

Soda wars. Sugar tax. US, Mexico The whole world is watching



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Editor's note

'Soda wars' are now being fought all over the world. The enemy is 'Big Soda', mostly meaning the colossal US-headquartered Coca-Cola and PepsiCo transnational corporations. Here, Marion Nestle, with Walter Willett the most formidable and influential activist academic in the US, introduces her new book *Soda Politics*. Its 508 pages are as always impeccably researched and meticulously referenced. It will remain an essential guide to action. She asks:

How did products containing absurdly inexpensive ingredients – sugar and water and not much else – become multi-billion dollar industries and international brand icons? How did products that are essentially candy in liquid form come to be considered acceptable for children as well as adults to drink as a substitute for water? What do soda companies do, overtly and covertly, to discourage legislators and health officials from focusing on their products as targets of 'drink less' messages? How do soda companies use their version of the science to promote their products as essential for well-being and happiness?

Marion Nestle addresses such questions in *Soda Politics*, with verve, humour, style, and meticulous attention to the facts. So does Pulitzer prizewinner Tina Rosenberg, in her investigation into the soda war in Mexico. The latest battle, to maintain legislation that imposes a 10 per cent tax on sugared soft drinks, has been won by a grand alliance of legislators, civil servants, health professional bodies, citizens and supportive media orchestrated by the *El Poder del Consumidor* (Consumer Power) public interest organisation.

The USA Soda wars (1)



Three US scientists who helped to start the Global Energy Balance Network, funded by Coca-Cola. They are Steven Blair, University of South Carolina; James Hill, University of Colorado; Gregory Hand, West Virginia University

Marion Nestle writes:

Sales of sugar-sweetened and diet drinks have been falling for a decade in the United States. A new Gallup Poll says 60 per cent of people in the US are trying to avoid drinking soda. In attempts to reverse these trends and deflect concerns about the health effects of sugary drinks, the soda industry invokes elements of the tobacco industry's classic playbook: cast doubt on the science, discredit critics, invoke nanny state-ism and attribute obesity to personal irresponsibility.

Casting doubt on the science is especially important to soda makers. Overwhelming evidence links habitual consumption of sugary drinks to poor health. So many studies have identified sodas as key contributors to chronic health conditions – most notably obesity, diabetes and coronary artery disease – that the first thing anyone trying to stay healthy should do is to stop drinking them.

Bending and shaping science

Soda companies know this. For at least the last ten years, Coca-Cola's annual reports to the US Securities and Exchange Commission have listed obesity and its health consequences as the single greatest threat to the company profits. The industry counters this threat with intensive marketing, lobbying and millions of dollars poured into fighting campaigns to tax or cap the size of sugary drinks. It also pours millions into convincing researchers and health professionals to view sodas as benign.

The revelation in August of Coca-Cola's funding of the 'Global Energy Balance Network' is only the latest example of this strategy in action. The Network promotes the idea that to prevent obesity you don't need to bother about eating less or drinking less soda. You just have to be more active. Never mind that most people can't lose weight without also reducing their intake.

A reporter who looked into this group, whose leaders, Steven Blair, James Hill and Gregory Hand, are shown above, discovered that Coca-Cola had funded the research of the scientists behind it, and generously. The network's website was registered to Coca-Cola. None of this, however, had been made explicit. As I said in an interview in August for *The New York Times*: "The Global Energy Balance Network is nothing but a front group for Coca-Cola. The agenda here is very clear: Get these researchers to confuse the science and deflect attention from dietary intake."

Most nutrition professional journals now require researchers to declare who funds their studies, making it possible to compare study outcomes with funding sources. Studies sponsored by Coca-Cola almost invariably report no association of sugary drinks with diabetes, and question the validity of studies that do find such associations; or as in the case of Global Energy Balance Network investigators, they find activity to be the most important determinant of body weight.

Analyses of studies funded by Coca-Cola or its trade association demonstrate that they have an 83 per cent probability of producing results suggesting no harm from soda consumption. In contrast, the same percentage of studies funded by government agencies or independent foundations find clear linkages between sugary beverages and such conditions. Coincidence? I don't think so.

This year, I've been posting industry-funded studies with results that favour the sponsor's interests, every time I find five of them. They are easy to find. Despite pleas to readers to send me industry-funded studies that do not favour the sponsor, I hardly ever get them. Whenever I come across a study that shows no harm from sodas, I immediately look to see who paid for it.

Soda companies spend generously to convince researchers and health professionals not to worry about sodas' health effects. But why do researchers take the money? It is too simplistic to say that they are 'bought.' Industry-funded investigators say they believe the funding has no effect on the design, conduct or interpretation of their research. But research involves choices of questions, assumptions and methods. It is not difficult to carry out a study that appears to meet high scientific standards yet fails to include critical controls that might lead to alternative conclusions. Researchers funded by Coca-Cola need to take special care to control for unconscious biases but can only do this if they recognise the possibility. Many do not. Neither do many peer reviewers or editors of scientific journals. Although foodcompany financial support should not necessarily bias results, it appears to do so in practice.

Industry-funded scientists resent questioning of the influence of sponsorship on the quality of their science. They charge that investigators who find adverse effects of sodas on health are equally biased by career goals, righteous zeal or anti-corporate morality. Yes, independent scientists may have biases of their own, but their overarching research goal is to improve public health. In contrast, the goal of soda companies is to use research as a marketing tool. Disclosure is essential. If a study is funded by Coca-Cola, *caveat emptor*. Buyer, beware.

US consumers wise up

My new book *Soda Politics* is subtitled *Taking On Big Soda (and Winning!)*. In the US and other countries like the UK whose food supplies may now be saturated with soda, sales are dropping. Protests and campaigns by public health advocates and activists are effective, and can inspire similar action in many other countries.

Sales of sodas have fallen in the United States for a decade, with no sign of reversal. Only the smallest sizes are selling well. Soda companies attribute these trends to the effects of health advocacy. I think they are right to do so. Concerns about the health consequences of drinking sodas have convinced vast numbers of Americans to choose less sugary drinks. In response, soda companies are redoubling marketing efforts, especially in lower-income countries in Asia, Africa and Latin America. But even in the United States, advocates still have plenty of work to do.

There is overwhelming evidence that habitual soda drinkers run high risks for gaining weight, becoming obese, and developing consequences of obesity such as diabetes and heart disease. These illnesses pose problems not only for the people who have them, but also for society as a whole. In the US, the cost of obesity alone, in treatment and lost productivity, runs to hundreds of billions of dollars annually. Indeed, the first thing very many health professionals now tell clients to do if they want to lose weight, is to cut sugary drinks out of their diets.

Many people have lost weight, kept it off, and reduced or eliminated symptoms of diabetes by doing nothing else besides switching to water when thirsty. Doing so, however, presents problems for soda companies. Although sodas are basically tap water and sugars, and cost hardly anything to produce, they have turned their makers – principally Coca-Cola and PepsiCo – into multi-billion-dollar corporations with global recognition, distribution, and political power.

And the companies use their political power. They dismiss concerns about the health effects of their products as trivial. Instead, they say that the science linking sodas to health problems is too flawed to draw conclusions, and that obesity depends more on how active you are than it does on what you drink. They say that what you choose to drink is your decision, suggesting that individual choices have nothing to do with the billions of dollars spent on marketing.

Those arguments no longer work the way they used to. Print, broadcast and electronic media are exposing soda company practices that recall those used by the tobacco industry when its products come under attack. It is evident that Big Soda copies the playbook used by Big Tobacco to distract people from the harm caused by cigarette smoking. First, discredit the science. Then use philanthropy and form partnerships to silence critics, lobby Congress for protection, and pour fortunes into fighting anything that might increase costs to discourage sales, such as soda taxes.

Battles are being won

But the public is increasingly aware that sodas are bad for health. Advocacy against them, in the US at least, has reached a tipping point. For health advocates, sodas are 'low-hanging fruit,' easy targets for intervention. Falling soda sales are the results of successful advocacy. Health advocates, with far fewer resources than soda companies, have been using their democratic rights as citizens – and time-honoured methods for promoting social change – to counter soda industry marketing, lobbying, and public relations. They are out gathering public support and, occasionally, as in the successful soda tax vote in Berkeley, California, and now also in Mexico as told by Tina Rosenberg in the story that follows this one.

Now is the time to build on this success and encourage everyone who cares about health – citizens, private and public groups, and government agencies – to discourage consumption of sugary drinks and other unhealthful foods. Let's advocate even more forcefully for food systems that promote consumption of foods and drinks that are healthier for people and for the planet.

This, however, means taking on greater challenges than those just posed by sodas. It means building a movement to stop food companies from marketing junk foods to kids and using their political power to influence local elections and regulations that might reduce sales of their products. In the long run, it means working with other advocacy groups to reform laws governing corporations so that they can be held accountable for social responsibility. Most of all, in the US it means overturning decisions of the Supreme Court that allowed unlimited, and often anonymous contributions to election campaigns so that it will again become possible to elect representatives who are more concerned about public health than corporate health.

The success so far in the soda wars, is reason enough for gain courage to take on these challenges.



Mexico commemorated its Day of the Dead on 31 October. Family members who have died are remembered in effigy together with their favourite foods or drinks. This image here also names the causes of death – Coca-Cola, and diabetes

Tina Rosenberg writes:

Mexicans love their soda. Construction workers go to their jobs in the early morning clutching giant 2-litre or even 3-litre bottles. Babies in strollers suck on bottles filled with orange soda. In the highlands of the state of Chiapas, Coca-Cola is considered to have magical powers and is used in religious rites. Mexicans drink more soda than nearly anyone else in any country in the world. Their top three daily sources of calories in 2012 were all high-calorie drinks. Mexico also has by far the world's highest death rate from chronic diseases caused by consumption of sugary drinks – nearly triple that of the next to worst, South Africa.

Mexico also has loved the soda industry. Vicente Fox, who in 2000 became the country's first democratically elected president, had earlier been president of Coca-Cola Mexico, and then head of the company's Latin American operations. The symbolism was noteworthy. Soda companies – particularly Coke, which controls 73% of the Mexican market (compared with 42% in the US) – have amassed extraordinary influence over health policy in Mexico.

The consequences of this became apparent in 2006, when the release of Mexico's National Survey of Health and Nutrition revealed that diabetes – the country's leading single cause of death – had doubled since 2000. Between 1999 and 2006, the average waist size among women of childbearing age increased by nearly 11centimetres. During the same period, obesity among children aged 5 to 11 rose by 40%. No other country in the world had experienced a rise in obesity of that magnitude. Mexico was on its way to becoming the fattest major country.

The 2006 obesity statistics sounded an alarm in Mexico. The country's then health secretary, José Ángel Córdova Villalobos, approached Juan Rivera, founding director of the Centre for Research in Nutrition and Health at Mexico's National Institute of Public Health, and the country's most prominent nutrition scientist, and asked him for recommendations to combat the obesity epidemic.

Rivera laid out a programme involving various parts of the government, to educate the public, encourage behaviour change, and regulate advertising, among other things. 'That's very complicated,' Córdova said. 'You're an academic. I'm a politician – I'm very pragmatic. Choose one thing.'

Need to reduce soda

Reduce soda consumption, Juan Rivera replied. The health survey showed that soda intake had more than doubled among adolescents between 1999 and 2006, and nearly tripled among women. So Rivera worked with a group of Mexican and US nutritionists to produce a diagram shaped like a jug with layers of various drinks to illustrate the ideal balance for daily drink intake. The idea was to put a poster with the jug in every health centre. 'It never happened,' said Rivera. 'Opposition from the industry was tremendous.'

As Mexico began to grapple with obesity, and soda's role in it, the industry began to counterattack with the argument it uses everywhere that soda is under siege. 'Obesity comes from taking in more calories than you spend,' said Jaime Zabludovsky, chair of the board of *ConMexico*, the processed food and drink producers' group. 'If Michael Phelps eats 5,000 calories a day and swims 10 kilometres, there is no problem. If you eat 2,000 calories per day but don't move, you have a problem. The source can be soda, tortillas, chocolate, sandwiches, *fritanga*, bagels – there is not any product that in itself causes obesity.'

Terror of taxation



Coca-Cola has 73 per cent of the market for fizzy drinks in Mexico. Vicente Fox, former Coke executive, was elected Mexican president in 2000. There was no chance that soda would be taxed. Or so everybody thought...

The idea of balancing calories in with calories out is now the mantra of the soda industry worldwide. An 'active lifestyle' is the solution – not dietary change, and certainly not soda taxes.

Coca-Cola Mexico had been sponsoring youth sporting events for many years, but its efforts intensified after 2006. The next year, for example, Coca-Cola and the government jointly began *Ponte al 100*, a programme to promote the habit of exercise. And since an active life is what matters, who better to help than the industry that knows how to promote sporting events? We are part of the solution,' said Jorge Terrazas, head of *Anprac*, Mexico's soft drink industry group.

But the soda industry's contention that activity can protect us from obesity and diabetes is not borne out by research. This shows again and again that diet is a far more important factor in obesity than exercise. And over the last two decades, the Mexican diet has been transformed. Consumption of beans has dropped by half. In the last 14 years, consumption of fruit and vegetables has dropped by 30% – largely replaced by ultra- processed food and sugar-sweetened drinks.

In part due to the North American Free Trade Agreement, which took effect in 1994, the availability of processed food has soared. Even in the most remote villages, little stores sell packaged biscuits, pastries, doughnuts and cakes, and sodas and non-carbonated sweetened drinks. When you're hungry, you can buy a *Gansito* snack cake and a soda for about a dollar. It's fast and cheap and delicious.

The evidence is overwhelming that excess sugar consumption is the largest factor in the global obesity epidemic. Excess sugar is also by far the most important driver of diabetes, even among thin people: you need not be overweight to get diabetes. And soda is the worst source of sugar. The high concentration causes a spike in blood glucose. The body responds with a flood of insulin, which in turn can lead to fatty liver disease and diabetes. Also, liquid calories don't trigger satiety. After eating 200 calories of a *Gansito* cake, you are less hungry. After consuming 200 calories of soda, you are still hungry.

The taxation spectre

What keeps soda executives up at night is the spectre of a soda tax. They don't worry about lost revenue or sales from a tax. They worry about the demonisation of their product. Soda is on the verge of becoming the liquid cigarette. So the industry seeks to break the link between soda and disease, and backs research to support its position. Its companies cultivate a health-conscious image – a tactic that conveniently also sells drinks. Coca-Cola's promotion of thousands of sporting events in Mexico is a key marketing and advertising strategy. And if they can't actually win friends, companies spend like crazy to buy them. There was a time when Philip Morris and British American Tobacco did all these things, too. It only put off the inevitable. Soda makers have a dilemma: every effort to avoid becoming the tobacco industry makes them look more like the tobacco industry.

When the government headed by the current president Enrique Peña Nieto proposed a soda tax in September 2013, it took the industry by surprise. While the industry had lavished its attention on the health sector, the tax proposal had come from Mexico's finance ministry – part of a larger package of fiscal reforms. 'Tax' was the important word, not 'soda'.

But the industry's shock quickly gave way to confidence. As obesity and diabetes rates soar around the world, a soda tax is one of the top recommendations of global health experts. Several European countries have some version of a tax. But in the rest of the world, the soda industry has kept them at bay. Some 30 jurisdictions in the US have tried to pass taxes or controls on soda; all failed. President Obama considered proposing one in 2009, and it had substantial congressional support, but the mighty power of the soda industry killed it.

Exercise!

In Mexico, the soda industry responded with more than arguments about exercise – it responded with money. To appreciate the reach of soda industry funds, consider an unremarkable public event that took place in July 2013 – a few months before Mexico's congress debated the soda tax. On 8 July, the Mexican Diabetes Association's branch in Monterrey hosted a talk by Jorge A Mendoza López, a local exercise scientist, called 'Physical activity for people living with diabetes'.

The link with disease



Gradually, thanks to incessant public interest campaigns with clever presentation, people at all levels in Mexico from senior politicians to impoverished farmers, have made the connection between soda, obesity, and serious and deadly diseases

Only one thing about the talk was of note: it was sponsored by Coca-Cola. Mendoza was the first head of the Mexican branch of a global organisation called Exercise Is Medicine. The group's first founding corporate partner is Coca-Cola. According to Exercise Is Medicine's annual report, Coca-Cola also provided logistical support for Mendoza López's talk.

Dr María Guadalupe Fabián San Miguel is on the board of Exercise is Medicine. She participated in a press conference in December 2012, to denounce the idea of a soda tax. 'Let's not punish companies with taxes,' she said. 'The solution isn't to demonise business, but to educate people.'

Playing the education card

A similar argument against the soda tax was made by Dr Mercedes Juan López. 'The important thing is to educate people so they're aware of the health effects, because you can't force anyone not to drink soda,' she said in March 2013. 'No food is harmful if consumed in moderation.' She admitted that a tax might lower soda consumption, but, she added, 'Cigarettes are taxed, and some people still smoke.'

Many people in Mexico held these views. What made these women remarkable was not their medical degrees but their positions: when Fabián San Miguel attacked the proposed soda tax, she was the medical director of the Mexican Diabetes Federation. And Mercedes Juan López was, and still is, the health secretary of the Mexican national government. Before becoming minister, Mercedes Juan López chaired the board of the *Fundación Mexicana para la Salud*, the Mexican Health Foundation. She was one of many health officials to go into the government from *FunSalud*, as the foundation is known. *FunSalud* dominates health policy in Mexico, and has been a longtime critic of attempts to limit Mexicans' soda consumption and a longtime friend of the soda and processed food industries. Its nutrition project is the Nestlé Nutrition Fund (Juan López was a member of the fund's consultative committee). Its child obesity project is financed by the Coca-Cola Export Corporation and *Peñafiel*, a Mexican manufacturer of soda and mineral water, part of the Dr Pepper Snapple Group.

I called the Mexican Diabetes Federation and asked to interview Fabián San Miguel. I was sent to Marco Villalvazo, who runs the federation's programme to train diabetes educators. He is one of eight medical experts in Mexico who participate in Together for Wellness, a programme sponsored by the *Grupo Milenio* media company, Coca-Cola Mexico, and Coca-Cola's Beverage Institute for Health and Wellness.

Villalvazo didn't think much of the soda tax. 'Education is what matters,' he said. 'Obesity and diabetes are multi-factorial illnesses – one can't demonise one product alone as causing these epidemics. Raising the cost doesn't work.' I asked him why the chief educator for the Mexican Diabetes Federation also works with Coca-Cola. 'There is a part of Coca-Cola that makes mineral water and non-sugared beverages,' he said. 'That's the ethical part of Coke. I was working with them in my personal capacity to make short films about hydration.' He said he was not paid for his participation.

He has a lot of company. Mexico's National Council on Science and Technology recently announced a new prize to support research in public health. Its partners are the Coca-Cola Foundation and the Beverage Institute. Virtually every government panel on fighting obesity includes Coca-Cola, and often other food companies. Armando Ahued Ortega, Mexico City's secretary of health, has often warned that diabetes is causing the collapse of Mexico's health system. And dialysis (kidney failure is a major consequence of diabetes) isn't even covered. If it were, the health system could pay for nothing else. 'There goes everything else social security covers – cataracts, cancer, everything,' Ahued Ortega said in 2013. Yet the same year he and Mexico City's mayor presented Coca-Cola with its Health Conscious Organisation award for its 'promotion of active lifestyles'.

On the Facebook page of the Monterrey diabetes association, among the 13 organisations the group 'likes' are *Oxxo*, which is Coca-Cola's chain of convenience stores, and *Femsa*, Coke's major Mexican bottler, the largest Coke bottler in the world. Why does a diabetes association 'like' a Coke bottler? It had given the association a large amount of diabetic supplies, said Maribel García Méndez, the director of the association. One of Coke's other Mexican bottlers, *Arra* Continental, had provided money for a camp for kids with diabetes.

Changing Coke's image



Coca-Cola once sold its product at Christmas by association with Santa Claus. Mexican health activists, using the methods of Greenpeace, put diabetes on the label of a giant Coke, with their own Santa Claus in Mexico City's central Xócalo Square

They helped her solve the problem that keeps her up at night: raising money. 'I understand that it's a thin line,' she said. 'Most of the [diabetes] organisations receive help from these types of institutions. We accept it because it's no-strings-attached, and done in the open. The problem is so complex that we have to link ourselves to people who are ready to help – civil society, government and businesses.'

This is not just a Mexican phenomenon. Coke has given millions of dollars to various health organisations in the US, including dietitians' and paediatricians' groups. But a backlash has begun, and some are severing their relationship with Coke. Not so in Mexico – and industry money has a far greater impact in countries, such as Mexico, where everyone who works in health stays up at night worrying about money.

Yet in the month after proposing a soda tax, Mexican president Enrique Peña Nieto signed it into law. The soda industry was overturned by three things. One: a government desperate for tax money. Two: the rise of civic groups that creatively countered the industry's political pressure. Three: a giant infusion of cash.

Mexico as an inspiration

After Mexico, the British overseas territory of Saint Helena passed a tax, then Berkeley, California – an island in its own way – then the US Navajo nation, then Chile, then Barbados. Many more countries are contemplating following. In Britain the conversation had been largely a soliloquy conducted by celebrity cook Jamie Oliver, who has raised the price of soda in his restaurants, with the money going to children's anti-obesity programmes. Now, however, the British Medical Association has endorsed a soda tax and Public Health England, a government body, just released a report recommending one, among many other measures.

Power to the consumer



Alejandro Calvillo, veteran of Greenpeace Mexico, founder and director of El Poder del Consumidor, combines direct street action, meticulous evidence from independent scientists, and lobbying of the Mexican establishment

Around the world, people are watching Mexico. Activists want to know how their Mexican counterparts did it. Governments seek evidence on the tax's effects. The soda companies are looking at Mexico and asking how the hell it happened. And, they fear, if it could happen in Mexico, then it could happen anywhere.

When the 2006 nutrition study came out, Alejandro Calvillo was starting a new organisation that he called *El Poder del Consumidor* – Consumer Power. Calvillo was not interested in traditional consumer advocacy work, collecting stories of fraud or bad service. He had spent twelve years at Greenpeace Mexico, five as its leader, and he founded *El Poder* to be a kind of Greenpeace for consumers – to fight industry pressure and win pro-consumer policies.

'We had lived till 2000 with one party in power for more than 70 years,' Calvillo said. Before Vicente Fox became president in 2000, the Institutional Revolutionary party (PRI) had won every election since 1929. 'The PRI had enormous control. Civil participation was very difficult to build – we lacked practice in democracy. It was important to create citizenship, and a consumer organisation can work on issues that are very immediate for people.'

Calvillo is now 57, a philosopher by education. He is an unlikely leader and spokesperson for a movement: sober, soft-spoken, thoughtful. In what is still a formal society, he wears jeans to press conferences. He looks uncomfortable being interviewed, but he looks uncomfortable a good deal of the time. He knew that *El Poder* needed to focus on just a few fields. The national nutrition study infuriated

him, particularly the rise in child obesity. Food would become one of *El Poder's* areas of work, alongside transport. What Calvillo was trying was radically new.

"There is no tradition in Mexico of listening to civil society on the issue of food," said Juan Rivera. 'Industry is seen as really important; they have to be consulted. But it's been very rare that anyone talks to civil society. The tradition here is that aristocrats don't talk to anyone who isn't of their social class. Civil society is seen as making trouble. Well, it's true: they are troublemakers,' he said, smiling. 'But a democratic society has to listen to them.'

El Poder gradually amassed victories. It created an informal network of sister organisations – groups that worked on health, environment, small agriculture, indigenous rights – which now form the Nutritional Health Alliance. Calvillo and his *compadres* played a major role in winning new official recommendations to keep junk food out of schools, and a government promise to limit advertising on children's television.

El Poder brought focus, organisation and a voice to the issue of Mexico's diet. What it couldn't bring was money. *El Poder's* headquarters is in a working-class neighbourhood in Mexico City's south, a few doors from Calvillo's house, with roosters, cobbled streets and colourful murals. In 2008, when funds were about to run out, he kept the organisation alive by selling his family's car. *El Poder* at first received small grants from Oxfam UK and the Heinrich Boll Foundation (associated with the German Green party). Calvillo had also been given a personal grant from Ashoka, a US 'incubator' for social entrepreneurship.

He and his wife, Elaine Kemp, who designs *El Poder's* campaigns and documents, eventually had enough money to buy another car. (Calvillo still travels mostly by microbus and metro – highly unusual for Mexican elites.) But raising the kind of money required to defeat the soda industry in a fight over taxes seemed impossible – until Michael Bloomberg, the billionaire mayor of New York City, stepped in.

Enter Bloomberg Philanthropies

The World Health Organization calls soda taxes the most effective strategy for improving diet (along with subsidising fruit and vegetables). The evidence that a soda tax can reduce obesity and disease, however, comes largely from theoretical models. It is hard to determine the impact on obesity and disease, in part because so few sugar taxes have been passed. Soda taxes are hard to study. It's difficult to isolate their effects, since countries tax many foods.

In the few years before Mexico passed its tax, Finland, France, Hungary and a handful of smaller countries and jurisdictions put new taxes on soda – but also taxed diet soda or mineral water (their aim was revenue, not health). Thirsty shoppers in Finland, France and Hungary have no economic incentive to avoid sugary drinks.

The Bloomberg boost



Michael Bloomberg as New York mayor campaigned energetically against soda. His Bloomberg Philanthropies donated \$US 10 million dollars to El Poder for a grand alliance linking soda with obesity and diabetes in Mexico

The available evidence shows that soda taxes reduce consumption – and when they are removed, as in Denmark in 2013, consumption rises – although studies suggest that a tax of less than 20% has only a small effect. What is harder to determine is the impact on obesity and disease, in part because there are so few cases where soda taxes have been passed.

Enter Michael Bloomberg, No failure to pass limits on soda has inspired as much *schadenfreude* as New York City's. When he was mayor, Bloomberg tried to ban cups larger than 16 ounces (close to half a litre), but the courts overturned the ban after a fierce campaign by the industry, which had the support of some unlikely allies, including the Hispanic Federation and the National Association for the Advancement of Colored People, both of which had received Coke money. The conservative commentator Jeff Stier summed up a widely held view of Bloomberg's policies: a 'meddling, busy-body approach'.

You bet, says Michael Bloomberg. In 2011, his charitable foundation, already a major funder of tobacco control programmes in low- and middle-income countries, decided to take on soda. Mexico was alluring, especially since a new president was about to take over. Bloomberg Philanthropies looks for strong local organisations to partner with, and Calvillo's group was an obvious choice. 'Experts around the world talked about Alejandro and how strong *El Poder* was,' said Kelly Henning, who runs the foundation's public health programmes. 'He really looks to the evidence, and is a very good collaborator with others.'

The 12 spoonfuls campaign



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The '12 spoonfuls' campaign was a breakthrough for El Poder. An adult hand thrusts a bottle of soda at children, with the line Would you give them 12 spoonfuls of sugar? Then why would you give them a soda?'

In 2012, Bloomberg Philanthropies began a \$10 million, three-year programme in Mexico to reduce soda consumption. For the first time, the financial power of Mexico's soda industry faced a serious challenge.

For the first six years of *El Poder's* life, the group publicised its issues only through free media coverage. Alejandro Calvillo gave, and still gives, nerdy press conferences, showing slides with numerous footnotes, and he often begins interviews with a recitation of facts and figures. But he alternates this with Greenpeace-style street theatre. In 2012, for example, reporters were invited to gather outside the offices of Mexico's health authority. An actor dressed like one of the polar bears that figure in Coke ads limped up, wearing a prosthesis on one paw, and a dialysis bag and tubing. He was carrying a bottle of soda, which he poured into a rubbish bucket. Over 40 outlets covered the stunt, including China's national news agency.

Six months later, Calvillo and his colleagues in the Nutritional Health Alliance dressed actors like police, who came out, faces obscured, to announce the arrest of the capos of the 'Junk Cartel' for the crimes of manipulating and tricking children. The criminals included the polar bear, alias *La Coca*, Tony the Tiger, alias *El Tigre* or 'the Lord of Sugar', and Ronald McDonald, alias *El Payaso* – the clown. Four actors in costumes were then paraded in front of reporters in handcuffs. That, too, got widespread publicity. The Bloomberg money allowed Calvillo to buy advertisements for the first time. The alliance created a very sober advertisement featuring doctors talking about children with diabetes. It requested space on the popular 10.30pm news programme of *Televisa*, Mexico's major TV network. 'Sorry, no space,' *Televisa* replied – and there was no space on any of the channel's other programmes either.

The alliance was also refused at Mexico's other major broadcast network, *TV Azteca*, at the cable network *Milenio TV*, and at a major outdoor advertising chain. This at least gave a reason, Calvillo said: it had a policy of not upsetting important clients. (A spokesman for *TV Azteca* said the ad was rejected because the doctors did not display their professional licences on screen, and the images were too graphic. Other media did not respond to inquiries.) But the cable networks Fox Sports and CNN took the ad, and it went on YouTube – 'see what the networks censored!' – where it got a quarter of a million hits.

The advertisement that came to symbolise the campaign was called '12 Spoonfuls'. 'We had been doing nutritional workshops with parents, and they were always shocked to learn how much sugar was in a soda – the least of them had 12 spoonfuls,' said Calvillo.

This turned into a poster showing a hand thrusting a soda at two children. Would you give them 12 spoonfuls of sugar?' asks the text. 'Then why would you give them a soda?' In one of the TV spots, a couple sat with a bowl of sugar in front of their unwilling daughter, using every parental 'open wide' trick to spoon sugar into her mouth. Focus groups conducted recently – two years after the campaign – showed that nearly everyone still remembered the messages of the advertisements.

The soda industry fought back against Calvillo's campaign mainly with advertisements promoting what has now become its global theme: balance your calories with exercise. Other publicity focused on the economic consequences: Fernando Ponce, then head of *Anprac*, the soft drinks industry association, warned that 10,000 jobs would be lost in the short term, and 20,000 in the medium term.

Going against Bloomberg

But the industry's most interesting tactic was to focus on Michael Bloomberg himself, as had been done in New York City. Poster and media publicity referred to the tax as 'the Bloomberg tax' and 'a tax promoted from a foreign country'.

'Alejandro Calvillo complains about multinationals, but receives money from the US,' warned one advertisement. 'And you? Are you going to let a gringo tell you what to consume? What are Michael Bloomberg's real interests in Mexico? A gringo wants to charge you the taxes he couldn't charge there. What interests are behind *El Poder del Consumidor?*'

The alliance's own research (paid for, of course, by Bloomberg) showed that these ads had little impact. An anti-gringo strategy is apparently not effective for an industry commanded by Coca-Cola. In fact, that strategy was a better fit for Calvillo's side. Mexico is the one country that rivals France in its resentment of US cultural and corporate dominance, which has reached new heights since Nafta.

Reviving the traditional diet



A billboard of welcome to the town of Zinacantán in the state of Chiapas. A woman in native dress holds a bottle of Coke, with its slogan 'Open happiness' shown below. Rates of consumption of Coke in Mexico are highest in Chiapas

Mexican small agriculture is dying, replaced by big agribusiness. The Mexican indigenous diet is disappearing with it. For the alliance, the soda tax was a way to promote both health and Mexicanness. Alejandro Calvillo talks about encouraging Mexicans to go back to the traditional Mesoamerican diet of fruit, vegetables and grains such as amaranth – considered one of the best in the world,' he said.

For some of Calvillo's allies in the alliance, revitalising the traditional Mexican diet was their major goal. One was Yatziri Zepeda, an environmental economist, who runs *Proyecto AliMente* – which she finances with her part-time research job.

Her passion for a soda tax came in part from the three years she lived in Chiapas, the poorest state in Mexico – and the land of Coca-Cola. Indigenous regions of Chiapas have the highest rates of Coca-Cola consumption in Mexico, possibly in the world. Billboards on the outskirts of towns show a woman in native dress holding a Coke bottle, with 'Welcome to Zinacantán' at the top and the Coca-Cola slogan 'Open happiness' below. Coke is used in religious rites; burping rids the body of evil spirits. In Chiapas highland churches, Coke bottles line the aisles and even decorate the altars.

We aren't speaking out against soda,' Zepeda said. But she is trying to promote and celebrate alternative traditional drinks. In April she and colleagues organised a festival of *pozol*, an indigenous corn drink, the kickoff of a campaign called, 'It's

healthier to eat like Mexicans.' In the highland town of San Juan Chamula, villagers gathered to listen to music and get reacquainted with native foods and drinks.

The most enthusiastic taster at the gathering, however, was far from home: Jamie Oliver, who came to film his anti-sugar documentary *Jamie's Sugar Rush*. 'Mexico doesn't need to look outside its doors to find a solution to diabetes and obesity,' he declared to the crowd, holding up high a cup of *pozol*. 'The solution is right here, inhouse, and it's traditional foods.'

The irony is that ancient Mexican cuisine has never been more fashionable – but in the sleek restaurants of Mexico City, not the highlands of Chiapas. 'Traditional Mexican cuisine is so relevant in privileged communities,' said Yatziri Zepeda. 'But in rural communities, everything from here is not cool.'

Among the legislators

The Mexican congress is normally home turf for soda industry executives and lobbyists; here they are among friends. 'When we want help with a campaign, they are here to help,' said Marcela Torres Peimbert, a senator from the pro-business National Action party (PAN) – which was almost uniformly against the tax. Although Peña Nieto's party, the PRI, is famous for its discipline, many PRI legislators didn't like their president's proposal either; many people they represent work in bottling and selling soda, and the PRI also received soda industry largesse.

Mexico's leftist party, the PRD, did support the tax. And the industry had never before faced an opposition with Bloomberg money. 'That levelled the playing field' said Ricky Arango, who heads *Polithink*, a hip public-interest lobbying firm Bloomberg hired to persuade legislators. 'It allowed us to compete one-on-one with the soda industry. Without it we would not have had money for polls and publicity.'

Marcela Torres Peimbert became the tax's most unlikely champion, though her party, the PAN, opposed the tax: she was not a businessperson but a psychotherapist, and her uncle had diabetes. 'But every family has a relative with diabetes.' She said the president of the Mexican senate, Miguel Barboza, just had his right foot amputated.

With the support of the Nutritional Health Alliance, she first proposed a tax of two pesos (8p) per litre, but they knew it would be bargained down. 'It was convenient for the government that I'm a legislator from the opposition,' Torres said. 'It's difficult to ask for a tax hike, but it's different when it's civil society asking and I was their spokesperson. But my party criticised me. They said that we would all be blamed for the tax and the PRI will get the money to spend. In my state, the owners of the bottling plants don't talk to me.' She sniffed. 'I don't miss them.'

The beverage industry was so fearful of having soda singled out for demonisation that it proposed changing the tax to a levy on sugar. The rest of the food industry was furious, according to Jaime Zabludovsky, chairman of the board of the industry group *ConMexico*. The soda industry dropped the proposal. Legislators, however, thought so much of the idea that they proposed expanding the soda tax to junk food.

Polithink needed to convince legislators that it was politically safe to vote for a tax increase. The group hired an independent polling firm, which asked people: Would you support a tax if the money went to drinking fountains in schools? (This was disingenuous, as you cannot earmark tax money in Mexico, and in fact, the drinking fountain programme is only now getting started.) In large part because of Calvillo's public campaign, polls found that 70% of the public supported the soda tax, and an even higher percentage agreed it would change their behaviour.

On 31 October, president Enrique Peña Nieto announced the new one peso-per-litre soda tax (equal to about 10% of the pre-tax price), and an 8% tax on junk food, in a ceremony unveiling a new strategy for combating obesity and diabetes. The plan was heavy on exercise promotion and has produced ubiquitous (and ineffective) posters of young, slim, smiling Mexicans pointing at the camera and saying, 'Go to your clinic and have a checkup today!'

On the stage with Peña Nieto at the ceremony was Brian Smith, president of the Latin America Group of Coca-Cola. He talked about Coke's nutritional education and promotion of physical activity, such as a programme Coke was supporting with Mexico's sports commission. He didn't mention the soda tax. The tax took effect on 1 January 2014. A year and a half later, all sides were engaged in another battle.

The industry desperately needed to show that the tax had failed. 'This is a regressive tax,' said Jorge Terrazas, the new head of the soft drink industry association. 'It's not just that 64% [of tax revenue] comes from people with few resources. They didn't stop drinking soda. But they stopped buying personal hygiene and home items.' He was talking about data that had just come out from the National Survey of Household Income and Expenditure. Drinks, in fact, were the only category of spending that rose between 2012 and 2014. The industry seized on these data – but the survey is not a measure of soda sales. It can't separate the effects of the tax from background noise, such as economic changes. And 'drinks' includes all cold beverages, including alcoholic drinks. Mexicans could be buying more bottled water, or drowning their sorrows in beer.

Industry executives felt their strongest argument was the high level of tax collected. Treasury officials had predicted the government would collect 1.2 billion pesos (around \$US 75 million) from the soda tax in 2014. It actually collected 1.9 billion (around \$US 120 million) 'That is the best argument that the tax did not do what it was supposed to do', Jaime Zabludovsky said – arguing that the high rate of revenue suggested consumption had not decreased. 'The more successful it is as tax collection, the less successful it is as a health measure.'

The whole world is watching



Led by Juan Rivera and Barry Popkin (back row, second from right, and centre) here is the team assembled in Mexico to check if the soda tax is effective. Yes, it is. Sales and consumption are down by 6-12 per cent. Higher tax will have more impact

That's not how the finance ministry sees it. Rodrigo Barros, the ministry's head of tax policy, said that the initial revenue prediction for the tax had been very conservative; it was a projection based on existing VAT collection on soda, which is taxed at numerous points. The new tax is collected only from factories and importers. 'These are only a few large plants, and it makes collection much easier,' he said. 'Tax evasion rates are lower.' The high level of tax collected could reflect lower rates of tax evasion, he said

For Alejandro Calvillo's side as well, the question of whether the tax succeeded was all-important. Bloomberg funded research conducted by a team led by Juan Rivera at the National Institute of Public Health along with Barry Popkin, a prominent nutrition scientist and economist at the University of North Carolina, Chapel Hill. The study controlled for other factors affecting soda purchases, and found that compared with pre-tax trends, sales of taxed drinks fell by 6% in 2014. Sales of bottled water were up by 4%.

The decline started slowly but accelerated: by December 2014, soda sales were down 12% from December 2013. And the drop was greatest among the poorest Mexicans – by December they were buying 17% less sweetened soda than the year before. (Jorge Terrazas was right – the tax does affect the poor disproportionately. But so does the pain and cost of diabetes.) In September, Mexico's national statistics

institute released data on beverage consumption showing that Juan Rivera's findings actually slightly understated the soda tax's success.

The battle continues. Close to the end of October, the lower house of Mexico's congress, the chamber of deputies, passed an amendment that would have halved the tax for beverages with less sugar. But the political climate has now shifted; after the vote, all the parties scrambled to deny responsibility for watering down the tax – "The industry did it," said one deputy – and the senate quickly overturned the amendment. As of the end of October, the 10 per cent tax is back in force.

Today Mexico, tomorrow the world

Alejandro Calvillo, meanwhile, is campaigning to go further. In interviews and press conferences he talks about doubling the soda tax and removing the VAT on bottled water; a soda would then be twice the price of the same size of water. And he's campaigning to go wider. 'This is not just a battle for the perceptions of Mexicans,' he said. 'The governments of Colombia, Ecuador, other Latin American countries, South Africa, India – they're all looking at a soda tax. The world's attention is on Mexico'.

Status

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