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# The interface between international trade and investment agreements and food environment policymaking: A conceptual framework

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Addressing the global challenge of malnutrition in all its forms will require policy measures to improve food environments, yet progress has been patchy and often slow, particularly for regulatory measures. International trade and investment agreements (TIAs) may limit governments' "policy space" for public health regulation. Constraints have been particularly apparent for public health measures targeting unhealthy commodities, including ultra-processed foods. Challenges and disputes regarding food environment regulation under TIAs (even if successfully defended) can entail significant drain of human and financial resources, and political capital. Lack of awareness or understanding of the implication of TIAs on policy space for regulation can contribute to regulatory chill and policy inertia. Governments lacking capacity to interpret their "legally available" policy space may want to err on the side of caution when there is perceived risk of a formal dispute—even if such threats are unfounded. This paper draws on analysis of literature, trade and investment dispute documentation, and data from inter-disciplinary expert interviews ( $n = 22$ ) to present a new conceptual framework for the potential impacts of TIAs on policy space for regulating food environments. The analysis that underpins the framework focusses on the key policy domains of fiscal policies, front-of-pack nutrition labeling, restrictions on marketing to children, nutrient limits, and product bans. Analysis indicates that regulatory context and stakeholder influence, policy design, and mechanisms associated with TIA rules and provisions intersect in ways contributing to policy space outcomes. This new framework can provide a basis for rapidly assessing policy coherence between TIAs and food environment regulations in these domains. It can also be used to identify areas where further legal analysis would strengthen the development and defense of regulatory proposals. The framework may be applied to nutrition regulation more broadly, given the common themes that emerged across the different domains due to common interests of stakeholders, notably the food industry. It thus provides a basis for analyzing the political economy of regulation to address the commercial determinants of health in relation to unhealthy food and beverages.

## KEYWORDS

policy space, food environment interventions, trade and investment agreements, political economy, public health

## Introduction

There is an urgent need for research to address policy inertia in the regulation of food environments. Nutrition policy makers have the World Health Organization (WHO)'s "best-buys" and best-practice recommendations to refer to, yet uptake has been too slow to address the rising global burden of malnutrition. Most countries have failed to halt the rise in prevalence of obesity and reduce premature mortality from dietary non-communicable diseases (NCDs) (Lin et al., 2020). An emerging body of research indicates that binding constraints on nutrition policy space arising from international trade and investment agreements (TIAs) may hamper governments' efforts to address the growing burden of diet-related NCDs through food environment regulation, thereby contributing to policy inertia (Koivusalo et al., 2009; Friel et al., 2013a,b; von Tigerstrom, 2013; Thow and McGrady, 2014; Thow et al., 2015, 2017a,b; Kelsey, 2016; Ruckert et al., 2017; Barlow et al., 2018; Schram et al., 2019; Milsom et al., 2020; Garton et al., 2021a). However, such constraints are difficult to study empirically, and therefore the scholarship on this issue is largely theoretical.

Regulatory and policy space (hereafter simply referred to as "policy space") refers to "the freedom, scope, and mechanisms that governments have to choose, design, and implement public policies to fulfill their aims" (Koivusalo et al., 2009; p. 105). This concept thus includes the ability or right of states to regulate, the range of content and restrictions that policies can cover, as well as the processes through which policy can be chosen, designed, and implemented. National policy space encompasses both internal and external factors, pressures and priorities. TIAs are one contributing component, along with domestic laws and structures, that determine what governments can and cannot do. Under the purview of promoting freer flows of trade and investment, binding commitments made under TIAs may constrain the way countries can regulate goods, services, and investments to promote public interests (including public health) (Rodrik, 2018; Thow et al., 2022).

In this paper, TIAs refer to trade agreements and/or investment agreements. Trade agreements can be multilateral, involving most parties (e.g., the World Trade Organization, WTO, agreements); plurilateral involving many parties; regional, with membership confined to a specific region; or bilateral between two parties. Investment agreements are mainly bilateral, while combined trade and investment agreements are typically regional or bilateral. Agreements are negotiated between countries, signed, implemented, administered and ultimately enforced through agreed dispute settlement procedures and bodies. There are also informal forums for surveillance of compliance and management of disagreements outside of formal dispute settlement (e.g., the discussion of specific trade concerns at the WTO Technical Barriers to Trade, or TBT, Committee). Finally, there are external bodies that establish international standards and reference points

that are referenced in TIAs (such as the Codex Alimentarius Commission, hereafter Codex, which establishes trade-relevant standards related to food and beverages, e.g., food safety and labeling). Trade disputes are most often arbitrated between states, i.e., Parties to the agreements. In state-state dispute settlement (SSDS), although companies cannot themselves challenge or initiate a formal dispute, they can encourage and support states to do so on their behalf, as has been documented in the challenges of tobacco packaging regulation in Australia and Uruguay (Crosbie et al., 2018; Jarman, 2019). More than 2000 bilateral investment treaties and several important regional TIAs include investor-state dispute settlement (ISDS), wherein companies can challenge government regulations directly (UNCTAD, 2022).

TIAs and the decisions of dispute settlement bodies are binding in a way that global health and human rights covenants are not, as consequences for non-compliance can be enforced through binding dispute settlement processes. These binding TIA rules include, *inter alia*, commitments not to discriminate between locally produced goods and "like" products from other nations, not to adopt regulatory measures that are more restrictive than necessary to promote public interests (including public health), to protect intellectual property rights, and also not to expropriate the property of foreign investors either directly (which is rare) or indirectly by enacting measures that have "equivalent" effects (Labonte and Sanger, 2006a,b). TIAs can also govern who must be consulted in policymaking processes, the adherence to agreed international standards, and an emerging codified understanding of "good regulatory practice" (Labonte and Sanger, 2006a,b; McNamara et al., 2021). These rules are meant to separate *bona fide* regulatory measures (i.e., made "in good faith" to achieve legitimate policy objectives) from those that constitute hidden forms of discrimination, protectionism or expropriation.

However, as indicated by several examples of WTO disputes (World Trade Organization, 2010a,b,c,d, 2014), investment disputes (UNCTAD, 2013a,b,c), and processes in informal trade fora (Kelsey, 2017; Thow et al., 2017a,b; Barlow et al., 2018; Barlow and Thow, 2021), these constraints on policy space can restrict governments' autonomy to enact policies to achieve public health, environmental and social development objectives, including mitigating the negative impacts of trade liberalization in harmful commodities. This has sparked a wave of critique from international legal, development, public health, environmental, and political science scholars (Wade, 2003; Page, 2007; Rodrik, 2011, 2018; Chan, 2013; UNCTAD, 2014; Fukuda-Parr and Treanor, 2018). Critics have long raised concerns regarding the WTO agreements—in particular, the General Agreement on Tariffs and Trade (GATT), the General Agreement on Trade in Services (GATS), and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)—as constraining low- and middle-income countries' (LMICs)' ability to autonomously pursue development policies (Wade,

2003; Page, 2007). More recently, scholarship has revealed how the international trade and investment regime, especially through the proliferation of “WTO plus” bilateral and regional investment treaties and free trade agreements, has evolved into a system that often reaches behind borders into domestic policy arenas in ways that threaten the post-2015 development agenda (Chan, 2013; UNCTAD, 2014; Fukuda-Parr and Treanor, 2018; Rodrik, 2018; Labonte et al., 2019; Labonté et al., 2020; McNamara et al., 2021). Critically, disputes do not actually have to occur to influence policy making; the mere threat of a TIA challenge or dispute is often enough to discourage governments from pursuing a policy, in what is known as “regulatory chill”.

In a normative sense, decisions made by dispute panels or other influential actors/institutions (e.g., about food environment or other public health policies in a trade context) may also shape future negotiations and interpretations of agreements. These all have an impact on policy and regulatory decisions at the national level, which may play out at different points in the domestic policy cycle (i.e., agenda setting, policy design, decision making, implementation, evaluation).

Regulating unhealthy foods to address the commercial determinants of health undeniably has impacts on industry. As unhealthy foods are a common product of trade and investment, these industry impacts can effectively trigger the use of TIAs, either by industry or trade partner governments, with arguments linked to economic concerns. As such, international trade law and international investment law introduce constraints on policy making that may not reflect domestic policy priorities, but those of other states and the private sector (Wagner, 2014). The critiques and challenges to the primacy of these agreements, and to interpretations of their various provisions, are part of a contested dynamic between actor-stakeholders in various related policy systems.

Constraints on food environment policy space have already occurred (Larios, 2005; Thow et al., 2017a,b; Barlow et al., 2018), and studies suggest future risks to health and food environment policy space posed by emerging international trade agreements and investment treaties (McGrady and Jones, 2013; Friel et al., 2013a,b; von Tigerstrom, 2013; Thow and McGrady, 2014; Marquez, 2015; Thow et al., 2015; Hirono et al., 2016; Schram et al., 2018a,b). A few examples help to illustrate different types of policy space constriction in the context of food environment regulations. There are certain policies that simply cannot be pursued within the bounds of TIA commitments, for example an increase in tariffs beyond agreed rates, or import bans of goods where there are domestic “like” products. Such constriction was seen when a population nutrition measure to prevent NCDs in the form of an import ban on turkey tails (a high-fat off-cut) to Samoa was required to be lifted when the country acceded to the WTO in 2011 (Thow et al., 2017b).

Front-of-pack nutrition labeling (FOPL) regulations for unhealthy food products is an example of a food environment measure for which Member states have raised specific trade

concerns (STCs) in the WTO’s TBT Committee, prompting the Member states behind the regulations to provide clarification, additional supporting evidence, or further justification (Friel et al., 2013b; Thow et al., 2017a). Though it is not a formal challenge or dispute, this process has the potential to cause regulatory chill, leading to delayed policy implementation, and/or weakening or abandonment of proposed regulations (Schram et al., 2018a).

Although there have been strong contributions from legal scholarship and public health nutrition literature, no framework exists specifically to assess policy space for food environment interventions at a national level, taking into account variable contextual factors and specific binding trade and investment commitments. Developing a better understanding of the potential constraints TIAs pose for policy space to address poor nutrition and diet-related NCDs through food environment regulation will assist in both the design of more robust nutrition policy interventions, and inform the negotiation of future TIAs that preserve food environment policy space. Such understanding may also help government policy makers to identify, critically assess and/or resist attempts by trade partners or commercial actors to restrict their policy space for food environment regulation through TIAs.

## Research questions

The conceptual framework presented in this paper arose from the research undertaken for the lead author’s doctoral thesis, supervised by the co-authors. Our hypothesis was that TIAs constrain policy space for food environment regulations, in a way that limits uptake of “best practice” nutrition policy. Our aim was to examine how these constraints occur (through what mechanisms, in what contexts), and what can be done to preserve this policy space. The investigation had three underlying lines of inquiry:

**Global experience:** How have TIAs been found to impact policy space for regulating unhealthy foods and beverages? What aspects of TIAs (e.g., specific chapters, rules, provisions) are relevant to governments’ policy space for priority food environment interventions?

**Policy design and context:** How do different policy formulations result in different levels of vulnerability to policy space constraint? What aspects of the policies themselves are likely to be affected by binding TIAs, and what are the pressure points? How might contextual factors, such as actors and institutions, influence the mechanisms of TIAs’ influence on policy space?

**Preserving policy space:** What are the key leverage points or strategies to increase/preserve policy space to achieve public health nutrition objectives via best practice in food environment regulation?

## Methodological approach

This research was carried out through a critical realist inquiry with a political economy lens, using three qualitative methodologies: realist review, policy scenario analysis, and stakeholder analysis. The approach to analysis was underpinned by previous conceptualisations of health policy space constraints arising from TIAs and theories of power, blending and expanding upon these existing theories to arrive at a new conceptual framework.

## Previous conceptualisations of health policy space constraints arising from TIAs

Fidler et al. described three mechanisms through which trade agreements could encroach on policy space, in their legal review of the WTO General Agreement on Trade in Services (GATS) from a health policy perspective (Fidler et al., 2006).

- Substantive constriction (i.e., direct limits on the range of policy instruments available to governments),
- Procedural constriction (i.e., the process of policymaking is limited or influenced), and
- Structural constriction (i.e., a shift from public to private provision of goods and services such that the economic and regulatory power of private sector actors is expanded)<sup>1</sup> (Fidler et al., 2006).

This framework was subsequently applied by Baker et al. (2014) and Hawkes (2015) in describing the nature of the threats trade and investment liberalization pose for governance in nutrition and NCD prevention.

In addition to these three mechanisms, the fourth mechanism relevant to food environment regulation is regulatory chill, as mentioned previously (Schram et al., 2018a). This refers to “government’s response to a high (perceived) threat of [a trade dispute or] investment arbitration by failing to enact or enforce *bona fide* regulatory measures, or by modifying measures to such an extent that their original intent is undermined or their effectiveness is severely diminished” (Tienhaara, 2011; p. 5–6). Regulatory chill can occur in response to a real or perceived direct threat of challenge under TIAs, but

<sup>1</sup> From a general public health perspective, this could be relevant to the privatization of health care or health insurance. However, in the context of food environments, this is not a shift we would expect to see, aside from possibly in the procurement of food and beverage services in institutional settings. Even then, these tend to be small contracts that do not fall under the scope of procurement commitments in TIAs. This definition of structural policy space constriction was not deemed particularly relevant in the context of policy space for food environment regulation.

its definition also includes internal institutional and systemic influences on domestic policymaking, resulting in internalized regulatory chill (Van Harten and Scott, 2016; Kelsey, 2017).

Schram et al. distinguish specific “response chill” through corporate influence or threat (e.g., through investor-state dispute settlement, ISDS), from “precedential chill” (based on past arbitral decisions), and “anticipatory chill” (internalized by policy makers based on uncertainty of policy (in)coherence with trade/investment, and therefore moderated by policy maker knowledge) (Schram et al., 2018a). Potential outcomes include policy being preserved and implemented “as is” or in modified form (which may or may not result in a challenge), or policy being delayed, compromised, or abandoned in response to perceived risk of a challenge. Other costs of pursuing a policy with potential for challenge may include reputational risk, expenditure of political capital, and the opportunity cost of diversion of efforts/human resources and budgets in order to confront or avoid a challenge (Van Harten and Scott, 2016). Contributing factors include the treaty context (i.e., specific content and dispute settlement mechanisms), the award context (relating to arbitral decisions), and the arbitration context (including e.g., a lack of precedent, means of appeal, potential arbitrator conflicts of interest, and legal fees and compensation). Political and economic factors, such as country resources, level of risk tolerance, political will/public support, political ideology, and the economic power of relevant actors/sectors may also influence the policy response (Schram et al., 2018a).

## Theories of power

Political economy is concerned with how power and resources are distributed and contested in different contexts, and the implications for outcomes (e.g., in relation to development, health, and social justice). Political economy analysis looks beneath formal structures to reveal the interests, incentives and institutions that enable or constrain change. Within this lens, we drew upon theories of power from Lukes (1974/2005) and further elaborated by Gaventa (2003), including three dimensions:

- Decision making/formal authority (most visible) (Lukes, 1974). This involves direct, empirically observable, openly-contested public issues (Gaventa, 2003).
- Design of institutions, norms, and “rules of the game” that operate systematically and consistently to the benefit of certain interests (persons, groups) at the expense of others (Lukes, 1974). This is also referred to as “mobilization of bias” present in institutions (Gaventa, 2003).
- Ideological (invisible) influence, whose role is suppressing latent conflicts within society (Lukes, 1974). This may, for example, keep certain policy issues off the agenda,



or influence expectations, so that inequities become non-issues (Gaventa, 2003).

We also drew upon the concept of “policy space analysis” put forward by Grindle and Thomas (1991) in relation to development policy, and as applied by Crichton (2008) and Thow et al. (2016, 2018, 2021) in answering public health and nutrition policy space questions, respectively. Grindle and Thomas (1991) policy space analysis framework highlights the interplay between context (e.g., actor characteristics and environment), policy characteristics (including public and bureaucratic impact and potential conflict, resources and political support for implementation and sustainability), and agenda-setting circumstances (e.g., the nature of problem, advocacy, and decision-making concerns) in policy change. Importantly, the framework characterizes policy space as being fluid, responding to the dynamics between forces that either support, or constrain policy space.

## Realist review

Initially, a realist review examined the mechanisms through which policy space has been affected by TIAs in different contexts, through global experience in regulation of unhealthy foods and non-alcoholic beverages. The process served to begin identifying which factors (organized into contexts, mechanisms, and outcomes) are important to include in a framework of policy space for food environment regulation with respect to trade and investment. The review focused on published evidence and interpretations of the relevance of existing TIA rules to a sample of priority food policy domains. These included fiscal policy, FOPL, food standards and product bans relating to nutrient composition, public procurement<sup>2</sup>, and restrictions on marketing and advertising to children. Methods and results for this study are published elsewhere (Garton et al., 2021a).

## Policy scenario analysis through vignette interviews

Our next objective was to conduct a close examination of how policy design and context contribute to the mechanisms of policy space constraint, through perceptions of expert informants. Due to the complexity of assessing policy space with respect to dynamic contextual factors and variable policy formulations, a method was needed that was flexible to conditions of uncertainty, human choice and complexity. We

therefore drew upon the concept of *scenario analysis* which explores implications of plausible alternative futures in a manner that reflects a normative dimension and incorporates different perspectives (Swart et al., 2004; p. 138). Qualitative scenario analysis in particular gives voice to the important intangible factors shaping decision making such as values, behaviors and institutional structures (Swart et al., 2004). This next phase of the research therefore involved a series of expert stakeholder interviews examining in depth the range of potential interactions with TIAs for various different policy scenarios, for a selection of policy instruments. We opted to focus these interviews on the policy areas of FOPL, restriction of marketing to children, and nutrient composition standards, based on the greater potential for TIA-related challenges identified in the realist review. Policy scenarios reflected changing policy settings, i.e., the adjustable specifications of a policy instrument, the modification of which can range from incremental shifts in policy to more radical transformations (Hall, 1993). Policy settings explored included degrees of compulsion (i.e., voluntary or mandatory), inclusion/coverage (i.e., products or services within remit), regulatory definitions and targets, implementation factors, policy design (process) factors, *et cetera*. These policy scenario interviews were carried out through a qualitative “vignette” exercise.

Each structured vignette was designed to shift incrementally, by changing a mix of policy settings, based on the variables that were hypothesized to influence regulatory space for the given policy according to the literature (Table 1).

Participants ( $N = 22$ ) included experts in international trade and investment law, public health researchers, government bureaucrats working in public health and trade policy, and representatives from inter-governmental organizations concerned with global health, nutrition, and trade and investment (Table 2).

After talking through each variant of the policy scenario with the participant, we asked them to discuss their perception of challenges, threats or opportunities with regards to international trade and investment law for that particular situation, repeating this process through each variation. Through discussion of the various policy settings, the interviews also endeavored to define the perceived potential legal risk of each policy option (with respect to TIAs) in the given context, as well as what would need to change in order to reduce the potential legal tension with international trade and investment commitments. The same vignettes and variations were presented to each participant, allowing for comparison of responses between participants for a given policy action. This analysis was carried out for a hypothetical country context, incorporating discussions of how different contextual factors might influence policy space outcomes. The methods of the policy scenario analysis vignette study are further elaborated in a separate publication (Garton et al., 2021b).

<sup>2</sup> It was anticipated that the area of public procurement to improve food environments would yield little evidence, as it is not widely applied and therefore largely untested; there are no known international trade- or investment-related challenges to food procurement policies as yet.

TABLE 1 Policy scenario variations for labeling, marketing restriction, and nutrient composition regulations.

Scenarios	FOP labeling	Marketing restrictions	Nutrient composition
0.0 Baseline	<u>Voluntary</u> Guideline Daily Amount thumbnails	<u>Mandatory</u> ban of television advertising using persuasive techniques during children's programming	<u>Quasi-regulatory</u> reformulation of targeted nutrients
1.0	1.1 <u>Degree of compulsion</u> : mandatory (after voluntary)  1.2 <u>Degree of compulsion</u> : mandatory (skip voluntary)	1.0 <u>Content restricted</u> : persuasive vs. all unhealthy food advertising	<u>Nutrient</u> : sodium <u>Degree of compulsion</u> : mandatory <u>Products within remit</u> : 1.1 Select food categories 1.2 Broad reduction  1.3 Exemptions (e.g., for traditional foods) <u>Degree of compulsion</u> : 1.4 Skip voluntary
2.0	2.1 <u>Format</u> : interpretive 2.2 <u>Format</u> : size increase 2.3 <u>Format</u> : warnings	2.0 <u>Definition</u> : time of day, peak viewing times	<u>Venue</u> : out-of-home meals 2.1 chains (>20 outlets) 2.2 all food service including informal sector
3.0	3.0 <u>Nutrient profile</u> : national vs. regional or international	3.0 <u>Target audience</u> : children under 12 vs. under 18	3.0 <u>Nutrient</u> : Trans-fatty acids
4.0	4.0 <u>Due process</u> : no consultation of industry	4.1 <u>Medium</u> : include non-broadcast 4.2 <u>Medium</u> : all marketing	4.0 <u>Nutrient</u> : Sodium
5.0	5.1 <u>Implementation</u> : short time frame 5.2 <u>Implementation</u> : no stickers	5.0 <u>Targeted commodity</u> : include Brands	5.0 <u>Nutrient</u> : Sugar
6.0	6.0 <u>Evidence</u> : international vs. local	6.0 <u>Evidence</u> : international vs. local	6.0 <u>Evidence</u> : international vs. local

TABLE 2 Expert interview participant characteristics.

## Participant characteristics (N = 22)

Policy area (n)	Geographic region (n)	Sector (n)	Discipline (n)
Labeling (9)	Australasia (9)	NGO (10)	Trade law (12)
Marketing (9)	Latin America and Caribbean (7)	Academic (16)	Investment law (7)
Nutrient composition (4)	Europe and UK (3)	Public sector (2)	Public health nutrition (8)
	North America (2)	Private sector (1)	
	Sub-Saharan Africa (1)	IGO (1)	

## Stakeholder analysis: Actors, institutions, and global advocacy coalitions

Finally, we drew upon methods for stakeholder analysis to further analyse the data collected in the 22 vignette interviews and the documentary data from the realist review. The objective was to determine the roles and interests of actors and institutions that factor into food environment policy space, and the ways in which they exert influence. Drawing upon Varvasovsky and Brugha (2000), we conducted a thematic analysis of the realist review data and interview transcripts to describe and categorize the interests of different actors and institutions that factor into trade- or investment-related nutrition policy space, the terms of their involvement and the ways in which they exert influence in global trade policy, with reference to national policy making processes (Varvasovsky and Brugha, 2000). Our analysis was underpinned by Sabatier (1988) Advocacy Coalition

Framework (ACF), which conceptualizes coalitions of actors, brought together by shared beliefs, as being influential in shaping policy outcomes for a given policy subsystem (Sabatier, 1988; Sabatier and Weible, 2007; Jenkins-Smith et al., 2014), which in this case was defined as the food environment regulation policy sphere. This framework is particularly relevant because the issue of TIAs constraining nutrition policy space is complex, international and intersectoral, with evidently competing key beliefs and interests between sectors as well as unequal distribution of resources between them. The lead author systematically coded each of the interviews and literature review sources according to themes in line with the ACF, in NVivo<sup>3</sup>. The methods used and findings of this phase of the study are described in detail elsewhere (Garton et al., 2021c).

<sup>3</sup> QSR International Pty Ltd. NVivo qualitative data analysis software.

## Integrated analysis: Retroduction

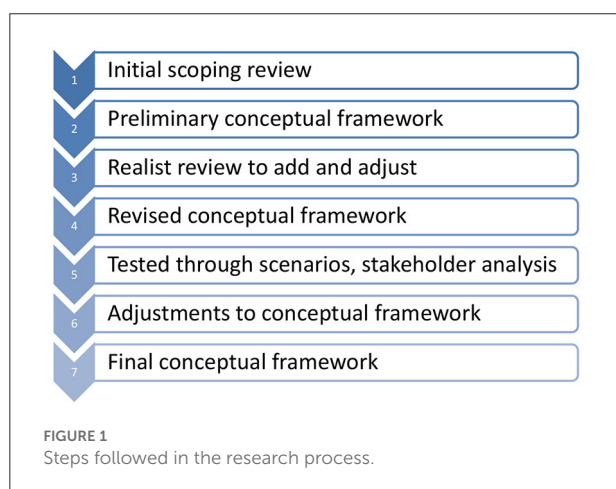
Through a process of “retroduction”, within and between these studies, we developed a theoretical framework for the potential influence of TIAs on policy space/policy inertia for food environment regulation. Retroduction is a key feature of critical realist analysis; it is an iterative process, moving between induction and deduction, and continuous interaction between theory and observation (Halperin and Heath, 2012). In practice, “the compiling of evidence (induction) leads the researcher to theory (deduction); and once a hypothesis is formed, the researcher brings it “backward” for readjustment or redefinition” (Halperin and Heath, 2012; p. 32). Previous theories identified in an initial scoping review (e.g., Fidler et al. on TIA constraints to health policy space, Schram et al. on regulatory chill, and theories of power from Lukes and Gaventa) informed a preliminary conceptual framework, which in turn informed, and was subsequently revised after, each stage of research (see Figure 1). As such, it is an “evolving, dynamic process of discovery and hypothesis formation” (Halperin and Heath, 2012; p. 32).

## Results: Elements of a new conceptual framework

In this section, we present how the findings from our research advance the previously described existing theories.

### TIA mechanisms of policy space constraint

The realist review suggested that there are potential TIA contributors to policy inertia in food environment regulation, but that strategic policy design could avoid most of the



substantive constraints, indicating a certain degree of policy coherence between public health nutrition and trade goals. The main substantive constraints are similar across food policy domains, but not identical; for instance, intellectual property protections are most relevant in marketing restrictions that touch brands and branded images. Process constraints, however, in the name of good regulatory practice (e.g., in the form of the “necessity test,” transparency, fair and equitable treatment, regulatory coherence, and harmonization) appeared to pose more serious threats to policy space for food environment regulation. Such constraints tend to be consistent across the food policy domains assessed.

In terms of **Contexts-Mechanisms-Outcomes**: TIAs and certain associated rules or processes (including non-discrimination, necessity test, harmonization/international standards, transparency, intellectual property protections, fair and equitable treatment, regulatory coherence, and investor-state dispute settlement) are Mechanisms of potential policy space constraint, which are activated (or not) depending on many different factors related to policy design, actors & institutions, and regulatory contexts (all of which can broadly be considered part of Context) (Garton et al., 2021a). These contextual factors, which influence how the TIA Mechanisms are used and interpreted, will be discussed in the section that follows. Outcomes (in terms of preserved or constricted policy space) therefore depend upon the interplay of contextual factors (policy design, actors and institutions, and regulatory contexts) with these TIA mechanisms. This conceptualization suggests that food environment policy space is a system of *competing forces*, or pressures. It also asserts that TIA rules are *constructs*, subject to a certain degree of interpretation.

Our analysis of the combined studies indicated that, on the surface, existing TIA rules for the most part are unlikely to pose “substantive” constraints to *well-designed* food environment policies made in good faith. Robust food environment regulations (e.g., informed by evidence, with strategically framed objectives, backed with nutrient profile models, and part of a comprehensive effort rather than “stand-alone” initiatives) should be coherent with basic TIA principles, under a “liberal” interpretation which implicitly prioritizes States’ prerogative to regulate for the public interest. However, our analyses also revealed how TIAs *are* likely to pose constraints to food environment policy insofar as they are *used and interpreted* by different actors—which at present is underpinned by a dominant neoliberal ideology implicitly prioritizing corporate interests over the public good.

This is where the “procedural” constraints arise. This includes:

- Evidence generation that is more burdensome than would be considered acceptable for “good regulatory practice” in public health, to prove necessity or justify measures: how much evidence is “enough” depends upon the evidence

that will be brought *against* the regulation (by opposing industry groups);

- Pressure to harmonize regulations according to international standards (i.e., Codex), or justify deviation from this “standard” (which is often interpreted in trade forums as a regulatory “ceiling” rather than a regulatory “floor” or baseline): companies will purposely use their interpretations of international standards to undermine public health policy proposals;
- Transparency requirements (requiring early public notification of regulatory proposals) used by powerful countries, supported by their industry stakeholders, to raise specific trade concerns in the TBT Committee that may stall or chill policy;
- Investors taking advantage of ambiguity in the definitions of fair and equitable treatment to threaten or pursue claims against regulatory measures through ISDS; and
- Regulatory coherence/regulatory impact assessment (RIA) processes wherein internal vetting of regulatory proposals is influenced by industry and domestic economic actors.

In terms of trends over time, the data indicated a tendency toward TIA content that is potentially more procedurally restrictive of health and food environment policy space in recent agreements (for instance the evolution of regulatory coherence rules in the Comprehensive and Progressive Agreement for Trans-Pacific Partnership, CPTPP, and the United States-Mexico-Canada Agreement, USMCA). Though there have been some positive developments for health policy space (e.g., a partial tobacco carve-out from ISDS in the CPTPP<sup>4</sup>, followed by a broader health carve-out from ISDS in the Peru-Australia Free Trade Agreement), this trend implies that there is a need for public health nutrition (and other health-related) actors to monitor and stay active in this international trade and investment sphere if policy space is to be preserved.

Having identified substantive constraints and procedural constraints TIAs pose to nutrition policy space, we found that Fidler et al. (2006) definition of “structural” constriction did not apply to the findings on constraints to food environment policy space. Moreover, several of the mechanisms of constraint we observed (e.g., some of the “industry and economic growth” coalition strategies to be described below) did not fit easily within that framework. We therefore contend that Fidler et al. (2006) definition of structural constriction should be expanded, for the purpose of examining policy space for food environment regulation. In the context of global nutrition

<sup>4</sup> This was only a “partial” carve-out as the CPTPP did not exclude tobacco from tariff reductions, or ISDS tobacco challenges explicitly, as governments still had to “elect to deny the benefits”; thereby placing the onus on the Member State to initiate a refusal of ISDS instead of it being fully carved out (Crosbie et al., 2014).

policy, “structural” constriction is more relevant with reference to the trends in global trade and investment governance toward increased private sector engagement in governing institutions and influence in decision making. We identified the following structural constraints to nutrition policy space posed by TIAs:

- SSSDs mechanisms wherein corporations may encourage and support nation states to challenge other nation states.
- ISDS provisions allowing investors to pursue challenges to regulatory measures against governments directly.
- Private sector participation in Codex/standards setting.
- Transparency and consultation requirements for regulatory measures allowing for food and beverage industry input into nutrition policymaking.
- Lack of public transparency regarding TIA negotiation but established processes for food and beverage sector input into TIA negotiation.
- Regulatory coherence provisions requiring RIA processes wherein internal vetting of regulatory proposals is influenced by industry and domestic economic actors.

This added focus on private sector engagement in governance is in line with literature concerned with the new generation of regional and bilateral trade agreements—frequently negotiated “behind closed doors”—assigning further power to industry actors through ISDS mechanisms and transparency provisions (Friel et al., 2013b, 2016; Thow and McGrady, 2014; Hawkes, 2015; Thow et al., 2015; Ruckert et al., 2017). An assessment of leaked Regional Comprehensive Economic Partnership (RCEP) chapters on services and investment exposed similar dangers, especially for the developing and least-developed countries involved (Kelsey, 2016). This focus also aligns with research on power imbalances and governance structures within Codex (Jones et al., 2019; Thow et al., 2019, 2020), and analyses of the USMCA regulatory coherence chapter (Jones et al., 2019; Labonte et al., 2019; Labonté et al., 2020; Thow et al., 2019, 2020).

## Regulatory context and policy design

As stated previously, contextual factors influence how TIA mechanisms (i.e., their associated rules and processes) are used and interpreted; policy space outcomes (in terms of preserved or constricted policy space) therefore depend upon the interplay of contextual factors (policy design, actors and institutions, and regulatory contexts) with these TIA mechanisms.

Four cross-cutting findings stood out in the policy scenario interviews between the three policy areas of FOPL, restricting the marketing of unhealthy food and beverages to children, and regulating nutrient content limits in the food supply, in terms of the interaction of TIA mechanisms with the regulatory context and policy design.



First, a key consideration regarding food environment regulations' trade-restrictiveness and incompatibility with TIAs and whether they have the potential to be discriminatory (either in intent or in effect) is what products or services fall within their remit, and how this selection is determined. The use of evidence-based, ideally WHO-endorsed, nutrient profile models can help justify such regulatory distinctions, though these are often contested. The growing acceptance of nutrient profile models underpinning food and beverage regulations is a significant supportive factor for preserving nutrition policy space, with potential for cascading normative effects. Participant responses also indicated the benefit of comprehensive regulatory design for policy coherence (i.e., applying across most or all food categories, rather than a select few). Comprehensive coverage was perceived to be less discriminatory, while having a greater potential for public health impact.

Second, participants stressed the importance of having evidence to justify the "necessity" of proposed food environment regulations with respect to their potential trade-restrictiveness. This implies establishing that there is no reasonably available alternative measure that is less burdensome or trade restrictive to achieve the stated objective. The strategic framing of regulatory objectives is therefore critical, as these directly relate to the evidence required to demonstrate a measure's expected effectiveness in achieving said objectives and in relation to available alternatives. It was noted that evidence generation is inherently imbued with power dynamics, and may present a considerable burden for some low-resourced countries.

Third, participants perceived that the internal government decision-making process is just as important to policy space as external bilateral or investor-state conflict, and this is often a matter of competing ideologies within the political system. Moreover, an internal bias toward minimal intervention in food system regulation may be codified into TIAs, for instance in the form of mandatory Regulatory Impact Assessment processes as regulatory coherence mechanisms, and contribute to systemic regulatory chill.

Finally, it has been noted that LMICs may be more prone to regulatory chill than HICs due to disparities in financial and human resources, and global political and economic power (Bernasconi-Osterwalder et al., 2012). Several interview participants acknowledged that the procedural and structural constraints posed by TIAs to nutrition policy space may be more acutely experienced by LMIC governments. One key example was having the resources to collect a body of evidence (i.e., to establish necessity) that would be perceived to be sufficient justification should the policy encounter any formal trade or investment challenges (bearing in mind the need to outweigh any counter-evidence generated by well-resourced food industry stakeholders and presented by HIC trade partners). In addition, capacity constraints within (and siloes between) government departments of trade and health may contribute to (mis)understandings around policy

(in)coherence between health and trade objectives, and resulting food environment policy space; this could increase the potential for regulatory chill and, thus, policy inertia.

## Actors, institutions, and coalitions

The evidence collected in the realist review indicated that the capacity and resources of relevant actors has a moderating effect on whether such policy space constriction occurs or does not, and that there are opportunities for strategic action to mitigate potential negative impacts in terms of TIA-related conflict. The stakeholder analysis highlighted the power and influence of certain actors and institutions in TIA-related policy space for food environment regulation, categorizing them into two competing "advocacy coalitions." There was a clear imbalance of power in favor of the group of stakeholders with common interests and beliefs associated with "industry and economic growth" as compared to the "public health nutrition" stakeholders trying to enact policy change. We also noted institutional bias toward "industry and economic growth" coalition stakeholders, for instance in the governance structure of Codex as an international standard-setting institution. In addition, there is evidence of power dynamics influencing the production of evidence, for example through the many industry-funded studies meant to confuse the evidence for food environment regulation.

Our stakeholder analysis (combining the realist review and interview data), identified five strategies used by industry and economic growth coalitions to constrict policy space through TIAs: (1) influencing government trade ministries' internal vetting of regulatory proposals; (2) convincing and supporting host governments to raise specific trade concerns and trade disputes, or raising own disputes in ISDS; (3) influencing TIA negotiations; (4) participation in Codex standards-setting; and (5) using transparency and consultation rules to influence food environment policymaking processes (Garton et al., 2021c).

We also identified three strategies used by public health nutrition coalitions to preserve policy space: (1) civil society organizations and key influencers pressure governments for transparency and accountability, including in TIA negotiation; (2) civil society organizations and other actors collaborate for greater collective influence; and (3) academics and other experts, including inter-governmental organizations (e.g., WHO, PAHO), provide technical support and evidence to legitimize advocacy and food environment policy development (Garton et al., 2021c). However, broader health advocacy literature describes additional strategies used by health coalitions confronting corporate influence on policy space through TIAs, such as in access to pharmaceuticals and tobacco control. Advocates have sought collective influence with those in other sectors (e.g., environmental, human rights, labor groups) and other jurisdictions on points of shared interest,

which may even include the occasional “unusual bedfellow” (Friel, 2021). Health policy advocates and governments have also received legal advice or other financial support from philanthropic donors or international civil society organizations to prevent or defend TIA challenges (e.g., the Anti-Tobacco Trade Litigation Fund, and the McCabe Centre for Law & Cancer’s training programme) (Bloomberg Philanthropies, 2022; McCabe Centre for Law Cancer, 2022). Finally, health policy proponents have consciously borrowed language familiar to trade policy practitioners in a way that seeks to integrate the norms of health and trade (Drope and Lencucha, 2014).

## Conceptual framework

In synthesis of the analyses conducted, we developed a novel framework to conceptualize how TIAs may constrain nutrition policy space, and how this policy space is preserved (Figure 2). This draws upon the initial realist review framework which outlined the key contexts, mechanisms, and outcomes (C-M-O) (Garton et al., 2021a). It incorporates TIA mechanisms representing potential substantive, procedural or structural food environment policy space constraints (adapted from Fidler et al.) examined in policy scenario vignette interviews (Fidler et al., 2006; Garton et al., 2021b). It adds elements of the Advocacy Coalition Framework of competing advocacy coalitions in the policy subsystem (and their respective interests, beliefs, power/resources, and strategies) (Sabatier and Weible, 2007; Garton et al., 2021c). Finally, it features a conceptualization of opportunities and constraints to policy space (support vs. opposition), embedded in policy context, adapted from Grindle & Thomas’ policy space analysis framework (Grindle and Thomas, 1991).

As shown in the framework, food environment policy space involves an interplay of pressures and power in the policy subsystem. Contexts, whose influence pervades throughout the diagram, include national regulatory contexts and agenda setting circumstances, policy characteristics/design, and actors and institutions. The “ring” in the figure represents TIA mechanisms that may be used to constrict policy space (i.e., they are one-directional, designed to constrain policy space when maximally applied). The center of the figure represents food environment policy space outcomes (regulations may be preserved, modified, delayed, compromised, abandoned; through substantive, procedural, and/or structural policy space constraints).

Outside the ring/circle is the realm of the industry and economic growth coalition (including other governments/trade partners, companies, and internal government institutions) concerned with economic (e.g., export industry) interests, acting to constrict food environment policy space (i.e., to maintain the status quo of limited regulation or to further deregulate). Their interests are predominantly in economic growth and private profit, and belief in a minimal role of government

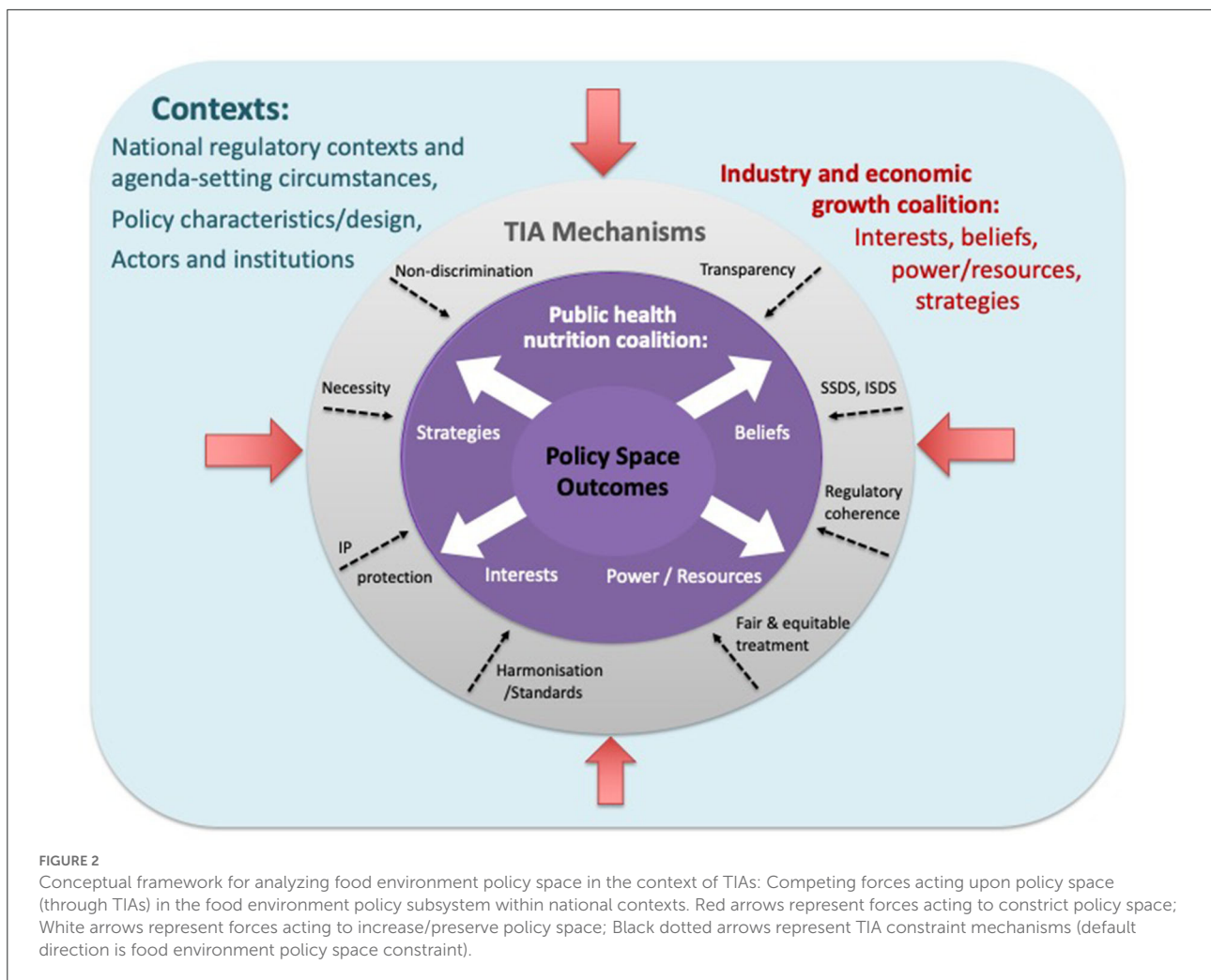
in regulating markets. Sources of power or resources include substantial financial resources, a “revolving door” between regulatory agencies and the private sector, submissions to regulatory committees, lobbying, and technical expertise. Strategies to influence food environment policy space through TIAs include: (1) influencing government trade ministries’ internal vetting of regulatory proposals, (2) convincing and supporting host governments to raise STCs and trade disputes (or raising on their own in cases of ISDS), (3) influencing TIA negotiations, (4) participation in Codex standards-setting, and (5) using transparency and consultation rules to influence food environment policymaking processes.

Inside the ring/circle is where the public health nutrition coalition operates (including government Ministries of Health, and public interest organizations), acting to preserve food environment policy space and seeking policy change in food environment regulation. Their common interests are in public health protection and promotion, and belief that the proliferation and overconsumption of unhealthy commodities implies a need for government intervention. Sources of power and resources include strong technical expertise in the science of nutrition policy (though low capacity in the technical TIA aspects), but fewer avenues for influence, and fewer financial resources than the industry and economic growth coalition. Strategies to preserve policy space include: (1) civil society organizations and key influencers pressure governments for transparency and accountability, (2) civil society and other actors within the nutrition sector collaborate for greater collective influence, (3) civil society and other actors in nutrition collaborate outside the sector for greater leverage on points of common interest, (4) academics and other experts provide technical support and evidence to “legitimize” advocacy and policy development, and (5) coalitions receive legal advice and/or financial support from philanthropic donors or international civil society organizations to prevent or defend TIA challenges.

This framework illustrates the power imbalances the international trade and investment regime imposes on the food environment policy subsystem, which can contribute to policy inertia. The industry and economic growth coalition seeking to deregulate or maintain the status quo by constraining food environment policy space have greater resources and influence than the public health nutrition coalition seeking to preserve policy space and enact food environment policy change. In addition, the *default* direction of the TIA mechanisms (rules, processes) is policy space constraint; the stronger they are implemented, the more policy space is constrained.

## Discussion

This framework updates our understanding of how factors related to regulatory context and stakeholder influence, policy design settings, and mechanisms associated with TIA rules



and provisions intersect in ways contributing to policy space outcomes, in the domains of fiscal policies, front-of-pack nutrition labeling, restrictions on marketing to children, and nutrient limits and product bans. In particular, it expands the definition of “structural” constriction of policy space used by Fidler et al. (2006) to include shifts from public to private governance of international trade in goods and services, such that the economic and regulatory power of private sector actors is expanded. In addition, this framework highlights the competing systemic forces and pressures influencing food environment policy space through TIA mechanisms within national policy subsystem contexts (Figure 2).

This framework can be applied as a discussion tool to enable capacity building, for policy makers in nutrition, health and food as well as in economic sectors, toward greater inter-sectoral collaboration and coherence in population nutrition and international economic policy making. It can also serve as a baseline to guide future research examining strategies to recalibrate power within the international trade

and investment regime for increased food environment policy space. Alternatively, it may be useful as a template to guide policy space analysis for public health nutrition in a specific country context. It can provide a basis for rapidly assessing policy coherence between international economic policy (TIAs) and food environment regulations in these domains, and to identify areas where further legal analysis would strengthen the development of food regulatory proposals, in terms of robustness against international trade or investment challenges.

It has been said that trade and health objectives are not mutually exclusive, though they are often (and oversimplistically) perceived as such (Thow et al., 2022). Our analyses found that TIAs are likely to impose procedural constraints to food environment regulation through how they are used and (mis)interpreted by powerful stakeholders. Recent case studies have shown that transnational food and beverage company threats to pursue TIA challenges to food environment regulations in Latin America (food warning labels and advertising restrictions in Chile, and FOPL in Mexico)

were largely unfounded, using interpretive practices to influence regulators' understanding of their "legally available" policy space, and relying on governments' aversion to a challenge to delay or disrupt policy implementation (Dorlach and Mertenskotter, 2020; Crosbie et al., 2022). Similarly, Barlow and Thow (2021) analysis of STCs challenging health regulations in the TBT Committee highlighted the extent to which ideological arguments (outside the remit of the TBT Agreement) featured in the concerns raised, rather than focusing exclusively on the technical (substantive) aspects of TBT Agreement rules, thereby shaping the domestic policy understanding and/or interpretation of the implications of the Agreement. Governments seeking to regulate food environments with comprehensive FOPL, restriction of marketing of unhealthy food to children, and/or nutrient content limits will therefore need to understand the potential TIA-related legal issues, as well as the *limitations* to how they may be interpreted, and be willing to weather the inevitable storm of opposition from those who will readily use TIAs (among other means) to block or dilute regulation.

This framework, and discussion thereof, may be used as a tool to facilitate cross-sectoral capacity building for policy makers as part of a whole-of-government approach to improve policy coherence between health and trade. For instance, our analyses revealed that political will and capacity to understand the nutrition problem and legal parameters of the agreements are important parts in the equation of food environment policy space. It also indicates where institutional bias and structural power imbalances need to be addressed in order to preserve regulatory autonomy for implementation of "best practice" nutrition policies and other social development objectives. Suggested strategies to rebalance public and private interests in the trade-health nexus have included moving away from ISDS in future agreements, as well as increasing public health stakeholder participation and engagement in key trade-relevant forums like Codex (Schram et al., 2019; Thow et al., 2020; UNCTAD, 2021).

Thow and Nisbett (2019), assert that "public health actors need to recognize the fundamental and front-line nature of trade policy as both a barrier and potential catalyst for health." Recent scholarship has turned to how TIAs could be used to preserve, or even promote, policy space for NCD prevention (Delany et al., 2018; Thow et al., 2022). Thow et al. (2022) highlight how such policy space might be explicitly protected, e.g., in preambles to agreements, exceptions, exclusions, and limiting the scope/definition of key provisions. However, it is clear that more work is needed in this area to extract practical recommendations for policy makers. Moreover, as this conceptual framework demonstrates, without examining the agency, structures and power dynamics underlying the nexus between trade, health and food, an analysis misses the root causes of policy space constraint. Therefore, work on the technical aspects of trade/investment and health policy

coherence needs to be coupled with attention to the underlying political economy aspects of regulation, in order to see any real change in the commercial determinants of health (Reich and Balarajan, 2014; Balarajan and Reich, 2016; Thow et al., 2016, 2018, 2019; Kaldor et al., 2018; Baker et al., 2019; Friel et al., 2019, 2020).

## Strengths and limitations

One major strength of this analysis was its inter-disciplinary approach. We drew data from public health, legal, and political science literature, and the experts interviewed spanned all of these disciplines. Each of these fields of scholarship brought a different perspective to the research question. For instance, the public health discipline is grounded in concepts of health equity and "moral imperatives" but can be criticized for being idealistic or unrealistic, and policy inertia is a significant enduring challenge. A political economy lens introduced concepts of power and production, interests and belief systems that influence political behavior. A legal perspective highlighted the importance of specific language used in international treaty text, and the normative debates around its interpretation. This work therefore offers a more balanced and holistic view of what is a complex policy problem.

The new framework presented draws upon existing theory and expert knowledge to fill gaps in what we know about TIAs and policy space for public health nutrition. We have built upon the existing public health literature on this issue, which was largely speculative, through empirical research with global experts. In particular, use of vignette interviews based on policy scenarios was a novel method of understanding the nuances in the intersection between TIAs and policy settings, whose adaptation from social psychology and business applications presents an innovative repurposing of an analytical tool with promising potential in the field of nutrition policy research. Finally, the underlying philosophy of critical realism and associated process of "retroduction" in data analysis meant we could engage with both political economy and technical legal aspects based on real-world experiences. By iteratively moving between theory development and theory testing, with constant critique of our own interpretations, this allowed us to develop conclusions that are robust, policy-relevant, social-change oriented, applicable to different contexts, but fallible (i.e., open to change with new information).

In terms of limitations, this analysis was restricted by what is a relatively nascent field and small pool of expert knowledge. Most participants and literature reviewed were most familiar with WTO agreements, and thus there was limited discussion of "new generation" WTO-plus agreements and their influence on food environment policy space, including emerging areas of trade such as e-commerce. In addition, for some of the policy



areas of focus (such as marketing restrictions) there are few global “best practice” examples that can be studied empirically.

This work is also limited as a relatively point-in-time analysis of opportunities and constraints for nutrition policy space in a constantly changing international trade and investment (and geo-political) environment. For instance, the data was collected before COVID-19 appeared on the world stage; given the resurgence of issues around TRIPS and access to vaccines, diagnostics and therapeutics, some have speculated that COVID-19 may prompt a shift in global discourse toward greater attention to health consequences of TIAs (Barlow, 2022). Reportedly, nutrition featured more prominently in UK-US trade discussions following the British Prime Minister’s admission that his personal COVID-19 complications were linked to being overweight (Barlow, 2022). On the other hand, the economic impact of the COVID-19 pandemic has been used by the food and beverage industry as another reason not to pursue health regulations such as FOPL that are argued will exacerbate the uncertainties and costs wrought by the pandemic (Barlow, 2022). More recently, the Russian invasion of Ukraine has shifted geopolitical alignments and disrupted global supply chains and trade partner relationships in ways that continue to unfold.

Finally, there was no participation of food and beverage industry stakeholders, nor trade or investment policy makers (e.g., negotiators), in the underpinning studies as these proved difficult to access. Therefore, the views expressed in the interviews, and thus their secondary analysis, may be skewed toward a public health nutrition stakeholder perspective.

## Conclusion

Our analysis indicates that existing TIA rules, for the most part, are unlikely to pose “substantive” constraints to *well-designed* food environment policies made in good faith. Robust policy design, in this regard, includes strategically framed objectives and being informed by evidence, underpinned by nutrient profile models, and part of a comprehensive policy effort. TIAs are, however, more likely to pose constraints to food environment regulation insofar as they are *used and interpreted* by different actors, in what we have broadly referred to as “procedural” constraints. These constraints may appear the form of requiring justification regarding non-discrimination, necessity and intellectual property protections, harmonization and international standards, transparency requirements, fair and equitable treatment, and regulatory coherence processes over-and-above what would be undertaken/considered adequate in the domestic policy sphere.

This study highlighted the power imbalance within the food and beverage trade and investment system between public health nutrition actors and those primarily interested in industry and economic growth, particularly regarding

participation in TIA governance institutions and processes. This unequal distribution of power and resources in favor of the industry and economic growth coalition of stakeholders poses “structural” constraints to nutrition policy space, in the form of state-state and investor-state dispute settlement mechanisms, transparency requirements, regulatory coherence, and standards-setting processes.

The conceptual framework we have presented provides a better understanding of the potential constraints TIAs pose for policy space to address the commercial determinants of poor nutrition and diet-related NCDs through food environment regulation. This framework may assist in both the design of more robust food environment policy interventions, and inform the negotiation of future TIAs that preserve food environment policy space. Such understanding may also help government policy makers to identify, critically assess and/or resist attempts by trade partners or commercial actors to restrict their policy space for food environment regulation through TIAs.

## Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors upon request, without undue reservation.

## Ethics statement

The studies involving human participants were reviewed and approved by University of Auckland Human Participants Ethics Committee. The patients/participants provided their written informed consent to participate in this study.

## Author contributions

The research presented in this paper was undertaken as part of the lead author’s KG doctoral thesis, supervised by the co-authors BS and AMT. KG carried out all data collection and analysis, with significant input from BS and AMT. All authors contributed to conceptual development and writing this manuscript.

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.



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