coke-unveils-happiness-flag-before-fifa-world-cup-opening-match#TCCC>.
- 361 Zmuda N. Coke thinks globally, acts locally with World Cup ads. Advertising Age. June 9, 2014.
- 362 http://www.specialolympics.org/coca_cola.aspx.
- 363 <http://www.olympic.org/sponsors/coca-cola>.
- 364 Coca-Cola Hellenic Bottling Company, op .cit. p. 31.
- 365 Coca-Cola India. Coca-Cola India Announces 3rd Season of Coca-Cola Cricket Cup Under-16 Inter-School Cricket Tournament - Coca-Cola India. <https://www.coca-colaindia.com/coca-cola-india-announces-3rd-season-coca-cola-cricket-cup-16-inter-school-cricket-tournament/>.
- 366 Dorfman L, Cheyne A, Friedman LC, et al. Soda and tobacco industry corporate social responsibility campaigns: How do they compare? PLoS Med. 9(6): e1001241. doi:10.1371/journal.pmed.1001241. p. 2.
- 367 Fottrell Q. 10 things Coke, Pepsi and the soda industry won't say. MarketWatch. Aug. 10, 2015. <http://www.marketwatch.com/story/10-things-the-soda-business-wont-tell-you-2013-04-12?page=9>.
- 368 Ibid.
- 369 Id. p. 5.
- 370 <http://www.coca-colacompany.com/our-company/operations-leadership-kelvin-balogun>.
- 371 Okello B. A story from “Coca Town”: celebrating a \$20M Investment in rural Ethiopia. Coca-Cola Journey. <http://www.coca-colacompany.com/coca-cola-unbottled/a-story-from-coca-town-celebrating-a-20m-investment-in-rural-ethiopia>.
- 372 Hill Briefing Highlights Peace Corps Innovation, op. cit.
- 373 Dorfman, op. cit.
- 374 http://www.coca-colaindia.com/CMS?Asset/ET_football_field.pdf.
- 375 Ibid.
- 376 Dorfman, op. cit. p. 5.
- 377 Yach D. email to the authors. July 13, 2015.
- 378 The Coca-Cola Company's Responsible Marketing Policy. <http://assets.coca-colacompany.com/a0/d8/658e9e864c32987a79b33e7a7328/responsible-marketing-policy-2015.2015.pdf>.
- 379 PepsiCo Policy on Responsible Advertising to Children, p. 1. https://www.pepsico.com/Assets/Download/PepsiCo_Policy_Responsible.pdf.
- 380 Ibid.
- 381 PepsiCo Global Nutrition Criteria for Advertising to Children. https://www.pepsico.com/docs/album/responsible-marketing/pepsico_nutrition_criteria_for_advertising_to_children.pdf?sfvrsn=0.

- 382 The Coca-Cola Company. Global School Beverage Guidelines. 2015. <http://www.coca-colacompany.com/stories/global-school-beverage-guidelines>.
- 383 Pepsico.com. PepsiCo Global Policy on the Sale of Beverages to Schools. 2013. https://www.pepsico.com/docs/album/policies-doc/pwp/pepsico_global_policy_on_the_sale_of_beverages_to_schools.pdf?sfvrsn=2.
- 384 The Coca-Cola Company's Responsible Marketing Policy, op. cit.
- 385 PepsiCo Policy on Responsible Advertising to Children, op. cit.
- 386 See Taylor AL, Dhillon LS, Hwenda L. A WHO/UNICEF Global Code of Practice on the marketing of unhealthy food and beverages to children. *Global Health Governance*. 5 (2012): 1-8, at 2. http://blogs.shu.edu/ghg/files/2012/06/Taylor-Dhillon-Hwenda_A-WHO-UNICEF-Global-Code-of-Practice-on-the-Marketing-of-Unhealthy-Food-and-Beverages-to-Children.pdf.
- 387 International Council of Beverages Associations, International Council of Beverages Associations Guidelines on Marketing to Children. <http://www.icba-net.org/files/resources/icba-marketing-to-children-guidelines.pdf>.
- 388 Harris JL, Sarda V, Schwartz MB, et al. Redefining "child-directed advertising" to reduce unhealthy television food advertising. *Am J Prev Med*. 2013;44(4):358-364. doi: 10.1016/j.amepre.2012.11.039.
- 389 CBAFAI Recommendations on Marketing to Kids, p. 4.
- 390 Ibid.
- 391 Ibid.
- 392 Id. p. 5.
- 393 Yach D, Khan M, Bradley D, et al. The role and challenges of the food industry in addressing chronic disease. *Globalization and Health*. 2010;6(10):1-8. doi:10.1186/1744-8603-6-10.
- 394 Taylor Id.
- 395 International Food & Beverage Alliance, India Pledge, p. 1. <https://www.ifballiance.org/sites/default/files/IndiaPledge.pdf><https://www.ifballiance.org/sites/default/files/IndiaPledge.pdf>.
- 396 Ibid.
- 397 Coca-Cola India. Support My School - Coca-Cola India. Available at: <http://www.coca-colaindia.com/sustainability/we/support-my-school/>.
- 398 Pepsicoindia.co.in. PepsiCo India - Healthy Kids. Available at: <http://pepsicoindia.co.in/purpose/human-sustainability/healthy-kids.html>.
- 399 PepsiCo India. Human sustainability. p. 7. <http://pepsicoindia.co.in/Download/Human-final%20file.pdf>.
- 400 Personal correspondence. July 21, 2015.
- 401 Spritellidie.com. About. 2014. <https://www.spritellidie.com/About>. Bhushan N. MTV India Launches Indie Channel. *The Hollywood Reporter*. 2014. <http://www.hollywoodreporter.com/news/mtv-india-launches-indie-channel-677302>. Pepsicoindia.co.in. PepsiCo India - 7UP. <http://www.pepsicoindia.co.in/brands/7up.html>.
- 402 Spritellidie.com. About. 2014. <https://www.spritellidie.com/About>. The Coca-Cola Company. Coca-Cola U-16 Inter-School Cricket Tournament Begins In Punjab. <http://www.coca-colaindia.com/coca-cola-u-16-inter-school-cricket-tournament-begins-punjab/>.
- 403 Goyal H, Jain J. Advertising Law In India. Part 1. Media, Telecoms, IT, Entertainment, India. Mondaqcom. 2012. <http://www.mondaq.com/india/x/192384/advertising+marketing+branding/Advertising+Law+in+India>.
- 404 Ascionline.org. The Advertising Standards Council of India - Advertisers. 2015. <http://www.ascionline.org/index.php/advertisers.html>.
- 405 The Advertising Standards Council of India, ASCI Code for Self-Regulation in Advertising, p. 8. http://www.ascionline.org/images/pdf/asci_code2new.pdf

- 406 Ascionline.org. The Advertising Standards Council of India - FAQ's. Available at: <http://www.ascionline.org/index.php/faqs.html>.
- 407 CONAR. Código PABI. Código de autoregulación de publicidad de alimentos y bebidas no alcohólicas dirigida al público infantil. 2009. http://www.promocion.salud.gob.mx/dgps/descargas1/programas/codigo_pabi.pdf.
- 408 YouTube. Razones de Peso. 2012. <https://www.youtube.com/watch?v=Wxg6iqQQZYg>.
- 409 Hernandez O. Marketing of SSB in Mexico. Report for CSPI.
- 410 Keith R. A Mexican Code on Food/Beverage Advertising to Children. The Temas Blog. 2008. <http://www.temasactuales.com/temasblog/consumer-protection/a-mexican-code-on-foodbeverage-advertising-to-children/>.
- 411 Hernandez O. Marketing of SSB in Mexico. Report for CSPI.
- 412 Keith R., op. cit.
- 413 Hernandez O. Memo citing Alianza por la Salud Alimentaria. (2013). Atrapa la publicidad chatarra dirigida a la infancia. <http://alianzasalud.org.mx/atrapalachatarra/>.
- 414 Hernandez O. Marketing of SSB in Mexico. Report for CSPI.
- Alianza por la salud alimentaria. (2013). Encuesta Nacional Sobre Obesidad. Julio 2013. http://media.wix.com/ugd/d7ff30_c70091b5cb6d9aafc00dc57fbbc3717a.pdf.
- 415 Hernandez O. Marketing of SSB in Mexico. Report for CSPI, citing mia/024n1eco Instituto Nacional de Salud Pública. (2013). Publicidad de Alimentos y Bebidas. <http://www.insp.mx/epppo/blog/2984-publicidad-alimentos-bebidas.html>.
- 416 Hernandez O. Marketing of SSB in Mexico. Report for CSPI.
- 417 Poder del Consumidor. (2014, September 11). Radiografía de productos que podrán publicitarse en horarios infantiles. <http://elpoderdelconsumidor.org/analisisdeproductos/radiografia-de-productos-para-ninos-que-podran-publicitarse-y-portar-un-sello-nutritional/>.
- 418 American Beverage Association. School beverage guidelines. <http://www.schoolbeverages.com/index.aspx>.
- 419 Scharma LL, Teret SP, Brownell, KD. The food-industry and self-regulation: standards to promote success and avoid failures, framing health matters. *Am J Public Health*. 2009;100(2)240-6. doi: 10.2105/AJPH.2009.160960.
- 420 Gortmaker SL, Swinburn BA, Levy D, et al. Changing the future of obesity: science, policy and action. *The Lancet*. 2011;378(9793):838-47. doi:10.1016/S0140-6736(11):60815-5.
- 421 Roberto CA, Swinburn B, Hawkes C, et al. Patchy progress on obesity prevention: emerging examples, entrenched barriers and new thinking. *The Lancet*. 2015;385(9985):2400-9. doi:10.1016/S0140-6736(14)61744-X.
- 422 Guthrie, A. Junk food feels the heat in Latin America. *The Wall Street Journal*. Dec. 29, 2013.
- 423 Lin X. *Pers. Comm.* Jan. 22, 2015.
- 424 Patel, Raj. Telephone interview. Jan. 5, 2015.
- 425 Popkin, Slining, op. cit.
- 426 Hernandez, M. Telephone interview. Jan. 10, 2015.
- 427 World Cancer Research Fund International. Restrict food marketing. <http://www.wcrf.org/int/policy/nourishing-framework/restrict-food-marketing>.
- 428 Popkin, Slining, op. cit.
- 429 World Trade Organization. Members Continue To Discuss “Good Practices” For Technical Regulations; 2013. https://www.wto.org/english/news_e/news13_e/tbt_17jun13_e.htm.
- 430 World Trade Organization. Healthy food and drink feature, but good practices deal eludes standards committee; 2014. https://www.wto.org/english/news_e/news14_e/tbt_18jun14_e.htm.

- 431 Asian Food and Beverage Alliance. Technical barriers to trade in Asean; case study in nutrition labelling. 2013.
- 432 Global update on nutrition labelling. Executive summary. Jan. 2014, European Food Information Council.
- 433 World Cancer Research Fund International, op. cit.
- 434 World Health Organization. Interim Report of the Commission on Ending Childhood Obesity. Geneva, Switzerland. 2015. <http://www.who.int/end-childhood-obesity/commission-ending-childhood-obesity-interim-report.pdf?ua=1>.
- 435 World Cancer Research Fund International. WCRF international nourishing framework. http://www.wcrf.org/sites/default/files/3_Economic%20Tools_Final.pdf.
- 436 Briggs ADM, Mytton OT, Kehlbacher A, et al. Overall and income specific effect on prevalence of overweight and obesity of 20% sugar sweetened drink tax in UK: Econometric and comparative risk assessment modeling study. *BMJ*. 2013;347:f6189. doi: 10.1136/bmj.f6189.
- 437 Colchero MA, Popkin BM, Rivera JA, et al. Beverage purchases from stores in Mexico under the excise tax on sugar sweetened beverages: observational study. *BMJ*. 2015;352:h6704. doi: 10.1136/bmj.h6704.
- 438 Ibid.
- 439 Replogle J. Health advocates cheer initial results of Mexico's soda tax. KPBS. Nov. 28, 2014. <http://www.kpbs.org/news/2014/nov/28/mexicos-sugary-drink-tax-shows-initial-results/>.
- 440 <http://www.animalpolitico.com/2015/04/el-gravamen-al-refresco-insuficiente-para-desalentar-su-consumo-camara-de-diputados/>.
- 441 Hernandez, M. Telephone interview. June 10, 2015.
- 441a Popkin, Hawkes, op cit.
- 441b Evich HB. War over soda taxes coming to a polling place near you. *Politico*. Nov. 29, 2015. <http://www.politico.com/story/2015/11/war-over-soda-taxes-coming-to-a-polling-place-near-you-216216>.
- 441c Otto, Rachman, op cit.
- 441d Wilkes T. Coca-Cola India says may have to shut factories if new sin tax passed. Dec. 11, 2015. <http://www.reuters.com/article/us-coca-cola-india-tax-idUSKBN0TU12Y20151211>.
- 442 Popkin, Hawkes, op cit.
- 443 O'Connor A. Coca-Cola funds scientists who shift blame for obesity away from bad diets. *The New York Times*. Aug. 9, 2015.
- 444 Wiist W. The Corporate playbook, health, and democracy: the snack food and beverage industry industry's tactics in context. In: Stuckler D, Siegel, K, editors. Oxford: Oxford University Press. 2011.
- 445 Gornall J. Sugar's web of influence 2: biasing the science. *BMJ*. 2015;350:h215. doi: 10.1136/bmj.h215.
- 446 Bes-Rastrollo M, Schulze MB, Ruiz-Canela M, et al. Financial conflicts of interest and reporting bias regarding the association between sugar-sweetened beverages and weight gain: A systematic review of systematic reviews. *PloS Med*. 2013;10(12):e1001578. doi: 10.1371/journal.pmed.1001578.
- 447 Popkin, Slining, op. cit.
- 448 Popkin, Slining, op. cit.
- 449 Hernandez O. Report to CSPI citing Diario Oficial de la Federación, 2014.
- 450 Hernandez O. Report to CSPI citing (Calvillo, 2012) (Alianza por la Salud Alimentaria).
- 451 Hernandez O. Report to CSPI citing Diario Oficial De law Federacion 2014.
- 452 Cohen L. New soda tax makes Mexico a leading guardian of public health. *Huffington Post*. Nov. 22 2013.
- 453 Gomes F. Mexico makes a move. *World Nutr*. 2003;4(8):602-6, citing Monteiro CA, Cannon G. The im-

- pact of transnational “big food” companies on the South: a view from Brazil. *PLoS Medicine* 9 (7). Published July 3, 2012. e1001252. doi:10.1371/ journal.pmed.1001252.
- 454 International health policy analyst Derek Yach joins the Vitality Group, PRNewswire. Oct. 23, 2012. <http://www.prnewswire.com/news-releases/international-health-policy-analyst-derek-yach-joins-the-vitality-group-175389031.html>.
- 455 Yach, Khan, Bradley, op. cit.
- 456 Interview with Patel R. Jan. 5, 2015.
- 457 Ibid.
- 458 Amit Srivistavea. Personnel correspondence. Feb. 2, 2015.
- 459 Waqanivalu T., email to the authors. May 17, 2015.
- 460 Branca F, director of WHO’s Department of Nutrition for Health and Development.
- 461 WHO. Set of recommendations on the marketing of foods and non-alcoholic beverages to children. 2010. http://apps.who.int/iris/bitstream/10665/44416/1/9789241500210_eng.pdf.
- 462 Center for Science in the Public Interest. Healthier food choices for public places. <http://www.cspinet.org/nutritionpolicy/foodstandards.html>.
- 463 Diario Oficial, De La Republica De Chile. No. 40,734. Dec. 17, 2013.
- 464 LegiScan. New York Assembly Bill 2320. <https://legiscan.com/NY/votes/A02320/2015>.
- 465 O’Connor A. Warning: soda may be bad for your health, San Francisco says. *The New York Times*. June 10, 2015. http://well.blogs.nytimes.com/2015/06/10/warning-soda-may-be-bad-for-your-health-san-francisco-says/?_r=0.
- 466 Center for Science in the Public Interest. Petition to ensure the safe use of “added sugars.” http://cspinet.org/new/pdf/sugar_petition_2-12-13_final.pdf.
- 467 Taylor A, Parento E, Schmidt L. The increasing weight of regulation: countries combat the global obesity epidemic. *Indiana Law J*. Vol 90, No. 1 (Winter 2015). https://www.researchgate.net/publication/271767641_The_Increasing_Weight_of_Regulation_Countries_Combat_the_Global_Obesity_Epidemic.
- 468 Taylor A, et al. op. cit.



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