



Contents lists available at ScienceDirect

Health Policy

journal homepage: www.elsevier.com/locate/healthpol



Six lessons from introducing sweetened beverage taxes in Berkeley, Cook County, and Philadelphia: A case study comparison in agenda setting and decision making

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ARTICLE INFO

Article history:

Received 30 September 2019
Received in revised form 19 May 2020
Accepted 1 June 2020

Keywords:

Taxes
Sugar-sweetened beverages
Health policy
Policy analysis
Obesity prevention
Nutrition policy

ABSTRACT

Sweetened beverage (SB) taxes have recently been introduced to prevent obesity by several governments, but limited information on related policy adoption processes hampers further diffusion. We investigated the agenda-setting and decision-making phases of SB tax reforms in Berkeley and Philadelphia (where it was successfully adopted), and Cook County (where it was repealed). A web-based survey, semi structured stakeholder interviews, and a local media coverage analysis were used to collect information. Findings were structured and analyzed using the health policy triangle of Buse, Mays and Walt. Six general lessons emerged. First, the policy was coupled to existing high-agenda items (e.g., financing pre-kindergarten in Philadelphia). Second, policy framing had to align prevailing political sentiments, as expressed in media (e.g., 'Berkeley vs. Big Soda' echoed skepticism of corporate influence in politics). Third, existing tax policies and political decision-making rules were important (e.g., confusion how the SB tax related to state and federal taxes fueled Cook County opposition). Fourth, the tax structure required technical and political considerations during policy formulation (e.g., artificially-sweetened beverages were included in Philadelphia to counteract arguments that the tax was regressive). Fifth, it was important to build an advocacy coalition upfront (e.g., the Berkeley coalition was constructed prior to announcing the attempt). Sixth, successful advocacy coalitions were locally grounded and influenced local media (e.g., the Cook County opposition engaged local retailers).

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1. Introduction

The evidence base for sweetened beverages (SB) taxes as a cost-effective public health policy has accumulated over the last years. A recent meta-analysis of real-world effect studies concludes that a 10 % SB tax significantly reduces sales, purchases, and intake of SB taxes by about 10 % [1]. Simulation studies suggest that SB taxes may reduce the disease burden and healthcare expenditure caused by tooth decay and obesity-associated diseases [2,3].

It is therefore a promising development that several governments have adopted SB taxes in recent years. About 170 million consumers paid SB taxes in the European Union in 2018. In the US, SB tax policy diffusion accelerated on the local level in 2016 and

2017, but it has attenuated since 2018 with established policies in jurisdictions representing a total of about five million people. Along the European Union and US, an SB tax has been introduced in Brunei, Chile, Mexico, the Philippines, Saudi Arabia, South Africa, Sri Lanka, Thailand, the United Arab Emirates, and several islands in the Caribbean and Pacific [4].

That leaves many governments that still do without SB taxes. The spread of SB taxes can be accelerated if their policy enablers and disablers are better understood. These do not solely consist of elements related to tax design and evidence on public health impact, but also relate to the broader policy context and factors shaping the policy process including stakeholder behavior. This type of policy analysis may be particularly important because SB taxes target a specific industry with vast commercial interests [5].

Comparative case studies on the adoption of SB tax policies in different health system settings are among the few research designs that can inform such policy analyses [6]. Academic literature has so far primarily focused on the potential health impacts of SB taxes.

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Wright et al. [7] conducted a review to investigate what type of research has been published on innovative health taxes, and found that fifty-one studies, executed between 1990–2016, investigated behavior change. In contrast, we could find only two peer-reviewed studies that conducted a policy analysis of the adoption of SB taxes. One study compared the failed attempt to introduce an SB tax in New York City (NYC) to other obesity control measures [8], the other compared the policy process of SB taxes on four Pacific islands [9].

Since the review of Wright et al. [7] additional policy analyses have been published [10–15]. A study on the SB tax policy process in Colorado and Kansas [13] was performed. Purtle et al. [11] and Kane and Malik [15] examined the policy process of the Philadelphia SB tax. Jou et al. [14] focused on strategic messaging in unsuccessful local US SB tax attempts. Hagens et al. [10] compared the policy context and content of 13 cases but did not specifically focus on the policy process of adopting SB taxes.

This paper adds to this emerging field of research by investigating the agenda-setting and decision-making phases of SB tax adoption of three local US governments: Berkeley (California), Cook County (Illinois), and Philadelphia (Pennsylvania). Collected information on these case studies is structured and analyzed using the health policy triangle of Buse, Mays and Walt [16], which focuses on policy content, context, process and actors. A detailed narrative of the agenda-setting and decision-making processes in the 3 case studies is provided. Our analyses helped us to identify general themes emerging in all 3 case studies, that are presented as “six lessons learned”.

2. Methods

In this section we first describe how we selected our case studies. Successively our data sources are described: a web-based survey, semi-structured interviews, and a local media coverage analysis. It is explained how we drafted narratives of all three cases, and the final paragraph provides a short description of the applied analytical process for identifying themes.

2.1. Sampling justification

We opted to investigate SB taxes in US cities to make cases as comparable as possible. We purposefully selected Berkeley, Philadelphia, and Cook County. The most important reason why we selected Berkeley and Philadelphia is that these were the first US cities to pass an SB tax. We wanted to contrast these cases to a city or county that did not pass an SB tax successfully. Several US cities attempted SB taxes unsuccessfully [17] and could have been selected, but in Cook County an SB tax was passed initially before it was repealed two months later. We hypothesized this could deliver a more detailed picture of differences between successful and unsuccessful cases. In addition, these cases exhibit some important differences in their policy context. This could potentially enable us to draw some generalizable lessons [18]. In Berkeley the average level of education and income is high. Berkeley is known for adopting health policy primers and has a high level of citizen engagement [5]. In contrast, Philadelphia is a relatively poor city with high inequities. Chicago (the biggest city in Cook County) also knows high inequities [19].

2.2. Survey

A short web-based survey was distributed to purposively selected key informants. The sample included actors who were involved in or closely followed the realization of one of the three SB taxes, with a wide range of professional backgrounds and roles.

Table 1
Characteristics of survey respondents and interview participants.

	Survey respondents, not interviewed	Interview participants
Local politicians	2	3
Public administration	2	0
Local public health academics	1	2
Public health advocacy group members supportive of tax	2	5
Other advocacy group members supportive of tax	0	3
Advocacy group members opposing the tax	1	0
Local news reporters	0	0
Total Berkeley	1	5
Total Cook County	0	4
Total Philadelphia	7	4

Affiliation, policy standpoint (in the case of local politicians, public administration and local academics) and case on which participants reported are not shown to ensure anonymity.

Box 1: Web-based survey questions.

- 1) What was your function/role during the development of the soda tax policy?
- 2) When did you become involved in the debate preceding the decision making?
- 3) Can you identify three factors, events, publications (research/popular media/other), or other critical junctures/circumstances that have had a big impact during the development of the soda tax policy?
- 4) What or who do you think have been the most important stakeholders during the agenda-setting phase of the development of the soda tax policy in your city?
(Respondents could refer to a maximum of ten stakeholders and had to assign their position regarding the tax (high/medium/low support or opposition, or non-mobilized), as well as their perceived level of influence (high/medium/low).
- 5) Do you think the following categorization of dominant policy frames is correct for your city: ‘health frame’ Berkeley, ‘targeted budget frame’ Philadelphia, ‘ambiguous frame’ Cook County.
(An explanation of these terms preceded this question).

We reached out to representatives of the mayor’s or county president’s office, members of the city council or county board, the civil service, public health institutes/advisory boards, locally based academics, advocacy/interest groups that supported or opposed the tax, and local news reporters. An initial list with potential participants was derived based on newspaper articles, and approached by e-mail. Non-responders were sent reminder e-mails every two weeks, up to six in total. We called secretarial support of non-responders when we were unsure if our invitation was sent to the correct e-mail address. A snowballing technique was used to identify additional potential informants. In total, we reached out to 95 persons of whom 21 completed the survey. See Table 1 for respondent characteristics.

The survey listed five questions about the agenda-setting and decision-making phases of the SB tax policy, as well as on the role of stakeholders during these phases (Box 1). A native English speaker, who was not part of the research team, carefully completed an initial version of the survey to make sure questions would be interpreted adequately.

2.3. Interviews

After completing the survey, respondents were asked if they wanted to participate in a semi-structured interview to discuss their responses. Thirteen of the twenty-one respondents were

interviewed from August 2018 to January 2019 by the lead investigator (LH), in a Skype or telephone interview that lasted between 30–60 min. Two participants were interviewed simultaneously, resulting in twelve interviews and nearly ten hours of recorded material. Interviews were transcribed, and LH drafted a summary report immediately after each interview.

2.4. Survey and interview data coding

The survey results and interview transcripts were independently coded by LH and MJ using Atlas.ti 8.3. LH and MJ used a coding scheme that was compiled after discussions with the full research team based on the summary reports, and according to the four elements of the health policy triangle (policy content, context, process and actors) [16]. See Appendix 1 for the full coding scheme. LH and MJ subsequently generated tables with occurrences of their respective coding results and reviewed code co-occurrences using the Atlas.ti co-occurrence table, which provides a visually accessible way to see patterns across the dataset. Differences in co-occurrence were discussed by LH and MJ by going through a selection of transcripts. This method provided a systematic way to discuss interpretation differences.

2.5. Local media coverage analysis

We used newspapers for the local media coverage analysis and to triangulate findings from the surveys and interviews. Based on participants' advice and local circulation figures, we selected the East Bay Times for Berkeley, Philadelphia Inquirer for Philadelphia, and the Chicago Tribune for Cook County. Since the latter showed highly divergent results, we also collected articles published in the Chicago Sun-Times. We included articles that were published from the date when the policy was on the agenda (according to survey respondents) until four days after it was adopted (Berkeley and Philadelphia), or repealed (Cook County). The search strategy in the newspaper databases combined the following words: tax, soda, pop, sweetened beverage, ssb, sugar, and sin. Articles that did not discuss issues related to the local SB tax were excluded. In total, we included 239 articles (296, when the Sun-Times is included).

We assigned the stance towards the tax (positive, neutral, or negative) of all included articles. We also assigned the type of article (editorial, column, letter to the editor, report). LH and MJ first screened article headings independently, and read full texts when the stance was not immediately clear. LH and MJ then discussed articles of which their assignments conflicted. The full research team discussed and decided upon the stance in six articles on which LH and MJ remained unsure.

2.6. Drafting narratives

Based on the information collected via the 3 different sources and structured according to the four elements of the policy triangle of Buse, Mays and Walt [16], we deployed an iterative, cumulative process to identify general themes. The transcript coding results and the media coverage results were first discussed several times with the whole research team. LH then drafted three narratives. These case-specific narratives were structured with the elements of the health policy triangle (policy content, context, process and actors) and were discussed several times to ensure they adequately represent the interpretation of the whole research team. During this process, LH and MJ extensively discussed which quotes to use, to ensure they reflect coding efforts and the media coverage analysis. Some minor editing occurred to quotes to assist the reader's understanding and to maintain confidentiality in some cases.

2.7. Identifying themes

After completing the three narratives, the research team identified general themes using the health policy triangle of Buse, Mays and Walt [16] as an analytical guide. We compared how the elements of the health policy triangle interacted in each individual case, and how case-specific interactions mirror those observed in the other cases. This analysis was split up in two parts. In the first part we related the policy content to the prevailing contextual elements. In the second part we related the characteristics and behavior of actors involved, including the role of local media, to the processes of agenda setting and policy formulation. A central element of this part concerned the role of advocacy coalitions, which we define as 'actors who share policy core beliefs and who coordinate their actions in a nontrivial manner to influence a policy subsystem' [6]. Although our study was not aimed at theory building, we did streamline the description of the advocacy coalitions present in our case studies according to the Advocacy Coalition Framework by focusing on the formation, structure and stability of coalitions, and their resources, beliefs and strategies.

3. Findings

The three narratives below describe our three case studies, starting with a short timeline. We then describe how the policy context interacted with the policy content. Successively, we describe how stakeholders influenced the policy process. The narratives are accompanied by quotes that accurately summarize the case-specific findings for our general themes. All quotes are presented in Table 2.

The findings of our local media coverage analysis are described throughout the narratives and summarized in Fig. 1 and Table 3. Appendix 2 provides the full list of local journal articles and their assignment as positive, negative or neutral towards the SB-tax reform. Coverage in our selection of newspapers was mostly positive in Berkeley, mixed in Philadelphia, and negative in Cook County. Coverage was intense in its volume and criticism prior to decision making, especially before the repeal in Cook County.

3.1. Berkeley

3.1.1. Timeline

Four interviewees indicated that the unsuccessful attempt of nearby Richmond in November 2012 was one of the main motivators to attempt an SB tax in Berkeley. The Richmond experience immediately highlighted the importance of a well-organized advocacy coalition to anticipate on soda industry opposition, and the time required for its coalescence. The local policy entrepreneurs (two council members) therefore did not immediately put the policy on the political agenda but took considerable time to first set up a steering committee with broad expertise and community representation (in this paper called 'advocacy coalition'). Both interviewed local politicians indicated that this coalition was established around September 2013. The measure was announced by around March 2014, leaving plenty of time for campaigning prior to the referendum that was held on November 4, 2014, with 76 % voting in favor.

3.1.2. Interactions between policy context and policy content

It appears that the supportive advocacy coalition was very sensitive to the issues that worried residents, and actively coupled the SB tax to these issues. One local politician mentioned that they realized early that there needed to be a broader constituency base. An opportunity arose when federal funds were cut for a popular school nutrition program in 2012–2013 [20], which formed a basis for the advocacy coalition according to all interviewees and several

Table 2
Quotes that summarize specific general themes.

Lessons	Berkeley	Cook County	Philadelphia
1 Coupling policy to issues already on the agenda	<p>“The soda industry just came in [Richmond] and slaughtered them, it was not a very pleasant sight. It quickly became clear that there needed to be a broader constituency base, and we met with parent leaders from the public schools who indicated that if a portion of the money went to the public schools’ program around nutrition, then they would be supportive.” <i>Local politician</i></p>	<p>“It was to fight obesity and to make people healthy and to fight diabetes. Except here is the problem. We had a budget shortfall of 280 million dollars for our pensions. . . This money wasn’t going to be canned to go and start programs that went into schools and taught children how to eat properly. . . It was strictly a source of revenue that was going to go pay down legacy debt. So, the hypocrisy was smacking right from the get-go.” <i>Local politician</i></p>	<p>“If it wasn’t dedicated to Pre-K it would’ve never passed. I think people are pretty clear about that. . . So you have got to remember that this is all happening in the construct of a state-wide campaign on Pre-K.” <i>Non-health advocate</i></p>
2 Aligning policy framing to political sentiment	<p>“I think that diabetes is much more...I don’t want to say a sexier disease but being overweight is one thing but when you start having your leg cut off or your foot cut off. . . I think to a certain degree we tried to demonize the soda industry. I think the demonization was well deserved by that industry but we probably got carried away a few times.” <i>Local politician</i></p>	<p>“I think in general people aren’t necessarily trustful of the county government to begin with. . . The ‘can the tax coalition’ [a coalition of citizens, businesses, and community organizations actively opposing the tax] was able to really tap into that and say, ‘you know they’re taxing you again..’” <i>Health advocate</i></p>	<p>“We very quickly adopted the framework that we would not be talking, leading at all with the concept of do this because you get healthier. . . [With a health frame] we would have gotten nowhere. Nobody in Philly cares about public health. This is a very unhealthy city. People smoke at higher rates than average in America. People are heavier; it is just not the place to talk about health.” <i>Non-health advocate</i></p>
3 Understanding the institutions of political decision-making and tax policy	<p>[see under stakeholders-outsiders] “[After a member of the steering committee explicitly expressed concerns that the tax targeted minority groups explicitly]. . . I think what that did was put it on the table so that we could deal with it. That’s when we came up with the idea of having an advisory committee that would advise the council. It wouldn’t be legally binding [otherwise a two-third majority would have been needed in the referendum according to California state law] but it would be stated public policy.” <i>Local politician</i></p>	<p>“It was these layers and layers of, sort of arcane tax law and regulations, and what can be taxed, and taxes on taxes and things like that, that really caused a lot of confusion. . . and I think the ability of the beverage industry quite honestly to exploit the confusion.” <i>Local academic</i></p>	<p>“I think James Kenney learned the lessons of Mayor Nutter’s proposals in developing and keeping his on track. He was a councilmember during all that time. He understood all the previous proposals, what holes were in them, and navigated the water successfully from learning from past mistakes.” <i>Health advocate</i></p>
4 Taking technical & political decisions during policy formulation	<p>[see under stakeholders-outsiders] “All that were part [of the advocacy coalition] had a really good sense of Berkeley. . . In any group dynamic, you get people who are nuts or whatever. But it all seemed to work out, and the most important thing is that people worked hard. People who were at the table trying to think through the policy, meaning they talked to voters. . . So there were no ‘prima donnas’ and for political campaigns to be without prima donnas is a rare thing.” <i>Non-health advocate</i></p> <p>“The people of Berkeley are very familiar with organizing and the political process. . . And I think they also feel like their influence on the process is higher than in the rest of the country”. <i>Health advocate</i></p>	<p>“It was her policy. She introduced it, and she fought for it for quite a long time. . . Her voice carries a lot of weight with the commissioners. . . So, when she decided to go ahead, I think she brought a lot of people on board just because of the relationships that she formed over her years in the county.” <i>Local academic</i></p>	<p>“I applaud Philadelphia Mayor Jim Kenney for introducing a plan to provide universal preschool for all of his city’s 4-year olds. . . But I do not support Mayor Kenney’s plan to pay for this program with a regressive grocery tax that would disproportionately affect low-income and middle-class Americans.” <i>Column by presidential candidate Bernie Sanders²⁶. This led to the inclusion of diet beverages as these are consumed more by people with higher incomes.</i></p> <p>“Philadelphia is a blue-collar community historically, and with a really strong union presence. And that union presence permeates through city council, right?...I don’t know what deals were made on a political level, of look you vote for the sugar tax, I’ll repave all your streets and have trash hauled out every week. I don’t know, this is Philly right. But backroom deals obviously were made.” <i>Health advocate</i></p>
5/6 Structure of the advocacy coalition	<p>[see under stakeholders-outsiders] “All that were part [of the advocacy coalition] had a really good sense of Berkeley. . . In any group dynamic, you get people who are nuts or whatever. But it all seemed to work out, and the most important thing is that people worked hard. People who were at the table trying to think through the policy, meaning they talked to voters. . . So there were no ‘prima donnas’ and for political campaigns to be without prima donnas is a rare thing.” <i>Non-health advocate</i></p> <p>“The people of Berkeley are very familiar with organizing and the political process. . . And I think they also feel like their influence on the process is higher than in the rest of the country”. <i>Health advocate</i></p>	<p>“It was her policy. She introduced it, and she fought for it for quite a long time. . . Her voice carries a lot of weight with the commissioners. . . So, when she decided to go ahead, I think she brought a lot of people on board just because of the relationships that she formed over her years in the county.” <i>Local academic</i></p>	<p>“Philadelphia is a blue-collar community historically, and with a really strong union presence. And that union presence permeates through city council, right?...I don’t know what deals were made on a political level, of look you vote for the sugar tax, I’ll repave all your streets and have trash hauled out every week. I don’t know, this is Philly right. But backroom deals obviously were made.” <i>Health advocate</i></p>

Table 2 (Continued)

Lessons	Berkeley	Cook County	Philadelphia
5 Building an advocacy coalition early	<p>“First when we got started, we had no campaign structure to speak of. So, I sponsor an academy of young people who are learning to do political community organizing. So, they made up the first folks to talk to voters. . . Once the volunteers started coming, one and then two and then ten and then twenty and it grew. This initial group of young people provided the structure and the discipline to get all the volunteers focused.”</p> <p><i>Non-health advocate</i></p>	<p>We had about eight weeks to work on the campaign prior to the vote actually coming up in the county board. We did not have the time to properly educate the public nor really a lot of the commissioners.”</p> <p><i>Health advocate</i></p>	<p>“I had our folks get there [Mayor’s budget address] and we completely packed the one balcony, but I’m staring across the other balcony which is empty at this time and I’m just thinking, oh, the soda companies and the Teamsters are gonna fill up the other side and all of a sudden PCCY brings in another hundred people and fills in the other balcony. We hadn’t really coordinated at that point yet. . . That’s when I knew we had a great advocacy partner in PCCY.”</p> <p><i>Non-health advocate</i></p>
6 Locally grounded advocacy coalition	<p>The pro-tax law signs were just everywhere, and it was so rare to see any anti-tax lawn signs. . . They’d make their own pro tax signs even, so there’s even ‘grassroots’ signs on people’s fences and cars. . . I think these homemade signs genuinely reflected people’s support for the tax.”</p> <p><i>Local academic</i></p>	<p>“The most important part is this. The opposition came in massive force from the people of Cook County. . . People were all sharing [receipts with the separate payment of the product and the tax] on their social media.”</p> <p><i>Local politician</i></p>	<p>“We were about very public testimony, very public events. Crowd building and making visits with lots of constituents, whereas that was complemented by sort of that inside political game. . . We weren’t in direct communication with the mayor’s office that way. So, we kind of had to trust that that was happening, knowing they had a good team around them that we’re good at this stuff.”</p> <p><i>Non-health advocate</i></p>
Stakeholders - outsiders	<p>“It was obvious that they [people demonstrating against the tax] were paid by the industry. They were not part of the community. They had no notion of who we were. They [soda industry] plastered the local transit stations with big advertisements. . . They just threw money at this thing and people felt offended. They felt that they were coming from the outside, trying to affect our elections, and it got people angry.”</p> <p><i>Local politician</i></p>	<p>“They were able to go into their distribution centers and their actual facilities in Cook County and rally their workers, and so it was employees of Dr. Pepper, Snapple- who also live in Cook County who then would come forward and say, you know if this tax goes into place I’m going to lose my job. And that was in the several different rounds of budget hearings during the passage and the repeal.”</p> <p><i>Health advocate</i></p>	<p>“They [people demonstrating against the tax] loaded up council meetings. Now, when I went around and checked the license plates of people, they were mostly out of state. . . But their guys were all white. And the women we were bringing were all Latino and black. And it really was very stark in the eyes of councilmembers. I mean the council is mostly black, very mixed. . . They ended up being like a giant.”</p> <p><i>Non-health advocate</i></p>

Table 3
Stance of newspapers articles towards local sweetened beverage tax.

Stance	Positive				Neutral				Negative				Total
	Editorial	Column	Letter	Report	Editorial	Column	Letter	Report	Editorial	Column	Letter	Report	
Berkeley				12				8					21
Philadelphia	1	8		5		1	3	6		3		4	31
Cook County		1	13	1		2		47	17	29	37	40	187
			4	4		2		22	6	3	2	14	57

See Appendix 2 for the full list of 296 included articles and their assignment by the research team.

media reports. Other foundational elements were the substantial health inequity and social disparity between white, black, and Hispanic residents. These inequities were highlighted in a report of the Berkeley public health department. Four interviewees indicated this report had impact as it was published during the early stages of advocacy coalition development.

The SB tax was not automatically seen as a way to address these health inequities by all members of the advocacy coalition, however. Building on the experience of Richmond, where the soda industry split the minority communities on the narratives of the regressive nature of SB taxes, substantial efforts were made to address underlying skepticism of minority groups around the financially regressive nature of SB taxes. Four interviewees mentioned how this fear was tackled by the proposal of an advisory committee that would guide city council on how revenue should be spent. This committee had to include people with a background in community nutrition programs, and as councilmembers were to select these advisors, it would represent all minority groups [21]. Since

the advices of this committee were non-legally binding, the SB tax required a simple majority. If the tax revenue would be earmarked to specific causes, a two-thirds majority would have been required according to California state referenda law. Four respondents indicated that not having to achieve a supermajority gave the advocacy coalition the trust that they could win the referendum.

Timely poll results then showed that residents trusted city council to use the revenue adequately [22]. These results were articulated extensively in media. One health advocate and a local academic indicated this public trust in city council relates to the local political awareness and community engagement. The political awareness of Berkeley residents reflected in policy framing. Berkeley has a history of being skeptical of large corporations [5]. The pro-tax message ‘Berkeley vs. Big Soda’ therefore resonated well. Equally important was the focus on diabetes rather than obesity. Four respondents mentioned this decision was well-elaborated and based on the notion that many people believe obesity is a personal problem, whereas diabetes relates more

closely to ethnic disparities and is perceived less as a personal problem.

A one-cent per ounce tax that excludes artificially-sweetened beverages (ASBs) logically followed the focus on diabetes. Some products were exempted for ease of implementation, but one health advocate indicated they were cautious to ensure it covered beverages that upper-class residents consume more often. All interviewees emphasized they opted to make distributors of SSBs responsible for paying the tax, rather than retailers, in line with the 'Berkeley vs Big Soda' messaging and local political sentiment.

3.1.3. Stakeholders characteristics and behavior during the policy process

Our observations suggest that the policy context was successfully considered in the Berkeley SB tax policy structure and framing efforts. Participants unanimously considered the local network of the advocacy coalition as pivotal. This coalition consisted of two council members who initiated the measure, leaders of various minority groups (African Americans, Hispanics), the school district, the Ecology Center (a non-profit community organization), churches, parents aiming for the continuation of the school nutrition program, pediatricians, dentists, service unions (public employees, nurses, teachers), local nutrition leaders, and some grocery store and restaurant owners.

All participants mentioned that these actors mobilized their precincts and recruited their networks of volunteers for the campaign. A non-health advocate explained that the campaign was disciplined from the start because of modeled behavior of community leaders and a well-elaborated first outreach action. Young people who were learning to do political community organizing went door-to-door first, with the effect that a positive momentum spread exponentially in the local community. Participants unanimously described the rapid spread of this grassroots movement. Preachers preached about the measure from their pulpit, there were talks about excessive sugar intake on schools and during exhibitions, residents placed lawn signs, and campaign volunteers reportedly knocked on every door in Berkeley.

The high level of organization of the advocacy coalition evoked this grassroots movement, but four interviewees indicated it was an expression of the genuine feelings of residents toward the issues the measure addressed, as expressed by pro-tax lawn signs that many residents placed near their own homes. Parallel to the grassroots efforts, the advocacy coalition effectively formed a political coalition, according to both participating local politicians. The entire city council and all council candidates endorsed the tax, because the two council members that were part of the advocacy coalition were able to explain the ethnic health inequities report in an understandable manner to their peer politicians.

One health advocate and one academic reported it was not challenging to attract positive media coverage because of all the grassroots actions. Newspaper articles mainly reported how supportive Berkeley residents were of the tax and that Berkeley could be the first US city to pass an SB tax. The 'irresponsible behavior' of the soda industry was also emphasized. The soda industry did try to get local corner stores and individuals to oppose, and all interviewees mentioned they were involved in 'AstroTurf lobbying,' a term used to describe artificial grassroots campaigns created by public relations firms. These actions backfired, however, as people had the impression that outsiders were trying to affect their elections.

The industry also placed advertisements that pointed out policy loopholes. This did not resonate well according to one health advocate, because of a focus on "lame" technical issues such as the exemption of certain drinks. By contrast, the supportive advocacy coalition was very context-sensitive in the buildup of their advocacy coalition, which all interviewees who were part of this coalition explained by reference to group dynamics and charac-

teristics of individual members. Interviewees also noted that the Bloomberg Foundation supported the advocacy coalition financially and with polling information, shortly before the referendum [23].

The potential spread of the policy in other jurisdictions was an important final point that one local politician and one non-health advocate raised. The advocacy coalition believed that an SB tax could pass first in Berkeley to trigger a snowball effect. This aim touched upon the pride and political engagement of residents and was a cornerstone of the advocacy coalition and the energy released in the campaign. This point made one local politician state that the campaign was "the most exciting thing I've ever done in my life".

3.2. Cook County

3.2.1. Timeline

One local academic and one health advocate mentioned, and several media articles reported that the adoption of SB taxes in other US jurisdictions initially sparked the idea in Cook County. With the extensive media coverage of the policy, a detailed timeline can be constructed. The local policy entrepreneur and Cook County board president, Toni Preckwinkle, first brought the proposal onto the political agenda around the end of August 2016. By November 10, 2016, the county board had to vote whether or not to adopt the measure, garnering very little time to build an advocacy coalition. The vote went down 8–8, and for the first time in her term, Toni Preckwinkle herself cast the vote enabling the measure to pass 9 to 8. Implementation was subsequently planned for July 2017. By February 2017, an opposition campaign began aiming to repeal the tax. The retail association felt there was too little guidance on tax implementation and filed a lawsuit in June 2017. This delayed implementation until August 2, 2017. During this delay, negative media coverage accumulated (Fig. 1). Media stories described how people on food assistance could not be charged the tax, as this was not allowed under federal sales taxes rules. Media also described that the tax had to be passed onto consumers according to state law, which meant it had to be demarcated at the register. All this confusion exacerbated an already negative public opinion, until the measure was repealed under a 15–1 vote on October 11, 2017. Of note, four months thereafter reelections took place.

3.2.2. Interactions between policy context and policy content

All interviewees mentioned there was an urgency to close a budget deficit, which explains the rapid course of action prior to initial adoption. However, this budget deficit was not an issue that the general public found valuable, and the original policy framing centered around childhood obesity was quickly perceived disingenuous by both opponents and the few (health) organizations that supported the tax because it also included ASBs. Combined with the tight timeframe, this made gaining support on the health narrative almost impossible:

Later in the process a principal (stated) aim was that the tax would prevent layoffs in the public sector due to the budget deficit. Although this did generate support among public sector unions, it was heavily criticized in the media. Several editorials, columns and letters were published that portrayed the tax as 'another cash grab', suggesting the county should just 'tighten its belt'. These articles articulated an existing public distrust in the county government. One health advocate mentioned this distrust stems back to the fact that Cook County historically knows high county taxes.

3.2.3. Stakeholders characteristics and behavior during the policy process

Our observations suggest that the structure and policy framing of the Cook County SB tax did not sufficiently account for the policy context. This oversight is evident in the absence of an organized

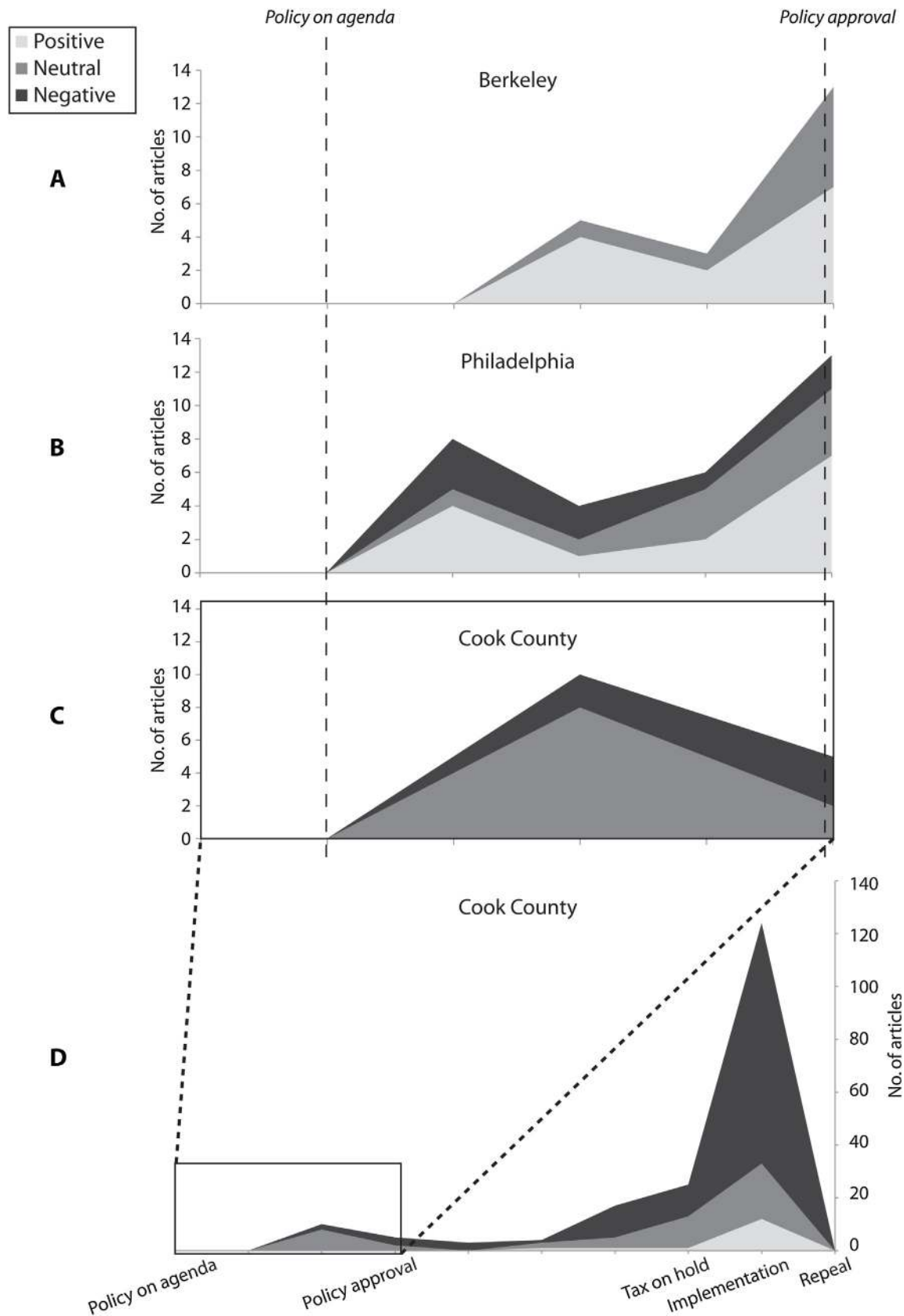


Fig. 1. Volume and stance of included local media articles during the agenda-setting and decision-making phases of the sweetened beverage tax policies in Berkeley, Cook County and Philadelphia.

advocacy coalition, followed by skillful efforts of local opposition to generate locally grounded resistance.

Two health advocates and one academic indicated that supportive organizations like the American Heart Association and the Illinois Public Health Institute had already been working on SB tax proposals on the state level for years. It seems that these organizations had limited access to core policymakers, as these interviewees pointed out that these organizations were only approached by supportive commissioners after the measure had already been discussed in county board. Despite these circumstances, the policy did pass initially. All interviewees mentioned this related to Toni Preckwinkle and the weight of her voice among commissioners.

In summary, all interviewees stated that the pro-tax coalition was not able to recover from their false start because of mixed framing approaches, a general public distrust in government, and the lack of shared policy ownership. By contrast, all interviewees stressed how the opposing advocacy coalition conducted a well-orchestrated repeal campaign, by reaching out to media outlets that extensively covered the history of high county taxes, the confusing tax structure, the potential of cross-border shopping, and the effects on local retailers, local soda industry workers, distributors and restaurant owners. This negative coverage fueled opposition and was part of the reason why chapters of the Teamsters union and the local chamber of commerce decided to oppose. This local opposition among interest groups eventually lead to popular opposition too. People for instance were sharing their receipts with the separate payment of the product and the SB tax on social media, which went viral according to one local politician.

Outside actors were also involved. Two health advocates and one academic indicated that the soda industry bought advertisements with anti-tax messaging on stores, television, and other media outlets, and financially supported local opposition. Industry also mobilized their workers successfully, who worked and lived in Cook County and pointed out they would lose their job if the tax went into place.

There were also outside actors who supported the tax. According to a local politician, the Obama administration supported the measure, as were prominent philanthropists with donations for the campaign and advertisements. The Bloomberg Foundation was most notable, but in several media outlets their involvement was negatively portrayed, labeling it an outside billionaire becoming involved in local politics.

3.3. Philadelphia

3.3.1. Timeline

Unlike Berkeley and Cook County, Philadelphia experienced failed SB tax attempts prior to the successful attempt in 2016. Former Mayor Michael Nutter attempted in 2010 and 2011, and mainly focused on the positive health impact the tax ought to have [15]. The idea of an SB tax reappeared around the summer of 2015 when mayoral candidate James Kenney conceptualized the tax as a revenue source for investment in pre-kindergarten and public recreation sites. All interviewees and five survey respondents highlighted these issues were high on the agenda, due to an ongoing statewide pre-kindergarten campaign, and the persistent lack of funding for public recreation sites. Two non-health advocates mentioned that interest groups assured Kenney they would support any revenue source if it was earmarked for these issues. However, from our media analysis we learned that the idea of an SB tax was not articulated publicly until several months later. During this period, James Kenney won the mayoral elections and was installed in office on January 4, 2016. He appointed the former NYC health commissioner, Thomas Farley, who experienced the failed SB tax when Michael Bloomberg was mayor of NYC in 2009. The tax proposal leaked to the press on February 28, 2016, one week

prior to its official announcement in the budget address of Mayor Kenney. After three months of campaigning with increased positive publicity towards the voting day, the measure was approved 13–4 on June 16, 2016.

3.3.2. Interactions between policy context and policy content

Participants unanimously considered the use of revenue for popular issues a key enabler. This was both genuine as well as strategic messaging. The structure of the tax logically followed policy framing with the inclusion of ASBs to make it less health-focused and less regressive, as people with higher incomes drink more diet sodas. The well-thought-out policy content was aided by previous experiences. One health advocate and one non-health advocate highlighted that the Berkeley case (by then in place for a year) gave them credibility in the revenue estimates of the tax. This was important given the focus on the investments that the tax would enable.

The failed attempts of Mayor Nutter and NYC Mayor Bloomberg also provided the insight that a health frame would be ineffective, according to one non-health advocate. Health arguments were used, however, but the supportive advocacy coalition carefully orchestrated it did not come across as the leading imperative. For this reason, the role of the health commissioner was downplayed, and nonpolitical health professionals only occasionally articulated health arguments to counteract industry arguments.

3.3.3. Stakeholders characteristics and behavior during the policy process

Our observations suggest that the policy context was successfully considered in the Philadelphia SB tax structure and policy framing. A remarkable finding that we draw from the four interviews was that the ‘inside game’ of political coalition building between the mayor’s office, unions, and lobbyists, was quite separate from the buildup of grassroots support. Communication between the mayor’s office and advocacy groups for pre-kindergarten and public recreation was limited. Yet, this did not indicate a lack of mutual trust. One non-health advocate described how they did public testimony and public advocacy events, while they simply trusted that the mayor’s office was doing a good job at the ‘inside political game’.

This level of trust may have to do with the leadership style of Mayor Kenney and his associates. One non-health advocate mentioned that Kenney was a popular councilmember prior to becoming mayor, with good relationships in both the council and among the unions. All interviewees and two survey respondents indicated that the mayor, the health commissioner, and the policymakers from the revenue and communications departments effectively formed a political coalition.

The ‘outside game’ of building grassroots support brought about many atypical actors, organized in the Bloomberg-funded ‘Philadelphians for a Fair Future’ coalition. One health advocate, two non-health advocates, and two civil servants mentioned Public Citizens for Children and Youth (PCCY) and the Parks Alliance were most instrumental, because these groups mobilized most constituents to public testimonies. Also involved were Friends of the Free Library, the Food Trust, schools, civil service, teachers, and building trades unions, and more typical groups like the American Heart Association. However, the coordination among these actors was clumsy at first. One non-health advocate described that this coalition had not communicated they would demonstrate in support of the tax at its first public hearing in city council. When this advocate arrived though with ‘his people’, he was positively surprised to find far more supportive demonstrators.

Opposing advocacy efforts were stark too according to all interviewees. The opposition included the soda industry, distributors, some restaurants, bars and grocery stores, and unions, most notably

the Teamsters. Opponents packed council meetings and public testimonies, but with participants that did not represent the constituency. One non-health advocate mentioned that this made opposition come over as “a giant”. This image was exaggerated by some actions of the soda industry. One non-health advocate mentioned that the American Beverage Association called random people to convince them the tax was a bad idea, to then put these people through to the office of councilmembers. The effect was that councilmembers became annoyed with a barrage of phone calls of confused residents. This advocate also stressed that industry lobbyists entered the private chambers of councilmembers, while others were waiting their turn. These actions backfired because councilmembers don't want to have the perception that industry interests are more important than constituents.

Other outside actors included the then Democratic presidential candidate Bernie Sanders, who wrote a critical piece on the SB tax for its regressive nature [24]. The inclusion of ASBs mitigated this, according to a civil servant who responded to our survey. Two health advocates and one non-health advocate stressed that the Bloomberg Foundation was also involved, with advertisements to counteract the soda industry campaign, funding of the Philadelphians for a Fair Future coalition, and experience from the NYC SB tax failure.

3.3.4. Six general lessons

The three narratives above point out similar interactions between policy context, content, process, and actors. From these interactions in the 3 case studies, we draw six general themes that are framed as “six general lessons” to enhance actionability of the findings. The first three relate mostly to the interaction between policy context and content. The other three relate to the characteristics and behavior of actors involved during agenda setting and policy formulation. Quotes that accurately summarize these lessons are provided in Table 2.

First, it was important to couple the SB tax policy content to existing issues that were already high on the agenda. These issues were context-specific and not necessarily related to public health. In Berkeley, the SB tax policy was successfully coupled to the loss of revenue for a popular school nutrition program, and ethnic health disparities (highlighted by an impactful report). In Philadelphia, the tax was successfully coupled to the need for revenue for pre-kindergarten and public recreation centers, issues that were already on the agenda for years. In Cook County, the SB tax was adopted initially to fix a pressing budget shortfall.

Second, policy framing must be in accordance with the prevailing local political sentiment, as expressed in media. Berkeley has a history of skepticism of corporate influence in local politics, which was echoed in the ‘Berkeley vs. Big Soda’ campaign message and media coverage. The perceived disingenuousness of obesity framing fueled an already present public distrust in the Cook County government, which was heavily articulated in media coverage. By contrast, a health frame was carefully avoided in Philadelphia, as this would have been perceived as nanny-state policy.

Third, existing structures of tax policies and political decision-making rules formed important policy constraints. Confusion how the SB tax related to state and federal taxes fueled opposition among local retailers and media in Cook County, whereas state legislation on local tax referenda were carefully taken into account in Berkeley.

Fourth, the tax structure required not just technical but also political decisions and flexibility during policy formulation, to ensure the tax structure remained consistent with policy framing and to act upon events. For instance, ASBs were added to the original proposal in Philadelphia, to counteract arguments that solely targeting SSBs is regressive, as people with higher incomes drink more diet sodas. In Berkeley, the tax excluded ASBs and was

levied at the level of distributors, in line with the focus on diabetes and ‘bad behavior’ of the soda industry. The supportive advocacy coalition emphasized these elements of their proposal when the soda industry plastered the local transit stations with big advertisements, which offended residents. By contrast, policy framing initially focused on childhood obesity in Cook County, but this was perceived disingenuous because ASBs remained part of the proposal to raise sufficient revenue for the budget shortfall.

Fifth, building an advocacy coalition had to occur upfront in the policy process. This took time. In Berkeley, considerable time was reserved to generate support among community leaders and politicians, prior to public announcement. In Philadelphia, support was generated among councilmembers, unions, and special interest groups during this stage. Philadelphia also had the experience of two failed attempts. By contrast, supportive interest groups were informed after the tax proposal was already discussed in the Cook County board.

Sixth, the advocacy coalition had to be locally grounded and able to influence local media. This was especially pronounced in Berkeley, where the advocacy coalition consisted of community leaders who successfully activated their precincts. The Philadelphia advocacy coalition represented the constituency of city councilmembers accurately. In contrast, the Cook County opposition successfully engaged local retailers and media. The effectiveness of outside actors that normally do not participate in local policy processes was variable. When their role was overt, a negative image emerged that hindered the attainment of their desired outcome, as was exemplified by the soda industry involvement in Berkeley and Philadelphia, and the Bloomberg Foundation experience in Cook County.

4. Discussion

The six lessons present the overall findings of our analysis. We first mirror these lessons to findings of other SB tax policy analyses. We then reflect on how our lessons relate to an established theory of the policy process (Multiple Streams Framework). We conclude by discussing the strengths and limitations of our study.

4.1. Reflection on other SB tax policy analyses

Our case study of the Cook County SB tax is, to our knowledge, the first empirical policy analysis of this case. Policy analyses of the Berkeley and Philadelphia cases do exist. Analyses of the Philadelphia case also highlight the importance of policy coupling to nonpublic health agenda items, political entrepreneurship, and applying political decisions to the technical tax design [11,15]. Our finding that the focus on ‘bad behavior’ of the soda industry appealed in Berkeley echoes a previous analysis of social media, campaign materials, and local news coverage [25]. The comparative design of our study, and our in depth description of the characteristics and behavior of actors involved can be seen as our main addition to the literature on the Berkeley and Philadelphia cases.

Mosier [13] compared the passage of a soft drinks and sweets tax in 2010 in Colorado, to the rejection of an SSB tax proposal in Kansas in the same year. Both bills were proposed primarily for revenue purposes, but budget purposes were more strongly emphasized in Colorado than in Kansas. According to Mosier, this opened the potential for linkage of health and revenue in Kansas, subsequently leading to more elevated conflict in this case. Our findings also suggest that a clear and explicit way of policy framing is required. Mosier's also found it was important to carefully take into account existing tax policies in the design of the SB tax. The latter was also noted in a comparative analysis of the SB tax policy process in four Pacific countries [9].

Our findings are not entirely consistent with policy analyses of other local US SB taxes. Jou et al. [14] explored the use of strategic messaging in the failed attempts of El Monte and Richmond, California, and found that reinvesting tax revenue into health-related programs holds potential, as does linking SB consumption to obesity and diabetes. Our findings indicate that revenue can also be earmarked to non-health issues (Philadelphia), and that a health focus was not necessarily successful. Health was not leading in Philadelphia, the focus on obesity was perceived disingenuous in Cook County, and in Berkeley the focus was on diabetes, not on obesity. Important anti-tax messages in El Monte and Richmond centered around negative economic effects on businesses and government restriction of personal choice. These arguments were also important in our cases, but we would emphasize the importance of negative effects on local businesses, since we found that both supportive and opposed advocacy coalitions can be successful if they are locally grounded (lesson six). Jou et al. finally point out the importance of clearly structuring the measure, incorporating cultural sensitivity, and providing education on the health effects of SSBs. These factors are consistent with our findings.

Paarlberg et al. [17] conclude that Democratic Party dominance, external financial support for pro-tax advocates, and a political message appropriate to the process are necessary conditions for local US SB taxes. The Democratic Party indeed dominates in our three cases. External financial support was important: the Bloomberg Foundation was involved in all three cases. Having a message appropriate to the policy process was important indeed, but we would extend this by highlighting the importance of coupling the policy to issues that are already high on the agenda.

4.2. Reflection based on the Multiple Streams Framework (MSF)

To explore the replicability of our findings we compare our lessons to the MSF. We do not test this theory, nor was it part of our data collection and analysis. We only use it to see whether our findings fit this empirically grounded theory of the policy process. The MSF emphasizes timing in the creation of a window of opportunity for both agenda setting and decision making. A window becomes more likely if a persistent policy entrepreneur with access to core policymakers promotes agenda change, and when the problem, policy, and political streams are ready for coupling. In the problem stream conditions emerge, which deviate from policymakers' or citizens' ideal states. In the policy stream, policy communities work out alternatives to these problems and conditions until a limited number of viable policy alternatives emerges. The political stream is located at the level of the decision system. Bargaining and powering dominate, as majorities are sought here [6].

It appears that the Berkeley advocacy coalition created an agenda window primarily in the problem stream, by coupling their policy to a focusing event (the loss of revenue for the school nutrition program) and a change of indicators (health inequities published in the public health status report). An agenda window also opened in the problem stream in Cook County (the budget deficit), but another problem (lack of trust in the county government) was coupled to the political stream (reelections were coming up) subsequently, leading to an agenda window for the repeal effort. In Philadelphia, the installation of a new mayor (politics stream) after years of campaigning for pre-kindergarten (problem stream) created a window for an SB tax. By that time there was already an established policy stream, since the former Mayor attempted to approve an SB tax twice. On the basis of this reflection we conclude that creativity was required in the process of coupling the policy and politics stream to the problem stream. The events and changes of indicators that made this coupling possible were highly context specific.

4.3. Limitations and strengths

The main strength of our analysis concerns its empirical basis of web-based survey responses, semi-structured stakeholder interviews and a local media coverage analysis. We found the health policy triangle from Buse, Mays and Walt [16] useful to structure case studies and to derive themes. We do not provide, nor strived for an in-depth analysis of our data with other established theories of the policy process. Our six lessons are nevertheless consistent with previous policy analyses of local US SB taxes. We are unsure whether this also applies to cases outside the US, where SB taxes are mostly adopted by national governments. A study that compared how SB taxes spread across US cities to EU countries for instance found that policy framing seems less focused in the EU, whereas it is very focused in the US. Political ideologies also seemed to interfere less with the coalition governments of EU countries [4].

An important limitation to our findings is the presence of possible sample bias, since most interview participants supported the SB tax. Potentially due to the politically sensitive nature of the topic or personal dissatisfaction with policy outcome, opponents were underrepresented. The perspectives of the participants may therefore not represent the views of all stakeholders, and strategies deployed by opponents may be underrepresented. We therefore recommend further research on the interaction between local advocacy coalitions and outside actors.

Another important consideration is the small sample size of completed surveys and interviews. We nevertheless did experience thematic saturation for all three cases, possibly because of the precise scope of the topic and triangulation with our media coverage analysis.

5. Conclusions

Our analysis lead to six general lessons for policy entrepreneurs with the ambition to successfully put an SB tax on the agenda. These lessons were derived by analyzing the interactions between the policy context, content, process and stakeholder behavior in three case studies. Although more research is needed to explore the theoretical generalizability of our findings, the six lessons on introducing sweetened beverage taxes in Berkeley, Cook County, and Philadelphia by looking at their respective agenda-setting and decision-making processes, can inform policy makers in other settings.

CRedit authorship contribution statement

Luc L. Hagens: Conceptualization, Methodology, Formal analysis, Investigation, Writing - original draft. **Milica Jevdjevic**: Formal analysis, Writing - review & editing, Visualization. **Patrick P.T. Jeurissen**: Conceptualization, Methodology, Writing - review & editing, Supervision. **Niek S. Klazinga**: Conceptualization, Methodology, Writing - review & editing, Supervision.

Declaration of Competing Interest

None.

Acknowledgments

We want to acknowledge the interview participants and survey respondents, who generously shared their time, insights and experiences with us.

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.healthpol.2020.06.002>.

References

- [1] Teng A, Jones A, Mizdrak A, Signal L, Genç M, Wilson N. Impact of sugar-sweetened beverage taxes on purchases and dietary intake: systematic review and meta-analysis. *Obesity Reviews* 2019;20:1187–204.
- [2] Jevdjevic M, Trescher AL, Rovers M, Listl S. The caries-related cost and effects of a tax on sugar-sweetened beverages. *Public Health* 2019;169:125–32.
- [3] Long MW, Gortmaker SL, Ward ZJ, et al. Cost effectiveness of a sugar-sweetened beverage excise tax in the U.S. *American Journal of Preventive Medicine* 2015;49(1):112–23.
- [4] Hageaars LL, Jeurissen PPT, Klazinga NS. Sugar-sweetened beverage taxation in 2017: a commentary on the reasons behind their quick spread in the EU compared with the USA. *Public Health Nutrition* 2018;22(1):186–9.
- [5] Nestle M. *Taking on big soda (and winning)*. New York: Oxford University Press; 2015.
- [6] Weible C, Sabatier P. *Theories of the policy process*, Vol 4. New York: Routledge; 2018.
- [7] Wright A, Smith KE, Hellowell M. Policy lessons from health taxes: a systematic review of empirical studies. *BMC Public Health* 2017;17(1):583.
- [8] Isett KR, Laugesen MJ, Cloud DH. Learning from New York City: a case study of public health policy practice in the Bloomberg administration. *Journal of Public Health Management & Practice* 2015;21(4):313–22.
- [9] Thow AM, Quested C, Juventin L, Kun R, Khan AN, Swinburn B. Taxing soft drinks in the Pacific: implementation lessons for improving health. *Health Promotion International* 2011;26(1):55–64.
- [10] Hageaars LL, Jeurissen PPT, Klazinga NS. The taxation of unhealthy energy-dense foods (EDFs) and sugar-sweetened beverages (SSBs): an overview of patterns observed in the policy content and policy context of 13 case studies. *Health Policy* 2017;121(8):887–94.
- [11] Purtle J, Langellier B, Lê-Scherban F. A case study of the Philadelphia sugar-sweetened beverage tax policymaking process: implications for policy development and advocacy. *Journal of Public Health Management & Practice* 2017;24(1):4–8.
- [12] Tamir O, Cohen-Yogev T, Furman-Assaf S, Endevelt R. Taxation of sugar sweetened beverages and unhealthy foods: a qualitative study of key opinion leaders' views. *Israel Journal of Health Policy Research* 2018;7(1):43.
- [13] Mosier SL. Cookies, candy, and coke: examining state sugar-sweetened-beverage tax policy from a multiple streams approach. *International Review of Public Administration* 2013;18(1):93–120.
- [14] Jou J, Niederdeppe J, Barry CL, Gollust SE. Strategic messaging to promote taxation of sugar-sweetened beverages: lessons from recent political campaigns. *American Journal of Public Health* 2014;104(5):847–53.
- [15] Kane RM, Malik VS. Understanding beverage taxation: perspective on the Philadelphia Beverage Tax's novel approach. *Journal of Public Health Research* 2019;8(1):1466.
- [16] Buse K, Mays N, Walt G. *Making health policy*, 2nd ed. Berkshire: Open University Press; 2012.
- [17] Paarlberg R, Mozaffarian D, Micha R. Viewpoint: Can U.S. local soda taxes continue to spread? *Food Policy* 2017;71:1–7.
- [18] Yin RK. *Case study research. Design and methods*, Vol 5. Thousand Oaks: SAGE Publications Ltd.; 2014.
- [19] US Census Bureau. *All ages in poverty*. In: *Small area income and poverty estimates*, 2017. Washington, DC: US Census Bureau; 2019.
- [20] Bay Area News Group. *Berkeley gala benefits schools gardening and cooking program*. East Bay Times; 2014.
- [21] City of Berkeley. *Ordinance nr. 7,388-N.S. Section 7.72.090 sugar-sweetened beverage panel of experts*; 2014.
- [22] Bay Area News Group. *California poll supports soft drink warning labels*. East Bay Times; 2014.
- [23] Bay Area News Group. *Former New York mayor Michael Bloomberg goes to bat in Berkeley soda tax effort*. East Bay Times; 2014.
- [24] Sanders B. *A soda tax would hurt Philly's low-income families*. Philadelphia Magazine; 2016.
- [25] Somji A, Nixon L, Meija P, Aziz A, Arbatman L, Dorfman L. *Soda tax debates in Berkeley and San Francisco: an analysis of social media, campaign materials and news coverage*. Berkeley: Berkeley Media Studies Group; 2016.