The Political Economy of Sugar-Sweetened Beverages Taxation in Latin America: Lessons from Mexico, Chile and Colombia

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Research

Keywords: political economy, SSBs taxation, transnational corporations

Posted Date: June 30th, 2020

DOI: https://doi.org/10.21203/rs.3.rs-36858/v1

Version of Record: A version of this preprint was published on January 5th, 2021. See the published version at https://doi.org/10.1186/s12992-020-00656-2.

Abstract

Background: In Latin America, diet-related non-communicable diseases and sales of sugar-sweetened beverages continue to rise at an alarming rate. Calls for action suggest "multi-sector" and "multi-stakeholder" approaches involving civil society and the private sector, including transnational corporations. While the focus has often been on forming “partnerships” of public and private sectors, ensuring the primacy of public health goals remains a significant governance challenge. This paper analyses this governance challenge using the experiences of Chile, Mexico and Colombia in the adoption of taxation of sugar-sweetened beverages. The three countries offer useful comparisons given their similar political and economic systems, institutional arrangements and regulatory instruments. We conducted a qualitative synthesis of the existing empirical evidence applying a political economy analysis to identify successes and failures during the policy process to adopt and implement the tax.

Results: The findings suggest that a major constraint was the political influence of transnational corporations in the policy process and on stakeholders. Intergovernmental support was critical to frame the sugary drinks beverages (SSBs) tax aims, mechanisms and its benefits, and for countries to adopt the measures. Coalitions for and against the tax were critical for the policy debates, and a lack of transparency throughout the agenda setting was diluted by powerful TNCs presences in the countries studied.

Conclusion: Governance arrangements involving partnerships with private sector actors should recognize the asymmetry of power among them and address it. Such arrangements should adopt clear mechanisms to ensure transparency and accountability of all partners, and avoid the undue influence of unhealthy commodity industries. Support of several governmental entities simultaneously, grassroots groups, and civil society groups in NCD prevention policies is also needed.

Background:

The burden of non-communicable diseases (NCDs) continues to rise rapidly in low and middle-income countries (LMICs), where 47% (approximately 7 million annually) of premature deaths from NCDs occur (1, 2). This poses a significant challenge to meeting the Sustainable Development Goals (SDGs), which include the target of reducing premature mortality from these diseases by one-third by 2030 (3). There is growing recognition that this rise in NCDs is largely attributable to rapid dietary changes worldwide (4–6). A key modifiable risk factor for NCDs is a diet high in added salt, sugars and fats, including sugar-sweetened beverages (SSBs).

Gradually, consensus is emerging amongst public health researchers and practitioners on effective strategies to tackle NCDs (1, 7). The World Health Organization (WHO) has recommended that Member States to adopt “best buy” policies proven to be cost effective in tackling NCDs and their risk factors (7). These include fiscal policies, such as subsidizing healthy foods and taxing unhealthy foods and drinks, thereby decreasing the price gap between healthy and unhealthy foods and beverages, and discouraging the consumption of unhealthy products (7, 8).

Taxing sugar sweetened beverages (SSBs) has become an especially popular policy, with 40 countries implementing such taxes by 2019 (9). Five Latin American countries enacted legislation for an SSB tax between 2014 and 2018, including Mexico (January 2014), Chile (January 2015), Dominican Republic (September 2015), Ecuador (May 2016) and Peru (May 2018) (10). Mexico and Chile were early adopters of SSB taxes and Colombia attempted to implement one in 2015, even before it was defined as a “best buy” intervention by international organizations. However, WHO recommendations on SSB taxation have elicited much political and economic debate (11–14). Existing evidence of the financial and health impacts of these policy instruments remains inconclusive (11–13, 15), and policymakers face varied challenges when designing health-related taxes (16–19). Clouding public policy debates has been the substantial participation of commercial interests, notably large TNCs and SSBs producers, whose business models are threatened by proposed fiscal measures (20). Their political-economic power, across all levels of government (21), and the limited accountability and transparency mechanisms available to local governments and civil society groups to monitor and identify their undue influence, raises concerns about industry interference and conflicts of interest during the policy making process (12, 22–24), (20, 22). In this context, it remains unclear how best to adopt SSBs in the region. What are the optimal levels and structure of SSB taxation? How best might such taxes be framed to fit local political and economic contexts? (23, 25).

The aim of this paper is to contribute to this discussion through a critical review the SSB taxation experience in Chile, Mexico and Colombia through a problem-driven political economy analysis. We set out how TNCs actors, through their economic and political power, have influenced the policy agenda on SSB taxation in these countries. The findings are used to identify broader lessons for implementing fiscal policies that could be considered in pursuing similar NCD prevention policies.

The political economy of SSB production and consumption in Latin America

In 2012, Latin America became the world’s largest consumer of SSBs after serving as a key contributor to global growth in the sector over the previous decade (26). A global analysis of the estimated daily calorie intake from SSBs per capita in 2015, found that four of the top ten countries were in Latin America: Chile (166 kcal/day/person), Mexico (158 kcal/day/person), Argentina (135 kcal/day/person), and Brazil (90 kcal/day/person) (5). While economic hardship, due to high inflation and currency depreciation, have changed consumption levels in unpredictable ways in the region since 2015 (27, 28), the beverage industry continues to identify the Latin American region as a SSB market of growth (29).

TNCs involved in the production of SSBs have been major investors in Latin America in recent decades, enabling them to capture a large market share in the region (28). In 2018 the total revenues of Femsa Coca-Cola increased 6.8% over the previous year, reaching $ 23.9 billion (USD), while 11% of PepsiCo´s income ($7.04 billion USD) came from Latin America (30, 31). From 2000 to 2013, sales of ultra-processed foods and SSBs increased from $38 billion (USD) to $81 billion (USD), larger than in any other region (PAHO, 2015). In 2013 retail sales in Latin America of SSBs was 110.7 liter/capita, with Mexico leading with 184.9 l/capita, followed by Chile 170.2 and Argentina with 156.1 liter/capita, Uruguay with 123.7, Costa Rica 103.8 Guatemala 101.1 liter/capita, while Colombia had 81.5 liter/capita (32). The Coca-Cola Company's income before taxes in Latin America for 2016 amounted to approximately 1.97 billion (USD) with a retail value of $90 billion (USD), having a 48% value share in the beverage market (33, 34). In addition, the market expansion and acquisition of smaller companies and bottlers in the region (27, 28) have expanded TNCs' abilities to challenge regulatory measures that threaten their consolidated profits and power (28).

Efforts by TNCs to influence policy decisions through political activities have now been well documented in the food, beverage, alcohol and tobacco sectors (35–37). A range of market (economic) and non-market (political) strategies have been employed, including constituency building, whereby relationships with key opinion leaders and policymakers in the community and health organizations are established. TNCs, particularly SSB corporations, have engaged in countries´ social and poverty alleviation programs, such as policies related to the provision of safe drinking water, and nutrition education programs (27, 38). Often these engagements take the form of public-private partnerships (PPPs) and are framed under the banner of 'corporate social responsibility' (CSR) actions (39).

Corporate actions such as PPPs and corporate social responsibility (CSR) initiatives, and their participation through multi-stakeholder arrangements in health policy, raise questions about asymmetry of powers between the public and private sector actors involved. These have been discussed in the global health (40–42) and recently, in the political economy literature pertaining to Latin America (43, 44). Nevertheless, the literature on the participation of transnational corporations (TNCs) in policy debates, policy design and agenda setting of SSB taxation in low and middle income countries remains limited. This paper aims to identify lessons that could be considered in pursuing similar disease prevention policies in similar contexts to understand and mitigate, when required, the potential influence they might have on the policy outcomes.

Methods:

We conducted a qualitative synthesis of document sources related to Mexico, Chile and Colombia between January 2011 and May 2018 (Updated in December 2019). A qualitative synthesis systematically searches for research on a topic, and draws the findings from individual studies together (45). Case studies of Mexico, Chile and Colombia were selected because Chile and Mexico were the first two countries in Latin America (the region with the highest consumption of SSB globally) to have adopted SSBs taxes, and Colombia is the only country in Latin America that has attempted and failed to introduce the tax (at the time of this review). The World Bank categorizes Mexico and Colombia as upper-middle-income economies (46) and Chile as a high-income economy (46), they share similar contextual factors such as type of government, geographic location and language, and they share similar obesity prevalence. In Mexico, 39.2% of adults are overweight and 33.3% are obese (47). In Chile these ratios are 39% and 34.4% (48) and in Colombia 56% of adults are overweight and 19% are obese (49). We selected three high-SSB consuming countries in the same region to identify common themes in the politics of agenda-setting for an urgent health priority. Also, we sought to explain differences in the interaction between TNCs and health advocates during the SSB tax policy process, especially given that TNCs are likely to be similar across countries.

The approach was to first conduct a systematic search of documents in English and Spanish. Criteria for selecting documents followed a process similar to guidelines used in scoping reviews (Fig. 1). Documents were included if they were either in English or in Spanish and were dated between January 2011 and December 2019. Study findings were systematically interpreted through a series of judgments from authors´ expertise to represent the meaning of the collected work to perform the documentary analysis (Bearman and

Dawson, 2013, p. 253) and arrange the narrative synthesis by themes. Databases searched included Academic Complete, Scielo, Web of Science and a systematic search in Google Scholar using the same terms (Fig. 1). We also undertook a complimentary search on each of the main stakeholders´ Websites identified to have been involved in the policy debates in order to identify grey literature relevant to our analysis (listed in Fig. 2). The final documentary search included scientific publications, reports, newspaper articles, legal documentation and press releases by organizations and government officials generated before and during the soda tax design and/or implementation phases (January 2011 to December 2019).

We then undertook a qualitative synthesis (45, 50), following an iterative reflexive process, using the framework for applied political economy (PE) analysis developed by the Overseas Development Institute (51). A qualitative synthesis is an integrated review, where data are aggregated and summarized (45). The framework for applied political economy (PE) problem-driven was applied. It has three phases: a) problem identification, b) problem diagnosis; and c) considerations of the plausible change process (Fig. 3). The problem this paper addresses is the influence SSB TNCs have on the SSB taxation agenda. The problem diagnosis includes structural and agency issues (51). Structural issues included the context, the policy process and the key players involved. Agency issues included the motivations and framings used for and against the SSBs, institutional arrangements and policy coalitions throughout the policy debates, and the governance principles of transparency, accountability and participation (Fig. 3). We look at how TNCs and local SSB producers influenced (or attempted to influence) the design and implementation of "hard policy", with the main constraint of not following expert´s recommendations (20% tax minimum) to have a health impact. For this work, influence refers to the capacity of an individual or an organization to have an effect on the development or behaviour of someone or something. Finally, we look at what lessons can we learn from these experiences, that can be considered when introducing a SSB tax elsewhere.

Results

Problem diagnosis: the politics of SSB taxation

Mexico

In 2012, results of the Mexican national nutrition survey showed that 72.2% of the adult population was either obese or overweight. In 2013, after a year of strong civil society advocacy for public health policy to control and prevent obesity, the country's president launched a regulatory initiative (The National Obesity and Diabetes Prevention Strategy). Additionally, in 2013, a comprehensive Fiscal Reform proposed by the Ministry of Finance (MoF) became effective. Both policy instruments included a tax on SSBs and snacks with more than 250 kcal per 100 g (10% and 8% respectively). The final document was highly criticized by advocacy groups due to its argued loopholes; nevertheless, it was highly promoted by the government and accepted by the food and beverage industry (F&BI) after initial opposition.

The main proponent of the SSB tax was the Senate in December 2012, but the tax was rejected by the Congress (both Senate and Deputies chambers) in May 2013. That same year in September 2013 it was overridden by the MoF as part of the President´s Fiscal Reform. A 1MXP per liter was accepted by Congress in October 2013. Civil society organizations (CSOs) advocating for the measure were *Alianza por la Salud*

Alimentaria, *El Poder del Consumidor, Fundación Mídete* and the *ContraPESO Coalition*, all supported by Bloomberg Philanthropies. Academics from the National Institute of Public Health and Aspen Institute also engaged in policy debates and processes. TNCs and national SSB producers opposed the measure, and were represented by several business chambers including ConMexico, Concamin and ANPRAC (see Fig. 2).

In SSBs tax was enacted in 2014 through the convergence of diverse factors: a) evidence of poor results of self-regulatory measures and the high rate of obesity in the country, b) an optimal policy context with a new government administration seeking additional revenue sources, and c) CSOs demands, with an organized advocacy campaign overlapping with the latter interest (24). F&BI representatives also provided input on policy design, arguing their interests were aligned with government objectives. These factors positioned SSB taxation favorably on the policy agenda and facilitated its passage into law. CSOs collectively started promoting SSB taxation in 2012 and proposing ways to increase it consecutive years. In 2015, while advocating for an increase to the SSB tax, CSOs reported being harassed anonymously for their efforts (52).

Several key events took place after the enaction of the new SSBs tax in January 2014: the President agreed with ConMexico (industry consortium - Consejo Mexicano de la Industria de Productos de Consumo, A.C) that it would not increase the tax further after it became effective; a research institute build by Coca-Cola Company was inaugurated by the President, the health minister, and Coca-Cola Mexico CEO; while CSOs continues advocating to double the tax (24).

After the tax was approved, the federal administration launched the Mexican Observatory on Non-communicable Diseases (OMENT – Observatorio Mexicano de Enfermedades No Transmisibles), as the advisory council delegated to monitor and evaluate the National Obesity and Diabetes Prevention Strategy.. The advisory council included 20 representatives from the public sector, academia, professional organizations, civil society organizations, and industry-related representatives (53). The two most influential organizations were ConMexico, representing the SSB industry, and the Aspen Institute Mexico, which was sponsored by the SSB industry and had strong ties to it. Notably, none of the National Health Institutes were represented on the Council, nor were any of the consumer groups that had been instrumental in the promotion and approval of the SSB tax. By the end of 2014 the OMENT had not established the indicators for the SSB tax impact assessment, nor had it produced a report on its impact, while an independent group led by the National Institute of Public Health, funded by Bloomberg Philanthropies, had reported a decrease in consumption (24, 54, 55).

According to the authorities, the Mexican soda tax generated approximately US$1.2 billion in 2014 (56), and even if the new SSB tax approved by Congress. Although the resolution that introduced the SSB tax promised (ermark) to use part of the revenue to increase access to clean water in schools, it is unclear how the revenues were actually spent.

Chile

In 2014, the Chilean MoF proposed the largest major tax reform in three decades, with the aim of raising revenue for comprehensive educational reform. Beverage taxes in Chile have existed since 1979, when the Chilean government introduced specific ad valorem taxes on alcoholic and non-alcoholic industrialized beverages, including SSBs. These beverages were initially subject to a 15% tax, which in 1985 was changed to

13%. The 2014 reform included a proposal to increase taxes on SSBs. The inclusion of a 20% tax on all SSBs and an increased tax on all tobacco and alcohol products was advocated for by CSO groups through media campaigns, opinion pieces in newspapers, and public actions. Arguments were mainly health-related and included the high consumption of SSBs in the country at that time, and the 60% prevalence of obesity in the adult population(15). Additionally, tax supporters highlighted the State´s responsibility to protect vulnerable populations through legislation(57).

The main proponent of the tax was the MoF through the Fiscal Reform process. The Ministry of Health (MoH) was not involved in the beginning but was considering, in parallel, regulation for healthy eating, which included food labelling and marketing food to children. CSO proponents of both initiatives were the Coalition for a Healthy Chile (*Frente por un Chile Saludable)*, Senator Guido Girardi, and academics from the *Institute of Nutrition and Food Technology* (Instituto Nacional de Nutricióny Tenconlogía Alimentaria INTA) and University of Chile. The private sector was mainly represented by A.B Chile, a national consortium of national and transnational food and beverage producers (See Fig. 2).

The F&BI contested the SSB tax proposal, based on similar arguments used by tobacco and alcohol industries, and in other SSB tax cases. They argued job losses, negative effects on the economy and trade, restriction of freedom of choice, regressivity (greater impact on the poorest groups) of the tax, the imposition of a ´Nanny State´ and the ´arbitrary discrimination´ argument questioning the legality of the proposal (14). Lobbying with congressional members intensified, and powerful coalitions were formed in opposition to the regulation. According to the literature, at the time there was no regulation against corporate financing for politicians and lobbying activities. Therefore some legislators and members of the MoF became allies of the industry (58). The persuasive power of the coalition aligned with the F&BI reduced the tax to just 5%, far below the recommended 20% tax to curb consumption (Table 1). This was further undermined by an exemption of some 'low sugar' SSBs (less than 15 g per 240 ml) (59). Thus, as happened in Mexico, the tax reform included amendments reducing the impact of the tax and limiting the potential impact on consumption.

Simultaneously, an intense debate about implementing a regulatory framework began – which included a restriction on marketing of unhealthy food to children, and a front-of-pack warning labelling informing consumers through new labels stating when a product is high in calories, sugars, fats and salt (60, 61). After long discussions and pressure from the F&BI lobbyists, the regulation finally came to effect in 2015 (62). After the recent experience with the SSB tax, the *National Association of Beverage Producers* became *A.B. Chile*, and hired a former member of parliament and prominent politician to be their representative. Since the implementation of the law, TNCs have filed several lawsuits against the Chilean State challenging the legality of restricting their trademarks, cases which are still pending (62). At the international level, TNCs supported by World Trade Organization (WTO) argued the new labelling violated several trade rules and was an obstacle to international trade.

Colombia

Colombia's political context is key to understanding the policy process for the promotion and, ultimately, rejection of the country's SSB tax. During 2015, the Minister of Health convened a group of experts to draft a series of proposals for a health tax to be included in a Tax Reform Project and be presented to the Congress by 2016. The proposal included plans to increase the tobacco tax and to introduce a new SSBs tax (63). At that time, Colombia engaged in extensive public and policy debates around the government's peace referendum with the Revolutionary Armed Forces (FARC), which was finally achieved on November 2016 (63). The latter resulted in a convoluted political scenario and one that could be argued as influencing the rejection of the tax, as the policy agenda was highly focused on the peace referendum.

The initiative to introduce a SSB tax came from the MoH, and was supported by CSOs and coalitions such as *Educar Consumidores* and Colombian Alliance for Healthy Eating (*Alianza por la Salud Alimentaria Colombia)*, the leading CSO of the cause, and an alliance of several other CSOs who joined to support the fiscal measure. Academics supporting the measure were based at *Universidad Javeriana*, while the main representatives of the TNCs and SSBs producers included *Postobón*, ANDI, FENALCO and SIC (see Fig. 2).

A SSB tax was proposed in 2016, supported by the government and CSO groups, but was not approved. The CSO *Educar Consumidores* was the main advocate for a 20% tax on SSBs, just as was advocated n Mexico and Chile, but the tax was voted against after several months under Congress scrutiny. Similar to Mexico and Chile, intense industry lobbying to Congress was undertaken, and anonymous harassment of activists (proponents of the tax) was reported (64).

Public statements by the Chamber of the Beverage Industry representative denied the benefits of the SSB tax. Pro-industry members argued that the SSB tax would cause job losses among the poor and that “the impact is of great concern especially in those people living in rural areas where bottled drinks constitute the sole reliable source of water”(65). Meanwhile the F&BI TNCs collaborated in PPPs and CSR initiatives such as the establishment of the International Energy Balance Network, led by Coca-Cola International, and recruiting allies in the country (66), or by providing drinking water in poor communities, in collaboration with other partners (67). The argument and its subjacent causal path to a hydration issue go beyond the soda tax policy, as in many cases such as Mexico, Chile and Colombia, water spring concessions (use and exploitation) and the governance of water access have loopholes that favour TNCs (68, 69).

The SSB industry strongly lobbied against the tax. For example, in September 2016 the National Association of Businessman in Colombia (ANE) and *Postobón*, a local subsidiary of a SSB TNC, won an important lawsuit against the State (63). This lawsuit demanded the Superintendent of Industry and Trade to withdraw an advocates’ media campaign on the negative effects of SSBs, claiming that it presented false and misleading information. Additionally, during the summer and spring of 2016, the media debate intensified. The newspaper Vice Colombia published three opinion articles supporting the measure, shortly before its editor was abruptly fired, increasing public demands for accountability. Polls conducted by the CSO showed that 70% of the population was in favour of the measure, and 42 of 268 members of Congress supported it (64). However, after intense lobbying during the last final months of 2016, it was finally rejected by the Congress. This case mirrored the other two cases but was unsuccessful, with no window for further discussion under the current political administration.

Motivations and framing for and against the SSBs tax

Important differences were found in understanding the ways in which values and evidence were used to motivate and frame policy design in each country. First, while the MoF drove the SSB taxation initiative in Mexico and Chile, in Colombia the main proponent was the MoH, with support from the CSO. While both the initiatives in Colombia and Mexico originated within MoH, and were framed as part of a comprehensive plan to tackle obesity, in Chile it was only included as part of a broader fiscal reform. These findings suggest that policy change was in part attributable to inter-ministerial synergy of the government in framing the policy debate. While the regulatory instruments were the same, framing the SSB tax as a health-related policy appears to have legitimized public discourse, although economic arguments were always needed. This is a core mandate of the MOH, not MOF, which potentially explains variations in frame sponsorship across the countries. The MOH in Chile and Mexico participated to a limited extent in drafting the SSB tax, in both cases the MOH supported the measure, although in Mexico the support came much after its approval in Congress, as Mercedes Juan, the Secretariat of Health had close links to the food industry (24).

Nevertheless, SSB taxation was framed beyond a public health rationale. In Mexico and Chile, SSB taxes were framed as a revenue generation mechanism (20, 24). In Colombia, where the tax was largely framed as a health intervention, the need to raise additional revenue was not substantively communicated as it was in the other two countries, and largely failed to gain traction in a crowded political agenda.

Second, as shown in Table 1, the type and rate of the tax in each country varied, and all three failed to pass taxes of 20%, the minimum price increase considered by experts to have a substantial impact on obesity rates in a short span of time (70, 71). While there is little evidence on how the final level and type of taxation were established (1MXP per litre in Mexico and a two-tier 5% in Chile), interference of the industry was reported in both cases. The rationale behind setting the level of the tax was not publicly available, and both taxes in Chile and Mexico were significantly less than the evidence-based simulations recommended (72, 73). Still, there is evidence that this can change; under the new presidential administration (2018–2024), the Mexican SSB tax has been increased due to inflation from 1.17 MXP per litre to 1.26 MXP per litre, and might increase to 2.26 MXP per litre (74)

Third, of the three countries only Mexico explicitly outlined plans to evaluate the impact of the tax. This was accomplished by launching a multi-sectoral platform to report the impact of this and other policies included in the MoH obesity strategy (Fig. 3). Nevertheless, to-date, published impact evaluations of SSB taxes have only been conducted by externally-funded academics (Fig. 3). How this evidence is used by government officials is unclear. For instance, in Mexico the opaque governance of OMENT (which ceased operations in 2019), lacking transparency and accountability mechanisms, means that little is known about how these findings were received, managed or supported, or how F&BI representatives may have influenced the non-response.

In all three countries, legislation containing SSBs taxes was vague on its evidentiary basis. These included: a) a lack of clarity around resource allocation using SSB revenues to accelerate health gains, b) missing justification for the chosen size of the SSB tax, c) an undefined plan for *multisectoral* policy implementation and/or evaluation; and d) in the specific case of Chile, rationale for increasing the existing staggered levy on SSBs, with a health-oriented purpose policy.

Institutional arrangements and coalitions driving and limiting SSBs tax policy

Our findings suggest that TNCs producing and selling SSBs have remained for the last 20 years a long in a powerful position in all the countries of study. For instance, the former Mexican President Vicente Fox (2002–

2006) was previously the CEO of The Coca-Cola Company-Mexico, and it was during Fox's leadership of Coca-Cola Mexico that it became Mexico's top-selling soft drink, increasing Coca-Cola's sales by almost 50% (75). Mexican Coca-Cola-FEMSA (the largest Coca-Cola subsidiary in the world, which The Coca-Cola-Mexico is a shareholder with 28%) is one of the five largest contributors to the gross domestic product (GDP) with Bimbo, Gruma (both F&BI), Cemex, and Telmex. Coca-Cola-FEMSA and PepsiCo, either directly or through CONMEXICO or ANPRAC, have been involved with political institutions, such as the Centre for Beverage Innovation, opened in 2016 with the MoH and the Mexican President.

In Colombia, Postobón was one of the top 14 largest companies contributing to the economy; from 2016 to 2017, its income increased by 4.7%. The beverage company has many social programs, including a university and a large program to promote active lifestyles. It has been awarded by national and international institutions, such as the Swedish Business Network in Colombia and the Institute of Internal Auditors of Colombia and the Secretariat of Transparency of the Presidency, allowing the company to improve its reputation and open business opportunities in the region´ (76).

In Chile the main opponents to the SSB tax were members of the National Association of Beverage Producers (Asociación Nacional de Bebidas Refrescantes –ANBER), including Coca-Cola Andina (Embotelladora Andina y Embotelladoras Coca-Cola-Polar), Embonor, and CCU. In 2011, the association reported an increase in SSB consumption of 11.8%, described as related to "growing the economy by the increase in jobs opportunities" (77). In 2014, just before the SSB tax was included in the fiscal reform, ANBER became A.B.Chile (Alimentos y Bebidas Chile), growing the consortium as Nestlé and Carozzi joined. To date, it is the country's most powerful food and beverage group, representing more than 20 companies (78).

Coalitions formed against the SSB tax policy were mainly composed by TNCs and national SSBs producers (which some were acquired by TNCs in the process), including business associations, confederations and trade organizations, and in some cases relations with academics or CSO, as some of the boards of trustees' or advisors were part of the F&BI (79) (Fig. 2). Part of their influence is likely attributable to their ability to leverage financial and strategic resources to position their views in the pubic domain. The representatives of such coalitions engaged in discourse around cooperation with public health aims, and built alliances with local and national government entities (80).

In contrast, powerful coalitions were also formed for the purpose of supporting the tax. They represented several CSOs and academics, mainly via the *Alianza por la Salud Alimentaria* (both in Mexico and Colombia) and by *Frente por un Chile Saludable* in Chile. In Colombia, CSOs were advised by some academics, but academics did not lead the call. In Mexico, by contrast, academics led research underpinning SSB taxation, supported the drafting of the bill, and assisted with advocacy efforts (24, 80). In Chile, while well-known public health academics were supportive of the measure, they were mainly advocating for other policy measures, such as warning labels on snacks and beverages, and had a long-standing close relationship with some policy entrepreneurs in bringing the policy to the agenda-setting process. At the time of the policy debates, and agenda setting, some pro-tax groups were supported by international organizations, and prestigious US based academics, supporting the coalitions (81). However, in Chile, the Nutrition and Technology Institute in Chile (INTA), a prestigious academic institution supporting the legislation, was undermined by undisclosed conflicts of interest that damaged its credibility.

In the cases of Mexico and Colombia, corporate interests influenced the media. In Colombia, the largest soda producer in the country owns the primary media outlet. Therefore advertising by CSOs supporting the tax was denied. Likewise, in Mexico, CSOs reported that the two main broadcasting corporations denied space for their campaign showing the amount of sugar in SSBs and other similar campaigns designed to support the measure. Regardless of a clear power imbalance surrounding the public policy debate between those who supported or opposed the tax, in Mexico, the pro-tax coalitions, led by civil society, maintained a powerful position in public opinion.

In Chile, debate centred around broader regulatory measures and the principles behind fiscal reform, with little focus on the specifics of a SSB tax. The primary frame sponsor for regulatory changes was the Senate head of the Health Commission, Guido Girardi, a media-savy spokesman of CSOs and academics (82). Likewise, in Mexico, a Senator, Marcela Torres, advocated for the SSB tax, and built a strong coalition with *Alianza por la Salud Alimentaria*, academics and the country office of the Panamerican Health Organization (PAHO), by positioning the tax as a health measure on the policy agenda. In Colombia, CSOs gained important public support for the SSBs through polls and social media, but policy entrepreneurs within the private sector were able to leverage Congressional contacts to successfully counter the measure.

Discussion

This study provides important insights into how the problem of obesity has been defined, and the role of SSB taxation in addressing this problem in Latin America. We describe the importance of the political and economic context, the actors involved in the policy debates, the dynamic ways in which SSB taxes were framed, and the coalitions formed to mobilize vested interests. In doing so, our findings reveal the often opaque means by which TNCs can assert influence in the policy process. This raises important implications for the governance of TNCs when seeking to use fiscal measures to reduce consumption of health-harming products. The ways in which SSB taxes were framed in each country was critical. As a means of recruiting social values to make complex policy positions comprehensible, framing is an emerging subject of inquiry in the health policy process (83). In all three countries, CSOs and academics emphasized social responsibility by raising concerns about the impact SSBs on obesity and diabetes, as well as access to safe drinking water (84). Civil society and grassroots groups wielded arguments about improving access to healthy food and safe drinking water to promote public revenue allocation towards health concerns. The main outcome of such arguments was widespread public support and further galvanizing coalitions of CSOs in all three cases. Nevertheless, in Mexico and Chile, the MOF was instrumental in framing SSB taxes as a fiscal measure. In Mexico, such arguments gained purchase on the policy agenda as revenue funds were legally assigned (or earmarked) to provide water fountains in schools(85, 86), but this was not the case in Chile nor in Colombia.

Concurrently, in all cases TNCs used arguments about their legal rights and obligations, free choice, ‘Nanny State’ and freedom of intellectual property right, as they had done to oppose food-marketing policy in Chile (60), and reminiscent of the tobacco and alcohol industries’ strategies (87). In Chile and Mexico, SSB companies argued against the tax on the basis of the right of free consumption, while in Colombia they applied litigation measures to CSO advertising against consuming SSBs outlining the health risk this implies. This is notable as it demonstrates the extent to which TNC influence is tied to framing in the media.

In these cases, TNCs were also able to negotiate directly with government regarding policy implementation, successfully subverting policy design so that levels of taxation for SSBs were not aligned with the existing evidence-based recommendations, and some beverages were declared exempt from the tax. In the Philippines, similar tactics were used by TNCs to dilute SSs taxes (Saxena et al 2019). In Colombia, even when advocates managed to raise the topic in public debate, political tactics from the industry opposing SSB taxes were strong enough to prevent it from reaching the policy and legislative agenda. In all three cases, the power of TNCs dominated policy discussions and outcomes.

Despite recent progress, the regulatory environment continues to be a major obstacle for addressing unhealthy foods and SSB consumption in most countries. In response, TNCs are increasingly focusing on emerging economies such as in Latin America, East Asia and Africa, with hopes to influence regulatory actions (5). Our research suggests that this is particularly true in Mexico, Chile, and Colombia. As with tobacco companies, SSB companies have faced unexpected regulatory changes in LMICs and have adapted to contain the damage (87). Therefore, companies have embarked upon remediation actions by strengthening PPPs and corporate political activism through policy debate and building strong regional and international networks through consortiums or charitable organizations. These strategies allow local fiscal benefits to foreign investors and might have direct effects on consumption patterns and may reduce public health policy space, as has happened in Myanmar with Coca Cola investments (88). Our findings concur with tactics used by the tobacco industry and by the food industry in other countries (88). Furthermore, these cases reflect that including several government agencies and strengthening grassroots movements and CSOs, as well as having a multi-sectoral approach to the measure, outlining it in several policy documents, are key elements for fiscal policies to successfully navigate the health policy process, and has been recognized as a key element for policy success in other case studies (18, 89, 90).

This study also found related concerns of transparency and accountability during policy design for SSB taxes in Mexico, Chile and Colombia. Modifications to the original proposals (20% tax) were not documented by official government sources. Secondary data documents suggest that TNCs influenced the final amount of the levy in both Mexico and Chile (14, 24). Mechanisms to protect such influence lack in all cases, a clear governance loophole identified by others (42), which has not yet been addressed at the national or global level (21). Additionally, how the revenues of the soda tax may support public health interventions is unclear. For instance, In Mexico some schools were provided drinking fountains by the PPPs established with Coca-Cola (91). According to some evaluations in Chile, prices of untaxed beverages decreased, but taxed products did not sufficiently increase in price to reduce consumption. Nevertheless, the latest evaluation of the SSB tax found a decrease in the volume of all soft drinks consumed. Nevertheless, there was a highly significant decrease in the monthly purchased volume of the higher-taxed sugary soft drinks by 21.6% (73). These findings suggest principles of transparency and accountability during policy design and implementation were dismissed in general (Fig. 4).

Our findings challenge established discourse about private sector participation in policy design concerning harmful consumer products. As a means of enhancing participation and generating consensus, the global governance discourse continues to advocate for NCD control through public-private (or multi-stakeholder) partnerships (1, 7). Our research suggests, however, that TNCs distort public health agendas with an undue influence and by unfairly leveraging their resources to limit evidence-informed debate. This is particularly worrying for processes of institutionalization, whereby patterns of relationships can lead to further entrenched opposition to reasoned debate (92) (Koon et al. 2020). Moreover, public-private partnerships in health often involve powerful interests with conflicted aims that compete with public health prevention strategies (40).

The problem-driven approach to GPE analysis comprises three layers: identifying the problem, mapping the contextual, politics and institutional arrangements around the SSBs taxation and identifying the political economy drivers. This provides lessons about the obstacles, challenges and opportunities a SSB taxation initiative might face in similar contexts. It followed a qualitative synthesis based on a documentary analysis, which included a triangulation process between different sources to improve the reliability and validity of the information. Nevertheless, some weaknesses were faced, such as the scarce public available information on the policy process for the countries included.

This work supports recent research on the SSBs taxation, finding commonalities between the Chilean and Mexican cases, and incorporating ¡ the power dynamics of the food and beverage TNCs around a health policy initiative success as critical (Chile and Mexico), or its failure (Colombia) in reaching the countries´ political agenda.

This research points to pervasive gaps in global health governance. As TNCs, by definition, exist beyond state boundaries, governance of their activities and power must also occur at the global level. However, global health governance is highly challenged by contradictory and unclear guidelines by international organizations. Two principles of governance are at stake; responsiveness and ´participation and consensus´. Both principles lead to misinterpretation and open the door to powerful corporate interests to incisively participate in policy design. Additionally, some global health recommendations regarding policy actions to prevent NCDs, particularly regarding risk factors such as tobacco consumption and ultra-processed food availability, have evolved from board recommendations to specific actions, and have recently focused more on engagement and governance rather than on policy implementation. This multi-country case study demonstrates the potential mechanisms for states to overcome TNC pressure.

Conclusion

The aim of this paper was to contribute to the discussion of the governance challenges the interference of TNCs has on ensuring the primacy of public health goals through critically reviewing the SSB taxation experience in Chile, Mexico and Colombia through problem-driven political economy analysis. We identified lessons for implementing fiscal policies that could be considered in pursuing similar NCD prevention policies, and exemplify how several corporate actors' powerful positions influenced the agenda for SSB taxation policy. Not only is it relevant to consider a multi-sectoral approach in framing SSB taxes, as well as its design with clear principles of transparency, responsiveness and consensus. Additionally, strategic advocacy of strong pro-tax coalitions are key for policy debate, and to overcome entrenched opposition. TNCs producing and selling SSBs have historically enjoyed positions of privilege in all three countries. Corporate coalitions have a powerful network of support in the region and resources to position their views on the pubic domain to gain support. Additionally, coalitions' representatives engaged in discourses about cooperation with public health aims, and building alliances with local or national government entities. Therefore, SSB taxation policies need to be in-line with the wider national political context, and address TNCs´ potential economic arguments, using legal measures, or strengthening their arrangements with other international actors and government entities to push for public health efforts such as SSBs taxes.

Declarations

Ethics approval

Not applicable

Consent for publication

Not applicable

Availability of data and material

The dataset used and /or analysed during the current study are available form the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interest.

Funding

No funding was required for this paper.

Authors' contribution

AC, AK, RS outlined the paper scope and objectives, AC drafted the paper and conducted the review, AK, HW, RS, LME, and KL contributed to the manuscript revision.

Acknowledgements

We acknowledge Diego S. Silva BA, MA, PhD, and Julia Smith BA, MA, PhD for reviewing our manuscript and providing comments to the draft.

Not applicable

References

1. WHO. Time to deliver: report of the WHO Independent High-Level Comission on Noncoummunicable Diseases. Geneva: WHO; 2018. Contract No.: CCBY-NC-SA 3.0 IGO.
2. WHO. WHO Indepent High-level Commission on NCDs. Think piece: Why is 2018 a strategically important year for NCDs? 2018 [Available from: http://www.who.int/ncds/governance/high-level-commission/why-2018-important-year-for-NCDs.pdf?ua=1.
3. UN. Sustainable development goals. Goal 3: Ensure healthy lives and promote well-being for all at all ages 2015 [Available from: https://www.un.org/sustainabledevelopment/health/.
4. Monteiro CA, Moubarac JC, Cannon G, Ng SW, Popkin BM. Ultra-processed products are becoming dominant in the global food system. Obesity reviews. 2013;14:21-8.
5. Popkin BM, Hawkes C. The sweetening of the global diet, particularly beverages: patterns, trends and policy responses for diabetes prevention. The lancet Diabetes & endocrinology. 2016;4(2):174-86.
6. Popkin BM, Adair LS, Ng SW. Global nutrition transition and the pandemic of obesity in developing countries. Nutrition Reviews. 2012;70(1):3-21.
7. WHO. Tackling NCDs: 'best buys' and other recommended interventions for the prevention and control of noncoummunicable diseases.; 2017.
8. Capacci S, Mazzocchi M, Shankar B, Brambila Macias J, Verbeke W, Pérez-Cueto FJ, et al. Policies to promote healthy eating in Europe: a structured review of policies and their effectiveness. Nutrition reviews. 2012;70(3):188-200.
9. WCRFI. NOURISHING Policy Database 2019 [cited 2019 20 Oct 2019]. Available from: http://www.wcrf.org/NOURISHING.
10. Le Bodo Y, De Wals P. Soda Taxes: The Importance of Analysing Policy Processes: Comment on" The Untapped Power of Soda Taxes: Incentivising Consumers, Generating Revenue, and Altering Corporate Behaviours". International journal of health policy and management. 2018;7(5):470.
11. Cornelsen L, Green R, Dangour A, Smith R. Why fat taxes won't make us thin. Journal of public health. 2015;37(1):18-23.
12. Cornelsen L, Smith RD. Soda taxes–Four questions economists need to address. Food policy. 2018;74:138-42.
13. Cornelsen L, Mazzocchi M, Green R, Dangour AD, Smith RD. Estimating the relationship between food prices and food consumption—methods matter. Applied Economic Perspectives and Policy. 2016;38(3):546-61.
14. Caro JC, Corvalán C, Reyes M, Silva A, Popkin B, M, Taillie LS. Chile's 2014 sugar-sweetened beverage tax and changes in prices and purchases of sugar-sweetened beverages: An observational study in an urban environment. PLos Med. 2018;15(7):e1002597.
15. Olea Durán BI. Efecto del aumento del impuesto a las bebidas gaseosas azucaradas en Chile: precios y comportamiento del consumidor. 2019.
16. Eyles H, Ni Mhurchu C, Nghiem N, Blakely T. Food pricing strategies, population diets, and non-communicable disease: a systematic review of simulation studies. PLoS Medicine / Public Library of Science. 2012;9(12):e1001353.

17. Powell LM, Chaloupka FJ. Food prices and obesity: evidence and policy implications for taxes and subsidies. Milbank Quarterly. 2009;87(1):229-57.
18. Baker P, Jones A, Thow AM. Accelerating the Worldwide Adoption of Sugar-Sweetened Beverage Taxes: Strengthening Commitment and Capacity Comment on "The Untapped Power of Soda Taxes: Incentivizing Consumers, Generating Revenue, and Altering Corporate Behavior". International journal of health policy and management. 2017;7(5):474-8.
19. Le Bodo Y, De Wals P. Soda Taxes: The Importance of Analysing Policy Processes Comment on "The Untapped Power of Soda Taxes: Incentivising Consumers, Generating Revenue, and Altering Corporate Behaviours". International journal of health policy and management. 2017;7(5):470-3.
20. Thow AM, Downs SM, Mayes C, Trevena H, Waqanivalu T, Cawley J. Fiscal policy to improve diets and prevent noncommunicable diseases: from recommendations to action. Bulletin of the World Health Organization. 2018;96(3):201.
21. Smith R, Lee K. Global health governance: we need innovation not renovation. BMJ global health. 2017;2(2):e000275.
22. Dodgson R, Lee K, Drager N. Global health governance: a conceptual review. 2002.
23. Wright A, Smith KE, Hellowell M. Policy lessons from health taxes: a systematic review of empirical studies. BMC Public Health. 2017;17(1):583.
24. Carriedo A. A policy analysis of the 2014 Mexican soda tax. London: London School of Hygiene and Tropical Medicine; 2017.
25. Bødker M, Pisinger C, Toft U, Jørgensen T. The rise and fall of the world's first fat tax. Health Policy. 2015;119(6):737-42.
26. Basu S, McKee M, Galea G, Stuckler D. Relationship of soft drink consumption to global overweight, obesity, and diabetes: a cross-national analysis of 75 countries. American journal of public health. 2013;103(11):2071-7.
27. Coca-Cola Femsa. Informe anula Femsa 2015 2015 [Available from: http://files.shareholder.com/downloads/FEMSAS/2085406360x0x879994/0A225CF7-5097-4D35-96BC-D2894ACD507A/FEMSA_Informe_Anual_2015_Spa_.pdf
28. US SEC. FORM 20-F Annual report pursuant to section 13 of the securities exchane act of 1934. For the fiscal year ended December 31 2014: Coca-Cola Femsa S.A.B de C.V.; 2014.
29. Nasdaq. How has Coca-Cola turned around its fortunres in Latin America? : Nasdaq; 2017 [Available from: https://www.nasdaq.com/article/how-has-coca-cola-turned-around-its-fortunes-in-latin-america-cm892004.
30. PepsiCo. PepsiCo Sustainability Report 2018. USA: PepsiCo; 2018 September 2019.
31. Coca-Cola F. Informe Annual 2018. Coca-Cola Femsa; 2018.
32. PAHO. Ultra-processed food and drink products in Latin America: trends, impact on obesity, policy implications. Pan American Health Organization Washington DC; 2015.
33. Factset. The Coca-Cola Co. (KO) Inveestor Day Factset: call street; 2017 [Available from: http://coca-cola-ir.prod-use1.investis.com/~/media/Files/C/Coca-Cola-IR/documents/transcript-16nov2017.pdf.

34. RaboResearch. Carbonated Soft Drinkis in Latin America 2014 [Available from: https://research.rabobank.com/far/en/sectors/beverages/carbonated-soft-drinks-latin-america.html.
35. Mialon M, Swinburn B, Sacks G. A proposed approach to systematically identify and monitor the corporate political activity of the food industry with respect to public health using publicly available information. Obesity reviews. 2015;16(7):519-30.
36. Yanamadala S, Bragg MA, Roberto CA, Brownell KD. Food industry front groups and conflicts of interest: the case of Americans Against Food Taxes. Public Health Nutrition. 2012;15(8):1331-2.
37. Ulucanlar S, Fooks GJ, Gilmore AB. The Policy Dystopia Model: An Interpretive Analysis of Tobacco Industry Political Activity. PLos Med. 2016;13(9):e1002125.
38. PepsiCo Foundation. El BID y PepsiCo refuerzan alianza 2016 [4 February 2016]. Available from: http://www.iadb.org/es/noticias/comunicados-de-prensa/2016-06-17/el-bid-pepsico-y-fundacion-pepsico-refuerzan-alianza,11498.htm.
39. Coca-Cola FEMSA. Annual Report 2015 2015 [Available from: https://img.coca-colafemsa.com/assets/files/es/inversionistas/Reportes Anuales/KOF-Annual-Report-2015.pdf.
40. Richter J. Public–private Partnerships for Health: A trend with no alternatives? Development. 2004;47(2):43-8.
41. Moodie AR. What Public Health Practitioners Need to Know About Unhealthy Industry Tactics. American Journal of Public Health. 2017;107(7):1047-9.
42. Kraak VI, Harrigan PB, Lawrence M, Harrison PJ, Jackson MA, Swinburn B. Balancing the benefits and risks of public-private partnerships to address the global double burden of malnutrition. Public Health Nutr. 2012;15(3):503-17.
43. Fairfield T. Structural power in comparative political economy: perspectives from policy formulation in Latin America. Business and Politics. 2015;17(3):411-41.
44. Schneider BR. Hierarchical Capitalism in Latin America: Cambridge University Press; 2013.
45. Seers K. What is a qualitative synthesis? Evidence-based nursing. 2012;15(4):101-.
46. The World Bank. HIgh income countries overview 2020 [Available from: https://data.worldbank.org/income-level/high-income.
47. INSP. Encuesta Nacional de Salud y Nutrición de Medio Camino 2016. Informe de resultados. . Mexico: INSP; 2016.
48. Ministerio de Salud. ENCUESTA NACIONAL DE SALUD 2016-2017 Primeros resultados. Santiago, Chile Departamento de Epidemiología División de Planificación Sanitaria Subsecretaría de Salud Pública; 2017.
49. Vecino-Ortiz AI, Arroyo-Ariza D. A tax on sugar sweetened beverages in Colombia: Estimating the impact on overweight and obesity prevalence across socio economic levels. Social Science & Medicine. 2018;209:111-6.
50. Gilson L. Qualitative research synthesis for health policy analysis: what does it entail and what does it offer? Health policy and planning. 2014;29(suppl_3):iii1-iii5.
51. Harris D. Applied political economy analysis. A problem-driven framework London: Overseas Development Institute. 2013.

52. Perlroth N. Spyware's Odd Targets: Backers of Mexico's Soda Tax New York,2017 [updated 11 Feb 2017. Available from: https://www.nytimes.com/2017/02/11/technology/hack-mexico-soda-tax-advocates.html.
53. Barquera S, Sanchez-BAzan K, Carriedo A, Swinburn B. The development of a national obesity and diabetes prevention and contrl strategy in Mexico: actors, actions and conflict of interests. In: Forum UH, editor. Public health and the food and drinks industry: The governance and ethics of interaction Lesons from research, policy and practice. United Kingdom: UK Health Forum; 2018. p. 18-30.
54. Colchero A, Popkin BM, Rivera J, Ng SW. Beverage purchases from stores in Mexico under the excise tax on sugar sweetened beverages: observational study. BMJ. 2016;352.
55. Colchero MA, Molina M, Guerrero-López CM. After Mexico implemented a tax, purchases of sugar-sweetened beverages decreased and water increased: difference by place of residence, household composition, and income level. The Journal of nutrition. 2017;147(8):1552-7.
56. Centro de Estudios de las Finanzas Públicas. Análisis de los Informes sobre la Situación Económica, las Finanzas Públicas y la Deuda Pública al Cuarto Trimestre de 2014 Palacio Legislativo de San Lázaro2015 [Available from: http://www.cefp.gob.mx/publicaciones/documento/2015/marzo/cefp0032015.pdf.
57. Corvalán C, Reyes M, Garmendia ML, Uauy R. Structural responses to the obesity and non-communicable diseases epidemic: Update on the Chilean law of food labelling and advertising. Obesity reviews. 2019;20(3):367-74.
58. Cuadrado C, Valenzuela M, Peña S. Conflicting goals and weakened actions: lessons learned from the political process of increasing sugar-sweetened beverages taxation in Chile. In: Forum UH, editor. Public health and the food and drinks industry: The governance and ethics of interaction Lesons from research, policy and practice. United Kingdom: UK Health Forum; 2018. p. 31-7.
59. Ley 20.606 sobre composicion nutricional de los alimentos y su publicidad., (2015).
60. Corvalan C, Reyes M, Garmendia ML, Uauy R. Structural responses to the obesity and non-communicable diseases epidemic: The Chilean Law of Food Labeling and Advertising. Obesity Reviews. 2013;14(S2):79-87.
61. Perez-Escamilla R. Prevention of childhood obesity and food policies in Latin America: From research to practice. Annals of Nutrition and Metabolism. 2017;71 (Supplement 2):98-9.
62. Campbell M. Non-communicable diseases: legal and policy implications of public health measures restricting intellectual property rights. Regulating for Globalization Trade, Labor and EU Perspectives2018.
63. Vilaquiran C. Impuestos saludables, más política que técnica: Lecciones aprendidas en Colombia durante la discusión de la pasada reforma Bogota: Asociación Colombiana de Educación al Consumidor; 2017 [Available from: http://www.educarconsumidores.org/pdf/8
64. Jacobs A, Richtel M. She Took On Colombia's Soda Industry. Then She Was Silenced. NY: New York Times; 2017 [Available from: https://www.nytimes.com/2017/11/13/health/colombia-soda-tax-obesity.html.

65. El Nuevo Dia. El pais no esta para hacer exeperimentos regulatorios Colombia2016 [Available from: http://www.elnuevodia.com.co/nuevodia/actualidad/economica/285903-el-pais-no-esta-para-hacer-experimentos-regulatorios.
66. Aaron DG, Siegel MB. Sponsorship of national health organizations by two major soda companies. American journal of preventive medicine. 2017;52(1):20-30.
67. Coca-Cola FEMSA. Annual Report 2016 2015 [Available from: https://www.coca-colafemsa.com/reporte-anual-2016/kof-informe-anual-2016.pdf.
68. Dejusticia. Marco legal del impuesto a las bebidas azucaradas en Colombia 2016 [Available from: https://www.dejusticia.org/wp-content/uploads/2017/04/fi_name_recurso_868.pdf?x54537.
69. Carriedo A. Water security: the key ingredient for soda tax success. In: Blog P, editor. Global Health: PLOS; 2017.
70. Chaloupka FJ, Powell LM. Using Fiscal Policy to Promote Health: Taxing Tobacco, Alcohol, and Sugary Beverages. Background Paper, The Task Force on Fiscal Policy for Health Tobacconomics at the University of Illinois, Chicago. 2019.
71. Sánchez-Romero LM, Penko J, Coxson PG, Fernández A, Mason A, Moran AE, et al. Projected Impact of Mexico's Sugar-Sweetened Beverage Tax Policy on Diabetes and Cardiovascular Disease: A Modeling Study. PLos Med. 2016;13(11):e1002158.
72. Caro JC, Ng SW, Taillie LS, Popkin BM. Designing a tax to discourage unhealthy food and beverage purchases: The case of Chile. Food Policy. 2017;71:86-100.
73. Nakamura R, Mirelman AJ, Cuadrado C, Silva-Illanes N, Dunstan J, Suhrcke M. Evaluating the 2014 sugar-sweetened beverage tax in Chile: An observational study in urban areas. PLos Med. 2018;15(7):22.
74. Echegoyen C. Diputadas de Morena proponen aumentar IEPS de cigarros, alcohol, botanas y refrescos para ayudar al sector Salud México Animal Político; 2020 [Available from: https://www.animalpolitico.com/2020/04/dipuatadas-morena-aumento-ieps-cigarros-alcohol-botanas-refrescos/.
75. Gómez EJ. Coca-Cola's political and policy influence in Mexico: understanding the role of institutions, interests and divided society. Health Policy and Planning. 2019.
76. Postobón. Postobon Annual Reprot. 2017.
77. El mostrador. Anber: Consumo de bebidas refrescantes aumentó 11,8%: 2012; 2012 [Available from: https://www.elmostrador.cl/ahora/2012/08/06/anber-consumo-de-bebidas-refrescantes-aumento-118/.
78. Chile A. Historia de AB Chile 2018 [Available from: http://abchile.cl/index.php?page=historia.
79. The Aspen Institute. The Aspen Institute. Consejo directivo [Available from: http://www.aspeninstitutemexico.org/aspen_estructura.html.
80. Donaldson E. Advocating for Sugar-sweetened Beverage Taxation: A Case Study of Mexico. Baltimore, USA: Johns Hopkins Bloomberg School of Public Health; 2015.
81. Fuster M, Burrowes S, Cuadrado C, Velasco Bernal A, Lewis S, McCarthy B, et al. Understanding policy change for obesity prevention: learning from sugar-sweetened beverages taxes in Mexico and Chile. Health Promotion International. 2020.

82. EPC. Demandará Chile a multinacionales de “comida chatarra”: senador Girardi 2014 [Available from: https://elpoderdelconsumidor.org/2014/11/demandara-chile-multinacionales-de-comida-chatarra-senador-girardi/.
83. Koon AD, Hawkins B, Mayhew SH. Framing and the health policy process: a scoping review. Health policy and planning. 2016:czv128.
84. Senado de la República. Sen. Marcela Torres propone un fideicomiso con el total de lo recaudado del impuesto a bebidas azucaradas para combatir la obesidad | PAN SENADO 2015 [Available from: http://www.pan.senado.gob.mx/2015/09/sen-marcela-torres-propone-un-fideicomiso-con-el-total-de-lo-recaudado-del-impuesto-a-bebidas-azucaradas-para-combatir-la-obesidad/.
85. LXIV Cámara de Diputados. En las escuelas públicas, sólo se han instalado dos mil 675 bebederos de agua potable; la meta sexenal es de 40 mil / 26 / Septiembre / 2015 / Boletines / Comunicación / Inicio - Camara de Diputados 2015 [Available from: http://www5.diputados.gob.mx/index.php/camara/Comunicacion/Boletines/2015/Septiembre/26/0098-En-las-escuelas-publicas-solo-se-han-instalado-dos-mil-675-bebederos-de-agua-potable-la-meta-sexenal-es-de-40-mil.
86. Acuerdo mediante el cual se establecen los Lineamientos generales para la instalación y mantenimiento de bebederos en las escuelas del Sistema Educativo Nacional, 2015 (2015).
87. Waa AM, Hoek J, Edwards R, Maclaurin J. Analysis of the logic and framing of a tobacco industry campaign opposing standardised packaging legislation in New Zealand. Tobacco control. 2016:tobaccocontrol-2016-053146.
88. Thow AM, McGrady B. Protecting policy space for public health nutrition in an era of international investment agreements. Bull World Health Organ. 2014;92.
89. Saxena A, Koon AD, Lagrada-Rombaua L, Angeles-Agdeppa I, Johns B, Capanzana M. Modelling the impact of a tax on sweetened beverages in the Philippines: an extended cost–effectiveness analysis. Bulletin of the World Health Organization. 2019;97(2):97.
90. Hofman KJ, Thow AM, Erzse A, Tugendhaft A, Stacey N, SA P. The political economy of Sugar-Sweetened Beverage Taxation in South Africa: lessons for policy making Session: Abstract Session for Young Researchers.
91. Coca-Cola Foundation. Centros de Hidratación 2014 [Available from: http://www.fundacioncoca-cola.com.mx/programas/bebederos.html.
92. Koon AD, Windmeyer L, Bigdeli M, Charles J, El Jardali F, Uneke J, et al. A scoping review of the uses and institutionalisation of knowledge for health policy in low-and middle-income countries. Health research policy and systems. 2020;18(1):7.

Table

Table 1. Political and health context, regulations, content and reported impact; and institutional arrangements for the soda tax policies by country.			
	Country		
Themes	**Mexico**	**Chile**	**Colombia**
Context			
Political context	Entering president in 2013	Major tax reform in October 2014	Tax reform project (SSBs and tobacco tax). Peace referendum with FARC
National obesity trends	37.8% overweight and 32.4% obesity among adults (70.2% combined prevalence) 36% overweight and obesity in children (5 to 10y)(1)	39.8% overweight and 34.4 % obesity among adults (74.2% combined prevalence)(2)	37.7% overweight and 18.7% obesity among adults (55.8% combined prevalence) 24.4% overweight and obesity in children (5 to 10y)(3)
SSBs retail sales in 2013(4)	184.9 litre/capita	170.2 litre/capita	81.5 litre/capita
Regulatory instruments, content and reported impact			
Regulation used to frame the policy	Fiscal reform (January 2014) Obesity policy	Fiscal reform (October 2014)	Obesity policy Fiscal reform
Type of tax and rate	Excise tax of 20%/ Excise tax of 1 MXP/l (≈ 10%)	Two-tired High sugar content (HSC): Ad Valormen 18% (> 6.25 g sugar/100 mL 20%) Low sugar content (LSC): Ad Valorem 10% (< 6.25g sugar/100mL)	Excise tax 20% None
E- marked tax	No, but the Senate passed a resolution to allocate a proportion of the SSBs to provide public schools with water fountains	NO	N/A

Impact reported after the implementation on SSBs purchases.	Daily per capita purchases decreased by an average of 6% (−12 mL/capita/day) of taxed SSBs. Low socioeconomic status households had an average decline between 9-17% compared with pre-tax monthly trends of 2013.(5)	Monthly per capita purchases of taxed HSC SSBs decreased by 3.4% by volume (95% CI −5.9%−−0.9%) and 4.0% by calories (95% CI −6.3%−−1.9%) The volume of household purchases of LSC SSBs increased 10.7% (95% CI 7.5%−13.9%)).(6)	NA
Framing the SSBSs tax			
Framing the SSB tax rationale Framing the E-marked tax revenue	Health related tax and revenue needs. To improve water provision in schools and parks.	Health related tax and revenue needs. To invest in a health reform.	Health related tax. To invest in programs to reduce obesity trends.
Normative values about the SSBs Industry in the country	TNCs and SSBs producers provide employment and economic growth to the country's GDP. Partnerships with government.	Employment important for productivity, and economy of the country. Investment in technology.	Inter sectorial relationships with broadcast industry.
Institutional arrangements and participation of non-state actors driving the SSBs tax implementation			
Governmental entity leading the initiative	Ministry of Finance (SHCP)	Ministry of Finance (MHCP)	Ministry of Health (MinSalud)
Non-state actors participating on the policy debates*	Ministry of Health (MoH), Academia (INSP Civil Society Organizations International organisations (Bloomberg philanthropies) National industry and beverage consortiums Transitional SSBs producers	MoH, Academia Civil Society Organisations National consortium of non-alcoholic beverages Transitional SSBs producers	Academia Civil Society Organisation Media Transitional SSBs producers
*Outlined also in table 2			

1. SSA. Encuesta Nacional de Salud y Nutrición de Medio Camino 2016. Mexico: Secretaria de Salud,; 2016.

2. Ministerio de Salud. ENCUESTA NACIONAL DE SALUD 2016-2017 Primeros resultados. Santiago, Chile Departamento de Epidemiología División de Planificación Sanitaria Subsecretaría de Salud Pública; 2017.

3. Social MdSyP. Encuesta Nacional de Situación Nutricional de Colombia (ENSIN). MinSalud Bogotá; 2015.

4. PAHO. Ultra-processed food and drink products in Latin America: trends, impact on obesity, policy implications. Pan American Health Organization Washington DC; 2015.

5. Colchero A, Popkin BM, Rivera J, Ng SW. Beverage purchases from stores in Mexico under the excise tax on sugar sweetened beverages: observational study. BMJ. 2016;352.

6. Caro JC, Corvalán C, Reyes M, Silva A, Popkin B, M, Taillie LS. Chile's 2014 sugar-sweetened beverage tax and changes in prices and purchases of sugar-sweetened beverages: An observational study in an urban environment. PLos Med. 2018;15(7):e1002597.

Figures

Search terms:
Policy/political/ poli* AND process
Fiscal/levy/tributary/regulation/reg*
Soda, sugar-sweetened beverages
Latin America/
Chile OR Mexico OR Colombia

1) policy OR political OR poli AND/OR process OR econo* OR economy AND SSBs OR sugary drinks OR soda AND fiscal OR levy OR tributary AND Latin America OR Chile OR Mexico OR Colombia OR Latinoamerica
2) policy OR political OR policy AND economy AND SSBs OR sugary drinks OR soda AND fiscal OR levy OR tributary

soda OR sugar sweetened beverages OR SSB OR sugary drinks OR nutrition OR food AND obesity AND Latin America OR Argentina OR Barbados OR Brazil OR Chile OR Colombia OR Costa Rica OR Dominica OR Ecuador OR Salvador OR Mexico OR Peru OR Uruguay OR Venezuela AND regulation OR public policy OR self-regulation OR law OR tax OR incentive OR label* OR school OR subsidy OR advertising OR publicity OR commercialization OR public contract.

Criteria for document selection:

Population: Chile, Mexico, Colombia
Intervention: Soda tax policy
Outcome: evaluation of the policy, description of the process, policy process, and position papers on the topic, press release, journalism accounts, and industry reports.
Dates: From January 2011 to December 2019
Language: English and Spanish

Figure 1

Search terms used for the documentary analysis and criteria to select documents

Country	Type of actor	Stakeholder
Mexico	Government	• Ministry of Health (Secretaría de Salud) • Ministry of Finance (Secretaría de Hacienda y Crédito Público-SHCP)
	Civil Society	• Alliance for Healthy Eating (Alianza por la Salud Alimentaria - ASAP) • The Consumers Power (El Poder del Consumidor- EPC) • Mídete Foundation (Fundación Mídete- FM) • Contrapeso • Bloomberg Philantropies
	Academia	• National Institute of Public Health (Instituto Nacional de Salud Pública) • Aspen Institute
	Private sector	• Femsa Coca-Cola, PespsiCo • Mexican Council of the Consumer Industry (Consejo Mexicano de la Industria del Consumo - ConMexico) • Mexican Confederation of Industries (Confederación de Cámara de Industriales- Concamin) • National Association of Soda Producers (Asociación Nacional de Productores de Refrescos A.C. - ANPRAC)
Chile	Government	• Ministry of Health (Ministerio de Salud- MinSal) • Ministry of Finance (Ministerio de Hacienda)
	Civil Society	• Front for a Healthy Chile (Frente por un Chile Saludable)
	Academia	• Nutrition and Food Technology Institute (Instituto de Nutrición y Tecnología de Alimentos- INTA) • Escuela de Salud Pública, Universidad de Chile
	Private sector	• National Association of Beverage Producers (Asociación Nacional de Bebidas Refrescantes –ANBER) • A.B.Chile (Alimentos y Bebidas Chile)
Colombia	Government	• Ministry of Health (Ministerio de Salud y Protección Social- MinSalud) • Minsitry of Finance (Ministerio de Hacienda y Crédito Público)
	Civil Society	• Alianza por la Salud Alimentaria • Educar Consumidores
	Academia	• Universidad Javeriana
	Private sector	• Postobón • Industrial Associates of Colombia (Asociación Nacional de Industriales- ANDI) • National Federation of Comerce (Federación Nacional de Comerico – FENALCO) • Superintendence of Industry and Commerce (Superintendecia de la Industria y el Comercio - SIC)

Figure 2

Stakeholders identified to be involved in the SSBs policy making by country

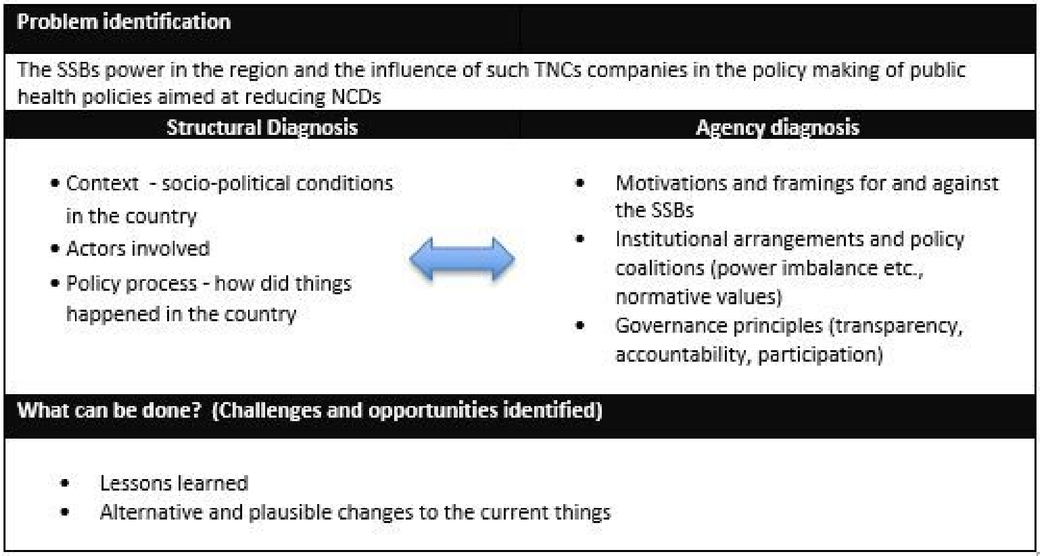

Figure 3

Analytical framework based on problem driven political economy framework Overseas Development Institute

- Transparency on how the amount of levy was agreed (Mexico and Chile).
- Transparency on how the vote against the soda tax measure came about (Colombia)
- Accountability instruments to disclose the allocation of soda tax revenue expenditure for public health programs (Mexico and Chile).
- Clear influence of the TNCs on the amount of the levy (Mexico and Chile) and the vote against the tax (Colombia)
- The use of unbalanced multi-stakeholder arrangements in the policy process and policy evaluation. TNCs representatives outweighing the CSO representatives included (Mexico).
- Conflicted and competing interests of stakeholders participating in the policy process (design and evaluation)

Figure 4

Governance gaps Identified in the cases