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Background

The nature and magnitude of the burden of chronic disease in low- and middle-income countries (LMICs) are now well understood, as are their impacts on health systems and national economies (World Health Organization [WHO] 2010; Mathars and Loncar 2006; Hossain et al. 2007; Alwan et al. 2010; Dans et al. 2011). What is less clear is how we should address chronic disease in LMICs, although doing so will require actions at both local and global levels (de-Graft Aikins et al. 2010). At the global level, international trade, despite bringing potential health

benefits through economic growth (a point we return to), is one of the major driving factors of a growing chronic disease burden. Trade's effects on chronic disease risk occur *progressively* along multiple pathways. It is the intent of this chapter to explicate those pathways.

Trade is not a new phenomenon: Human societies have long histories of trade with each other and one might even describe barter and exchange as inherently human social qualities (Labonté 2010). What is new is the volume of trade in goods and services, which has reached unprecedented levels over the past century, and the global scale at which trade now occurs. Also, the pattern of trade has morphed into an unequal playing field, where international trade rules tend to benefit disproportionately high-income countries (Birdsall 2006; Gallagher 2007; Polanski 2006; Sundaram and von Arnim 2009). The rise in global production chains, liberalization of global financial flows, and stark inequalities in countries' political and bargaining power are at the heart of many of the contentions concerning contemporary global trade.

Health concerns associated with trade have been a feature of national and global policy debate since the establishment of the World Trade Organization (WTO) in 1995 and its extensive suite of trade treaties aimed at progressively liberalizing the cross-border flow of goods, services, and finance. Such concerns are far from new. Disease has long followed trade routes, from infectious pandemics of past eras to SARS

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in more recent times. The link between trade and infectious disease has been well documented (Fidler 2003; Saker et al. 2004; Kimball 2006); and there is now an emerging evidence base that global trade is also linked with the rise of chronic disease in many LMICs. This linkage is associated, in part, with the global diffusion of unhealthy lifestyles and health-damaging products (Beaglehold and Yach 2003), posing a particular challenge to countries still facing high burdens of communicable disease.

The existing literature on trade and chronic disease has tended to focus on certain health problems, such as diabetes and overnutrition (Hawkes 2006; Yach et al. 2006). Lacking is an understanding of how such trade affects chronic disease more generally and through multiple pathways. To address this knowledge gap, we developed a generic framework which depicts the determinants and pathways connecting global trade with chronic disease. We then applied this framework to three key risk factors for chronic disease: unhealthy diets, alcohol, and tobacco, or what are sometimes referred to as “risky commodities.” This led to specific “product pathways,” which we propose can be further refined and used by health policy-makers to engage with their country’s trade policy-makers around health impacts of ongoing trade treaty negotiations, and by researchers to continue refining an evidence base on how global trade is affecting patterns of chronic disease. We focused our evidence gathering primarily on Latin America, sub-Saharan Africa, and Asia, where the impact of international trade agreements in the global flow of these products has been subject of greatest health comment and concern.

Trade-Related Globalization Chronic Disease

There are at least six interrelated ways in which trade-related globalization affects NCD pathways:

1. *Rising incomes.* Extreme poverty (USD 1.25/day) has decreased globally since the era of liberalized trade, as outsourcing created more

employment in LMICs (Labonté and Schrecker 2009), improving (at least some) people’s social stratification, especially for women in patriarchal societies who obtain work in export processing zones. Rising incomes in LMICs create new and exploitable markets for “risky commodities” (processed food, sugary drinks, tobacco, and alcohol) by the global food, beverage, and tobacco transnationals (Lawrence 2011; Labonté et al. 2011).

2. *Persisting poverty.* The rising tide of globalization’s economic growth has not lifted people very far. Poverty at the USD 2.50/day level has increased by almost the same number as the decline in the more extreme rate (Chen and Ravallion 2008). This places pressure on somewhat better-off but still poor households to obtain caloric energy in cheaper, less nutritious food, now more readily available, increasing their vulnerabilities to NCDs. Falling incomes for manual and industrial workers in high-income countries (HICs) made redundant by outsourcing has much the same effect.
3. *Urbanization.* These pressures in LMICs are exacerbated by globalization’s influence on migration from rural agricultural to urban wage-labor livelihoods. This migration is attributed, in part, to the rise in global food production chains, export-oriented agricultural policies, and forced displacements of rural populations to permit energy (oil, hydroelectric) or mineral (mining) extractions. Urban living decreases physical activity and exposes populations to unhealthy commodities and lifestyles (Food and Agriculture Organization [FAO] of the United Nations 2002; Chow et al. 2009; Subramanian and Davey 2006; Agyemang et al. 2005). Rapid urbanization in LMICs is further characterized by informal settlements (“slums”) where overcrowding and lack of open space compound difficulties in active living, and access to fresh or healthy foods is more difficult.
4. *Labor market insecurity.* Despite the new employment opportunities in LMICs created by globalization, much of this work is insecure or part-time with few or no benefits, a problem

of longer and worsening standing in wealthier countries (Schrecker and Labonté 2010). Across Latin America two-thirds of the urban population lives below the poverty line competing for an insufficient supply of jobs, with almost 60 % of all employment in the insecure, informal sector (Inter-American Development Bank [IADB] 2011). This insecurity, generalizing to other life domains such as housing and food, is associated with increased CVD and possibly other NCD risks (Cornia et al. 2007; Wilkinson and Marmot 2003).

5. *Nutrition transition.* For decades researchers have argued that economic development in LMICs is accompanied by an overall shift from under- to overnutrition, with well-documented trends in increased consumption of oils and fats in such emerging economies as China, India, Brazil, Russia, Mexico, and South Africa (Popkin 1994, 1997, 2002). It is now also occurring in low-income countries and at rates that exceeded similar transitions in today's HICs, partly an effect of liberalization and the growth of global food trade. Bad foods are good global commodities with high profits; good foods are bad global commodities with low profits (Caraher and Cowburn 2005).
6. *Financial crises.* Liberalized financial markets, banking deregulation, and digital technologies have fuelled numerous currency crises since the 1990s. The health-harmful effects of these episodic financial meltdowns in developing country regions resulting from unemployment, poverty, and dramatic cuts to health and social spending were experienced first and worst by those most vulnerable and least responsible for their making (Floro and Dymski 2000; Parrado and Zentento 2001). The 2007 global crisis that erupted with the collapse of the US real estate bubble has similarly increased unemployment and poverty in much of the world, and has been followed by an "austerity agenda" in which worst affected countries are being required to cut spending, reduce public sector employment, and privatize remaining public assets: that is, to continue with and deepen the neoliberal globalization project that most analysts

thought had been discredited by the banking failures (Labonté 2012). In the short term, declining incomes arising from the crisis may lead to a drop in alcohol and tobacco consumption, although they also lead to increased consumption of unhealthy, low-priced foods (Stuckler et al. 2011). Spending cuts under the austerity agenda are reducing access to health services (several countries are increasing user-fees in their public health systems), and will likely reduce the abilities of governments to undertake NCD prevention programs.

All of the above effects of trade-related global market integration have essentially made NCD risk factors "communicable" (with food, tobacco, and alcohol consumption serving as "vectors"), blurring the conventional distinction between communicable and non-communicable diseases. International trade takes place outside of, as well as within, the reach of enforceable trade treaties; our concern in this chapter is primarily with trade treaties and their rules, and how these limit governments' policy flexibilities (policy space and capacity).

Policy Space, Policy Capacity, Trade Treaty Rules, and Risks of Chronic Disease

"Policy space" describes "the freedom, scope, and mechanisms that governments have to choose, design and implement public policies to fulfill their aims" (Koivusalo et al. 2009, p. 7). "Policy capacity" refers to the fiscal ability of states to enact those policies or regulations, which depends upon their ability to capture sufficient revenue through taxation for this purpose. Both space and capacity can be affected by trade treaties. One concern with trade treaties is their "behind-the-border" shrinking of policy space by prohibiting a range of "trade-related" domestic regulatory options that could be used to promote healthy habits or, conversely, to restrict unhealthy ones. The primary purpose of all trade treaties is to reduce barriers to cross-border trade. One of the key principles underlying this purpose is *national treatment*: foreign goods or committed

services covered by a trade treaty must be treated the same as the identical or “like” domestic good or service. Internal tax and regulatory measures must be applied equally to imported and domestic goods or committed (scheduled) services in order to avoid trade disputes. To protect population health found to be in violation of trade agreements (the so-called *health defense*), governments have to prove that these policies are “necessary” and “consistent” with the norms of trade openness and nondiscrimination. Past and ongoing disputes over regulations governing tobacco imports and additives, alcohol products, and food items highlight the stringency with which this requirement is pursued (Mitchell and Voon 2011). Further limitations on the health defense include requirements that domestic regulations that could discriminate against foreign imports, even if treated no differently than national goods, must be based upon international standards or scientific risk assessments (Labonté 2010). These trade principles constrain policy space.

Policy capacity, in turn, refers to the resources states have to monitor or enforce regulations that they are able to promulgate. The issue of capacity is of considerable importance to LMICs, many of which have excellent laws “on the books” but lack effective enforcement measures. The policy capacity trade issue is that liberalization requires progressive reductions in tariffs (border taxes). Developing countries rely more heavily upon tariffs for their tax revenue than do developed nations. Although developing countries are granted more latitude in retaining higher tariff levels, they are under considerable political pressure to lock in and reduce their tariffs, in both multilateral WTO negotiations and notably in bilateral and regional trade treaties. In theory, developing country governments should be able to shift their tax bases from tariffs to sales or income taxes, assuming that their economies grow with increased liberalization. In reality, many developing, and most low-income, countries subject to tariff reductions as conditions for loans from the international financial institutions (the World Bank and IMF) have been unable to do so (Baunsgaard and Keen 2010; Glenday 2006), partly as a result of inadequate institutions to implement alternate tax regimes (Aizenman

and Jinjark 2009). For a majority of these countries there has been a net decline in overall public revenues (Labonté et al. 2008)—a loss in policy capacity—with implications for spending in health, education, or public regulations that can affect primary and secondary prevention of chronic disease.

Governments still retain substantial policy flexibilities within existing WTO Agreements, although these flexibilities continue to be eroded through ongoing treaty negotiations. Of considerable concern is the dramatic increase in bilateral or regional trade treaties, an outcome of stalled negotiations in the more multilateral WTO forum. Many of these bilateral and regional treaties, especially those involving the US or European Union (EU) and LMICs, include liberalization commitments, intellectual property rights protection, and agreements on government procurement that go beyond those in existing WTO trade treaties, and which can limit policy space to a much greater extent than WTO trade rules (Lynch 2010; Thangavelu and Toh 2005; Dahrendorf 2009). Finally, it is important to grasp that the intent of a government regulation “plays a very limited role in determining whether a measure violates a prohibition” of a trade treaty (McGrady 2011, p. 127). Arguing that the regulatory purpose was to protect public health holds little weight if, even unintentionally, it violates a trade rule—even a government invokes the health defense. Where this is of concern with respect to NCD risks is in how trade rules affect four of the key NCD control strategies:

- Demand reduction (e.g., pricing, taxation)
- Supply reduction (e.g., bans, import restrictions, regulation of distribution outlets)
- Reduced risk exposure (e.g., smoking restrictions, rules over alcohol content or salt/fat content)
- Informing consumers (e.g., labeling requirements)

Generic Framework

Figure 24.1 provides a generic framework of the linkages between chronic disease and international trade. Trade can be broadly segmented into

General framework: Trade and chronic disease

Legend:

—> Financial flows

- - -> Trade of goods

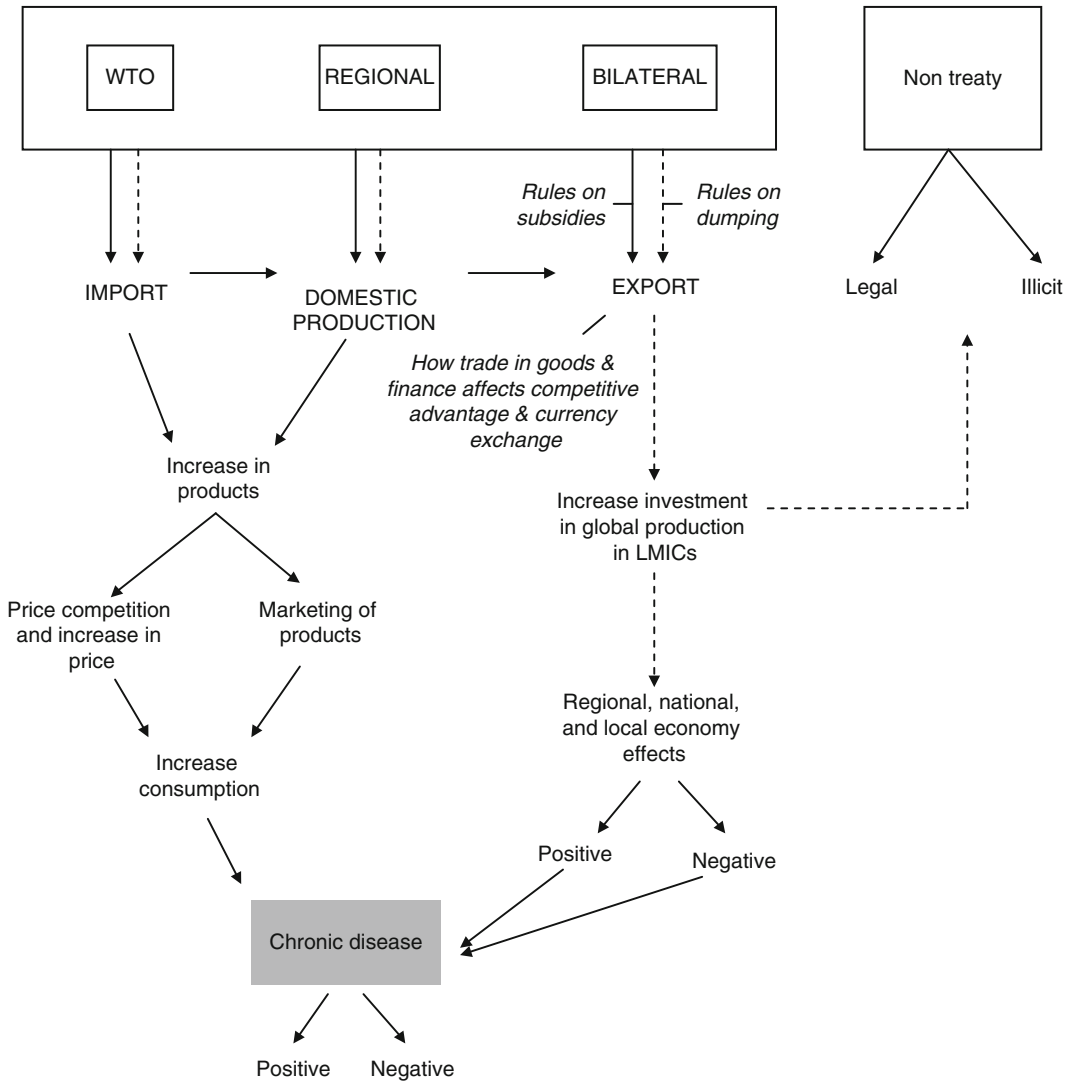


Fig. 24.1 A generic framework of the linkages between chronic disease and international trade

two categories: treaty, which includes bilateral, regional, or multilateral under the WTO and non-treaty, which includes both legal (but non-treaty) and illicit trade. Trade treaties can affect trade in

goods in two main ways: increased trade in raw or finished products (depicted with solid arrow lines) and increased foreign investment in domestic production, manufacturing, and distribution

(depicted with dotted arrow lines). Increased imports and domestic production result in increased domestic availability of a particular product. Greater quantity and availability, in turn, increase price competition (lower prices) and marketing and (generally) promotion of the product, both of which lead to increased product consumption. Increased consumption can have positive or negative consequences on chronic diseases depending on whether it is a health-promoting (e.g., nutritious food) or health-damaging (e.g., highly processed food) product. Increased foreign investment in a particular product can also lead to economic growth which, if adequately taxed, can contribute to revenues for health and other health-promoting social programs. However, if this product has harmful effects (e.g., tobacco), increased consumption is more likely to lead to poorer health outcomes, burdening health systems and offsetting any economic gains. Moreover, increased imports and foreign investment can displace domestic producers and manufacturers, which can reduce local revenues and food security (if local food crops are displaced) and increase dependency on foreign companies, making it more difficult to introduce regulations constraining their market growth or raising corporate taxes. Non-treaty trade in products has similar effects apart from legally binding constraints on a country's tariffs or domestic policies. Illicit trade is difficult to document for most products and is not discussed further in this chapter.

Specific Pathway Products

Tobacco Trade and Health

Trade liberalization in tobacco products is a concern for its potential to offset declining use in developed countries by penetrating new markets in developing nations. Trade can increase the disease consequences of tobacco consumption through two main pathways: trade and investment liberalization, and the impact of trade rules on government policy space.

Liberalization of International Tobacco Trade and Investment

Trade liberalization has led to increased tobacco consumption in LMICs (Taylor et al. 2000) through a combination of tariff reduction, liberalization in FDI, and minimal national tobacco control measures, all of which preceded tobacco control measures in many countries. This combination of factors increases competition in domestic markets, and contributes to a reduction in the prices of tobacco products and an increase in advertising and promotion expenditures, all of which lead to increases in tobacco consumption. As one example market liberalization led to a 1-year increase in the US tobacco products in Japan from 16 % in 1986 to 32 % in 1987 and a corresponding stall in the decline of tobacco consumption among adults and an increase in the level of consumption among adolescent girls (Honjo and Kawachi 2000). When South Korea opened its domestic market to the US tobacco product imports there was an 11 % increase in smoking among males and an 8 % increase among females in just 1 year (United States General Accounting Office [USGAO] 1992). Similar liberalization requirements have taken place in bilateral trade agreements, including an agreement between the USA and China in which China was required to cut tariffs on imported cigarettes. Consumption patterns corresponded with the abolition of tariffs, expanded sales networks, and removal of advertising and marketing restrictions, all policy strategies explicitly pursued by tobacco transnational companies to increase LMIC consumption rates (Bialous and Shatenstein 2002).

While using trade treaties to lower tobacco tariffs has been one strategy pursued by tobacco companies to increase LMIC consumption, an arguably more critical one has involved using financial market liberalization to control domestic tobacco industries worldwide. Referring to a now famous trade dispute in 1990 between Thailand and the USA, Callard and colleagues (2001) speculate that transnational tobacco companies (TTCs) sought to buy out or enter into a joint venture with the Thai Government's tobacco monopoly in order to enhance their economic

foothold in a large market and, more importantly, to increase their political influence with the goal of weakening Thailand's tobacco control legislation (Callard et al. 2001). WTO's General Agreement on Trade in Services (GATS) mode 3 (commercial presence) facilitates such investment when countries have committed different facets of their domestic tobacco industry to liberalization, although the explosive growth in bilateral investment treaties likely plays an even greater role. Philip Morris, an American TTC, draws over half of its cigarette profits from overseas (Weissman and Hammond 2000). Less than 10 years ago it was estimated that British American Tobacco controlled 50 % of all Latin American cigarette sales (Bialous and Shatenstein 2002). In the Dominican Republic, Philip Morris became the sole owner of cigarette division *Industria de Tabaco León Jimenes SA* and as a report of this buy-out suggests:

Philip Morris could benefit and increase its market share in the Dominican Republic through more aggressive marketing now that it has complete control over the cigarette division. Philip Morris also could benefit from DR-CAFTA (Central American Free Trade Agreement) by exporting the products it manufactures in the Dominican Republic to Central America (Euromonitor 2009).

A World Bank study estimated that cigarette production in LMICs rose from 40 to 70 % in the past few decades (Jha and Chaloupka 1999), the result primarily of the movement of TTCs into such countries through domestic company acquisition and foreign direct investment. In Argentina, for example, approximately 90 % of the tobacco market is now controlled by two TTCs (Philip Morris Corporation and British American Tobacco), neither being domestically owned (Sawaya et al. 2003). In South Africa, British American Tobacco owns 94 % of the tobacco market (Mejia and Perez-Stable 2006). Foreign investment, in turn, is associated with increased consumption: amongst former Soviet Union republics, those countries that received foreign direct investment from TTCs between 1991 and 2001 saw an increase in tobacco consumption of 51 % compared to a 3 % drop in those that did not (Van Walbeek 2006).

Trade Rules and Government Policy Space

Tobacco products generally fall under the WTO's General Agreement on Tariffs and Trade (GATT), concerned primarily with the reduction of import taxes, and the Agreement on Technical Barriers to Trade (TBT), which covers nontariff barriers to trade (Taylor et al. 2000). Tobacco production is also governed by the Agreement on Agriculture (AoA) with respect to allowed versus prohibited subsidies to tobacco farmers: of health-promoting benefit if tobacco subsidies were successfully challenged under the AoA, but a potential limitation if subsidies to former tobacco growers shifting to food crops were deemed impermissible. Tobacco marketing is covered by both the GATS, with respect to advertising and distribution services, and TRIPS, with respect to regulatory restrictions that might encroach on cigarette logos as "intellectual property rights." The WTO system makes tacit reference to health as an interpretative principle (Bloche 2002); and there are explicit exceptions that allow countries to avoid trade rule compliance if it is "necessary to protect human, animal or plant life and health" (GATT article XX(b); GATS XIV(b)). Dispute panels have generally interpreted the "necessity test" to these exceptions quite narrowly, requiring that countries provide sufficient evidence that particular health measures (such as Thailand's attempt to restrict imports of foreign tobacco products to reduce supply, successfully challenged by the USA in 1989) are essential to protect the health of the population, and that there is no other "less trade-restrictive" option available (in the Thai-USA case, nondiscriminatory taxation and advertising bans that could have the same effect).

Trade treaties enable tobacco and tobacco products to cross borders more easily. On the one hand, trade negotiations have been used by TTCs as opportunities to ensure that domestic regulations do not seriously imperil their penetration into LMIC markets (Shaffer et al. 2005); on the other, the Framework Convention on Tobacco Control (FCTC), negotiated under the WHO system, is seeking to strengthen national tobacco control through a global agreement obliging tobacco control policies to be pursued by all

WHO member states that ratify the treaty. Whether and how the FCTC will be utilized in tobacco-related trade disputes is only now becoming a public health concern.

The FCTC, for example, encourages use of taxation and restrictions on duty-free imports as tobacco control measures (Article 6(2)). Although nondiscriminatory domestic taxes would be permitted under WTO law, GATT rules prevent a country from using import taxes (tariffs) to restrict tobacco supply beyond their existing “bound” level. All countries, including LMICs, are supposed to lock in and reduce these levels over time, thereby gradually eroding this potential tobacco control tool. Moreover, outside of the WTO system, “nearly every investment and trade agreement negotiated by the United States eliminates or reduces trading partners’ tobacco tariffs and protects US tobacco companies’ overseas manufacturing and investment” (Bollyky and Gostin 2010, p. 2637). The USA remains one of the few countries to not ratify the FCTC.

The FCTC contains specific provisions that, assuming foreign tobacco products are treated the same as domestic ones (the nondiscrimination standard of the WTO), a country’s tobacco control measures should not be subject to a trade dispute. But it is not always clear if this will be the case. GATS provisions could affect restrictions on tobacco advertising (one of the control measures identified in the FCTC, Article 13(2)) and tobacco distribution systems. Advertising bans, if they focus solely on the content (tobacco products), are nondiscriminatory (apply to all forms of tobacco) and do not simply attempt to restrict the amount of advertising, and may be able to fend off a dispute challenge (McGrady 2011). Efforts to restrict distribution services (such as number or location of retail outlets) are more vulnerable to a trade challenge. This would apply only to WTO member countries that have committed to liberalize these sectors under GATS, and to do so without restriction. If faced with a challenge, these countries could argue that the health exception applied, whether this would be accepted by a dispute panel is unknown. Or they could “invoke the FCTC itself as an independent defence, although this would be

controversial” (Mitchell and Voon 2011, p. 2). All WTO member countries face negotiating pressure to continue the “progressive liberalization” commitment of GATS and to expand the sectors to which they commit, including advertising and distribution. Their best option if liberalizing these sectors is to exempt from them all tobacco products, which would be a permissible option under GATS.

A recent case involving the USA and Indonesia highlights the importance of taking account of WTO rules on national treatment (nondiscrimination). To comply with domestic legislation restricting flavors in cigarettes to prevent adolescent smoking, the USA banned imports of clove cigarettes. Indonesia argued that the domestic legislation, by exempting “menthol” from the list of flavors, discriminated against its clove cigarettes in favor of the US-manufactured menthol cigarettes. This constituted a violation of the TBT Agreement and its national treatment (nondiscrimination) obligation. Indonesia also argued that there were “less trade-restrictive” ways to meet the public health goal of reducing adolescent smoking than a ban on clove cigarette imports. The WTO dispute panel ruled with Indonesia on the first argument (nondiscrimination) but with the USA on the second (agreeing that a ban was a necessary public health policy).¹ The panel also referenced the FCTC in its decision, which leaves the door open to bans on clove

¹Indeed, the stringency of this necessity test may be changing. A recent dispute settlement involved Brazil’s ban on retread tires from the EU on the grounds that huge stockpiles of such tires were mosquito-breeding grounds which increased the risk of infectious disease. The dispute panel accepted the public health necessity of this measure (even though it was not a direct cause of disease) and that although other, less trade-restrictive measures could have been used, these other measures did not negate the public health importance of the ban. Unfortunately, because other regional trade agreements allowed small amounts of used tire imports from neighboring countries, the WTO panel ruled in favor of the EU, until Brazil is able to affect a totally nondiscriminatory ban. These dispute panel findings indicate that there may now be somewhat greater flexibility for domestic regulations affecting tobacco, alcohol, and food imports using the health defense *if* the regulations are defended on very specific public health grounds (McGrady 2011).

cigarettes *if* the USA also extended this ban to menthol cigarettes (which also happen to be the tobacco product of choice for most young American smokers) (McGrady 2012). Similar concerns, but not yet disputes, have been expressed about Canada's ban on flavors (again excluding menthol) and other additives in cigarettes, which has the effect of banning imports that contain burley tobacco, which is not used by Canada's domestic tobacco industry. What these disputes highlight is the importance of ensuring that tobacco control policies are, intentionally or otherwise, protectionist policies.

TTCs are using trade treaties to argue against other tobacco control measures, including packaging requirements. Article 11 of the FCTC makes the explicit provision that warning labels on cigarette packages must be "50 % or more of the principal display areas" with 30 % as an absolute minimum (WHO 2005a, p. 10). Measures that exceed the minimum standards set forth by the FCTC are being challenged under the WTO system and bilateral investment treaties, the latter permitting private companies to directly sue national governments for perceived expropriation of their property and earnings (real or potential). In a recent case, Philip Morris challenged Uruguay's decision to implement larger warning labels on tobacco packages than the minimum referenced in the FCTC. It used rules set out in a Swiss–Uruguay investment treaty, arguing that such warning labels violated its intellectual property rights by reducing the space in which it could feature its "brand" name and logos (Lencucha 2010). Philip Morris is also challenging Australia's plain-packaging law (another of the FCTC's recommended control strategies), using a bilateral investment treaty between Australia and Hong Kong; the ability of TTCs to search out such treaties is known as "forum shopping." Canada's earlier attempt to require plain-packaging was abandoned after Philip Morris threatened a similar suit using the investor-state provisions of North American Free Trade Agreement (NAFTA)—a "regulatory chill" that the threat of a suit alone can cause. Three other tobacco companies (British American, Japan, and Imperial) have joined the legal battle against

the Australian regulation; and at least two tobacco-producing countries (Honduras and the Ukraine) have launched WTO disputes under the TRIPS Agreement, which is considered to be a potentially more serious challenge than those brought under bilateral investment treaties because the specific trade rules covering such protection remain ambiguous and difficult to interpret (McGrady 2004). The fact that countries that are parties to the FCTC are nonetheless challenging tobacco control measures consistent with the FCTC's intent attests to an ongoing lack of policy coherence between domestic public health and international trade.

Alcohol Trade and Chronic Disease

Concerns are also rising about the impact of numerous WTO agreements on liberalized trade in alcohol, and the extent to which some of the recommended actions in the 2010 WHO Global Strategy to Reduce the Harmful Use of Alcohol (restricting alcohol outlets, availability and marketing, using taxation and prices to reduce consumption) may run afoul of trade rules. As with tobacco products, trade and investment liberalization affect alcohol-related chronic diseases through two principle pathways: increased availability, affordability, and marketing, and decreased flexibilities in alcohol control policies.

Increased Availability, Affordability, and Marketing of Alcohol

The production, distribution, and marketing of alcohol are becoming increasingly globalized. Most alcoholic beverages are largely purchased in the country of production, although cross-border trade in spirits (primarily those produced in HICs) has become subject to disputes over differential tax regimes (primarily exercised by LMICs). More importantly, and as with tobacco, international alcohol brands are now being produced industrially in plants owned, co-owned, or licensed by multinational corporations (Jernigan 2000). The penetration of transnational alcohol corporations in LMIC markets has increased the availability, affordability, and marketing of alcohol

products (Grieshaber-Otto et al. 2000; Jernigan 2009), all of which affect consumption rates.

Greater diversity of alcohol products made available through reduced tariffs on imports can increase overall alcohol consumption as these products can target a variety of tastes and preferences, although in some cases consumers may simply shift from domestic to foreign products (Gould and Schacter 2002). Many of the new foreign beverages contain higher alcohol content compared to domestic products (Grieshaber-Otto et al. 2000; Room and Jernigan 2000), which has become a focus of several trade disputes discussed shortly. As alcohol companies “thirst for new markets” (Jernigan 1997), intensive marketing practices are adopted as a means to increase consumption of alcohol, particularly in LMICs (Gould and Schacter 2002). The role of advertising is a critical factor in differentiating between “globalized” and other types of alcohol (Jernigan 2009). Whereas traditional local alcoholic products are marketed based on availability, quality, and price, a global alcohol product is “synonymous with its imagery ... represents a culture of its own” (Jernigan 2000, p. 471). Alcohol is being marketed through increasingly sophisticated avenues, including direct marketing (e.g., podcasting, cell phones), mainstream media, and via sporting and cultural events. The EU and the USA in current GATS negotiations are aggressively pursuing unlimited liberalization commitments in advertising; and “the World Spirits Alliance has described the Doha Round as offering ‘an excellent opportunity for the international distilled spirits industry to create new opportunities to expand its exports to world markets,’” identifying “liberalisation of restrictions on services, including distribution and advertising” as one of its top five priorities for the new trade round (Gould 2005, p. 367). An existing dispute under European Union trade rules has already found that a Swedish advertising ban on alcohol, even though nondiscriminatory since it applied to all alcohol products, was still ruled a de facto discrimination because domestic brands were better known to the public than were imported products (Zeigler 2006). As with tobacco, and with reference to GATS negotiations, the best strategy for WTO member coun-

tries under pressure to liberalize these sectors is to exempt all alcohol advertising and distribution services from their commitments.

Decrease Alcohol Control Policies

Many of the alcohol control policies that can help reduce alcohol-related harm (e.g., tariffs, taxes, licensing, labeling, regulation of the size of alcoholic beverage containers, identifying certain brands as “noxious” or “injurious”) are considered to be barriers to trade under several WTO trade agreements (Gould and Schacter 2002).

Reducing the control of state monopolies and enterprises is a key element of many trade treaties. Researchers have observed an increase in alcohol consumption and alcohol-related problems following their elimination; the Nordic countries are a case in point. Since the early twentieth century, Finland, Norway, and Sweden had state monopolies on production and wholesale, import and export, and off-premise retail monopolies—all with the overarching goal of reducing individual and social harm from alcohol consumption (Nordlund 2007). Following integration into the European Union and the European Economic Area (EEA), these countries have yielded to pressure to undertake trade activities that adopt the principles of national treatment or nondiscrimination. Alavaikko and Österberg demonstrated that following Finland’s entry into the European Union in 1995, the country’s markets opened and the state alcohol monopoly company, Alko, lost its traditional capacity for alcohol decision-making policy (Alavaikko and Österberg 2000). Mäkelä and Österberg observed that alcohol consumption increased 10 % in 2004 and levels have remained higher ever since (Mäkelä and Österberg 2009). The EU for years has argued that Canada’s liquor board monopolies which operate in many of the country’s provinces function to impose restriction on European alcohol imports. A 2003 WTO trade policy review attempted to pressure Canada to liberalize these state monopoly boards (Zeigler 2006), although so far without success.

Another key element of trade treaties is a greater “harmonization” of taxes and duties on alcoholic beverages (Grieshaber-Otto et al. 2000).

In particular, national alcohol taxation systems have been directly affected by the application of the national treatment requirement. A few years ago, the EU requested the WTO to examine the Philippine's excise tax regime, which includes a higher tax rate on imported spirits than domestic spirits (International Centre for Trade and Sustainable Development [ICTSD] 2009). The EU claimed that this provided unfair market competition, whereas the Philippines defended the law on the grounds that it provided support to indigenous communities who produced spirits from their raw materials, like coconut and sugarcane. In 2011 the WTO agreed with the EU (since the tax was clearly discriminatory) (European Commission 2011), with the Philippines committed to reducing its import taxes to comply with the ruling, a policy that will almost certainly lead to increased consumption in the Philippines.

Similarly, complaints brought by Canada, the USA, and the EU against Japan's higher tax rate for vodka than *shochu* (its domestic "like" product) were successful in an earlier 1996 WTO ruling. *Shochu*, however, typically contains between 25 and 40 % alcohol, whereas vodka contains between 35 and 50 %. A similar ruling was made against Korea's higher tax on higher alcohol content imported spirits, than its domestic spirits (McGrady 2011). The effect will be higher overall alcohol consumption. In both cases, however, the public health arguments for reducing overall alcohol consumption were not as prominent in the policy as they might have been which may have weakened the ability of the two Asian countries to invoke a health defense.

Simply put, when health arguments are not specifically invoked it is unlikely Chile, for example, levied a disproportionately high tax rate on spirits that had alcohol content higher than 40 %, which was successfully challenged by the EU (Gould and Schacter 2002). But, like Japan and Korea before it, Chile did not invoke public health arguments, instead relying on the argument that the policy was nondiscriminatory since it applied to all alcohol products, both domestic and imported. The EU, in this dispute, countered that most varieties of *pisco*, the domestically pro-

duced spirit, by law was required to have an alcohol content below 35 %, whereas most imported spirits had alcohol content of 40 % or above, thus having the effect of providing unfair tax advantage to the domestic product. The WTO agreed, although noting in its ruling that "members of the WTO are free to tax distilled alcoholic beverages on the basis of their alcohol content and price." Taxing on the basis of alcohol content is one of the WHO's recommended alcohol control strategies. This particular WTO ruling thus appears to conform with this health argument; but it also added that such a policy would only be permissible "as long as the tax classification is not applied so as to protect domestic production over imports," meaning that a discriminatory tax on alcohol content, even if designed for public health purposes, could still be found in violation of trade treaty obligations (World Trade Organization [WTO] 1999).

While some trade analysts argue that policies that are motivated purely by health interests may have more flexibility under trade law than what is often perceived (Baumberg and Anderson 2008), the ruling in the Japan–EU dispute over alcohol was clear that the intent of the policy did not matter, only whether or not it was unnecessarily trade-restrictive. The implication for alcohol control policies is that extreme care needs to be taken in crafting the policies to ensure that there is no hidden import discrimination, and that the health goals of the policy are explicit and defensible as having no other options by which they might be achieved (referred to in trade talk as ensuring that the policy can pass the "aims-and-effects test").

Even with this caution, nondiscriminatory alcohol control policies could still be challenged by different trade treaty provisions. In a pre-WTO GATT case brought by the USA against Canada's minimum pricing for beer products, the panel ruled that, even if the minimum price applied to all beers (domestic and imports), if it prevented imports from selling at a lower price it was a de facto discrimination (McGrady 2011). This could have implications for price controls as a means of managing overall alcohol consumption levels. The TBT Agreement, in turn, has provisions related to "technical regulations" which

include packaging and labeling requirements. Thailand in 2010 announced a number of new health warning labels that it will require on alcohol products. These warnings are quite explicit, even dramatic; and several WTO members have expressed concerns about them citing the TBT. At the time of writing (2013) it is not known how this issue will unfold. The Agreement on Sanitary and Phytosanitary Measures (SPS), for different reasons related to the need to justify regulations by reference to international standards or scientific risk assessments, could also be used to challenge what some alcohol-exporting countries might regard as “excessive” labeling or other control policies.

Food Trade and Chronic Disease

There are three general pathways linking trade and foreign direct investment from food to chronic disease, related to changes in the food system: growth of transnational food corporations (TFCs); liberalization of international food trade and investment; and global food advertising and promotion.

Growth of Transnational Food Corporations

Food production, distribution, and retailing have been consolidated into a small number of TFCs. Food retailers in particular have undergone an intense and rapid transformation; changes that occurred in regions such as Latin America between 1990 and 2000 took place in the USA over a period of 50 years (Reardon and Berdegue 2002). In 2003, the top 30 food retailers controlled almost 30 % of the market in Latin America and 19 % in Asia and Oceania (Hawkes et al. 2009). Reardon and his colleagues have labeled the retail transformation beginning in the early 1990s as a “take-off” period (Reardon et al. 2009), launching a “supermarket revolution” and the rapid spread of fast-food chains. The growth of supermarkets during the 1990s can be attributed to demand side factors, notably urbanization, the entry of women into the workforce, and economic growth (Reardon and Berdegue 2002),

as we noted earlier in this chapter. The supply side is driven by trade liberalization and foreign direct investment (FDI). Conditions for FDI were facilitated initially through the easing on investment regulations as part of structural adjustment programs, and subsequently through a variety of bilateral and regional trade agreements. FDI has played a critical role in the diet transition as it has especially targeted highly processed foods (Hawkes 2004). In Latin America, between 1988 and 1997, FDI in food industries grew from USD 222 million to USD 3.3 billion (Rayner et al. 2007). Hawkes and her colleagues, meanwhile, reviewed the available evidence on the links between international trade and dietary patterns (Hawkes et al. 2009). They found supporting evidence, notably from India and the Pacific Islands, that the increase in international trade has shifted dietary patterns from local, “healthy” diets to the consumption of fattier diets (see Box 1).

Box 1 From Tuna to Turkey Tails

The Federated States of Micronesia (FSM) has rights over the richest tuna fishing grounds in the world. Prior to its integration within global markets and economic dependency (partly arising from US aid projects in the 1960s and 1970s) it relied upon fish stocks for its protein source. As its economy “developed” from an agriculture and fishing to wage-labor, FSM became more reliant on trade and foreign investment. Part of this reliance came in the form of selling its tuna fishing rights to countries like Japan, as it lacked the infrastructure to engage commercially with the global tuna trade. Meanwhile, the USA, until 1986 the “administering authority” of FSM and under terms of trade within that authority, began exporting to FSM turkey tails, the high-fat, gristle, and heavily salted part of a turkey deemed inedible in its own country. Overweight and obesity rates rose in tandem with this dietary shift (Cassels 2006).

(continued)

Box 1 (continued)

Western Samoa has a ban on turkey tails, although not on “mutton flaps” (high-fat, low-quality cuts of lamb). Like other South Pacific Island nations whose diets have become globalized, it is experiencing high rates of overweight and obesity though at a slightly lower rate than those countries with no turkey tail bans (Cassels 2006). In its bid to become a member of the WTO, however, Western Samoa had to agree to eliminate its turkey tail ban within 12 months of accession. A “transitional” period of two additional years would be allowed, during which time the country could impose a domestic ban on the sale of turkey tails (though imports would still be allowed). After this period, the ban would have to be removed. According to the WTO accession agreement, the “transitional” period is intended “to allow time to develop and implement a nation-wide programme promoting healthier diet and life style choices” (WTO 2011)—a revealing glimpse at how the global economy prefers control of NCDs at the level of individual choice rather than at economic source. Moreover, while some South Pacific nations are now contemplating a ban on turkey tails and mutton flaps, their ability to do so may be challenged under the SPS Agreement, its requirements for scientific risk assessments, and “consistency” in defining the appropriate level of protection against risks to health (meaning that unless all domestic high-fat food risks to health were banned, even if consumed only occasionally, an import ban could be found to be discriminatory) (McGrady 2011).

loans from the international financial institutions initiated in the 1980s, with a quickening pace during the 1990s as many countries entered into global, regional, and bilateral trade agreements (Hawkes et al. 2009). Food was first represented in multilateral trade treaties with the formation of the WTO in 1995 and adoption of the AoA. Before this time, agricultural trade existed largely outside of formal trade treaties, and developing countries did not have to reciprocate in granting greater market access to developed country exports. With the WTO’s trade rules and dispute settlement procedures, developing countries are under increasing obligation and ongoing negotiation pressures to lower tariffs, export subsidies, and domestic agriculture support (AoA), as well as to open themselves to FDI in food-related sectors they may have committed under GATS. Alongside a growing number of bilateral and regional treaties, such as the NAFTA, the Central American Free Trade Agreement (CAFTA), and the Southern Common Market (MERCOSUR), regulation of international food trade and investment is increasingly governed by trade treaty rules. A specific example of trade treaty effects on health-related food policies includes the long-standing dispute between the European Union and several countries over the EU ban on hormone-treated beef; the ban violates requirements for scientific risk assessments under the WTO SPS Agreement (Labonté et al. 2010).

While international trade of food and food products has increased, so have the level of subsidies provided to agricultural producers in HICs (notably the USA, the EU, and Japan) with much of their produce (particularly American and European) going to export markets. This has led some trade policy analysts to argue that the high level of subsidies can be viewed as dumping (Anderson et al. 2001), defined in trade terms as goods entering a foreign market at less than “normal” prices and impermissible under the WTO’s GATT Agreement. These subsidies are due to be reduced under the terms of the AoA (which gave WTO member nations a 10-year moratorium from trade disputes related to agriculture, which expired on December 31, 2004), although both the USA and the EU have been altering slightly the terms of

Liberalization of International Food Trade and Investment

Liberalization of trade—eliminating quotas, reducing tariffs, and privatizing state trade agencies—was adopted by many LMICs either voluntarily or as a condition of structural adjustment

their subsidies to allow them to still qualify under the AoA's complex set of "boxes" permitting some, but disallowing other, supports to domestic producers. Much prevailing criticism of subsidies is that they damage the value of food exports from developing countries by suppressing world prices. From a public health vantage, eliminating production subsidies on unhealthy food products (such as fats, sugars, or high fructose corn syrup) is likely to do more health good than harm for all countries. But their elimination on healthier and essential food products could do more harm than good to many low-income countries which have become net-food importers—as a result of population growth, loss of arable land, and years of advice to shift from food products for domestic consumption to nonfood cash crops (cotton, coffee, tobacco) for export (Labonté et al. 2008; FAO 2006).

The AoA does retain considerable policy flexibilities with respect to managing food-related NCD risks. Although there is negotiating pressure to reduce tariffs on all food products, countries can choose to reduce tariffs on healthier imports first while retaining tariffs on unhealthy foods. A problem may arise if both healthy and unhealthy foods are "like" each other and differ only in, for example, the amounts of salt, fat, sugar, or trans fat they contain, and especially if the country retaining a stiff tariff on what it considers to be an obesogenic food allowed such foods to be produced and sold domestically. Some domestic subsidy space remains which countries could apply to healthier food production (fruits, vegetables) while removing subsidies for production of foods that are higher in fat (dairy, animal). These flexibilities, however, depend on countries having the financial resources to make use of them (Atkins 2010), and may still be liable to a trade challenge unless the domestic subsidies to fruits and vegetables did not lead to imported fruits and vegetables losing market share (Fidler 2010). Trade challenges under the AoA on export subsidies (which the AoA discourages but permits) could be made on unhealthy foods (fats, oil, sugar, dairy, and livestock), although this would require coherence within challenging countries between their health and economic development sectors, the latter of which may very well want to encourage such

unhealthy food imports or be subsidizing such exports themselves.

FDI in food-related production, processing, and retailing, enhanced by reducing investment barriers, has increased the presence of TFCs in most developing countries. This presence can increase food availability through reduction in retail prices following the removal of import barriers on food, depending on the dynamics of international and domestic prices. Food retail prices can also be lowered by the reduction of investment barriers since TFCs often purchase agricultural products at lower cost and promote economies of scale, but they also benefit from the lower agricultural cost of their own products. Hawkes and Thow demonstrate these effects in their analysis of the Central America—Dominican Republic—Free Trade Agreement (Hawkes and Thow 2008), which the authors argue will likely lead to greater consumption of highly processed food, meat, and other nontraditional foods in Central America. As another example, FDI in Eastern Europe after the fall of the Berlin Wall increased dramatically but with the bulk of it going towards sugar and confectionary, followed by soft drinks, milk/dairy, and other processed foods, very little went into fruits or vegetables (Lobstein 2010).

Impacts on food trade and invest liberalization on domestic production raise concerns about short- and longer term food security. A recent study by the United Nations Food and Agriculture Organization (FAO) examined trade liberalization and food security in fifteen small and large developing countries (Chile, Guatemala, Guyana, Peru, Cameroon, Ghana, Kenya, Malawi, Morocco, Nigeria, Senegal, Tanzania, Uganda, China, and India). Their key finding was that "trade reform can be damaging to food security in the short to medium term if it is introduced without a policy package designed to offset the negative effects of liberalization" (FAO 2006, p. 75).

Global Food Advertising and Promotion

Advertising and promotion marks the third pathway through which trade is affecting food systems and NCDs. In order to dominate in competitive food retailing markets, corporations

employ aggressive marketing techniques. Spending on food advertising is now higher than it is for tobacco (Chopra and Darnton-Hill 2004); and billions are spent annually advertising soft drinks (Rayner et al. 2007). The global food advertising has been steadily growing and the advertisement market is controlled by a few communications networks (Hawkes et al. 2009). Processed food, especially targeted to children, has been the main focus of promotion and advertising (Hawkes et al. 2009). Advertising and product marketing have contributed to changing cultural expectations of food (Rayner et al. 2007) and the “systematic molding of taste by giant corporations” (Chopra and Darnton-Hill 2004, p. 1559). Marketing has been especially targeted to youth. During the late 1990s, soft drink companies targeted school children by selling products in attractive combination packages in schools in Mexico and Colombia, which led to a 50 % increase in soft drink sales among children (Hawkes et al. 2009). Evidence from industrialized and developing countries found that children engage with food advertising and that there is clear link between advertising to children and the consumption of these products (Hastings et al. 2007; Institute of Medicine 2006).

Consistent with the WHO’s Global Strategy on Diet, Physical Activity and Health, several countries have begun to legislate restrictions on advertising to children, although most countries still rely upon formal or informal encouragement of corporate self-regulation (Hawkes and Lobstein 2011). As countries move towards enforceable regulatory approaches, the threat of a trade dispute arising from such restrictions could be reduced. However, as with tobacco and alcohol, commitments to liberalize advertising services under GATS could precipitate a trade dispute, if advertising restrictions disadvantaged foreign advertisers that specialized in the child or the youth market. The same risk exists if a country wished to restrict advertising for certain unhealthy foods, since that is where most FDI in advertising is directed (Sawaya et al. 2003). Similar advice thus follows (and applies equally to services with respect to food distribution systems): Exempt food products from GATS advertising and distribution commitments to preserve

maximum domestic policy space for regulating food marketing and availability.

Finally, there is some concern with the potential impact the SPS Agreement could have on countries’ food regulations. The SPS, as a general rule, requires that any trade-distorting food policy, even if it is nondiscriminatory, should be based on either an international standard (to which it defers to *Codex Alimentarius*) or, in the absence of a standard or if the requirement exceeds that in *Codex*, that it be based on a scientific risk assessment (McGrady 2011). *Codex* is actively developing standards relevant to the WHO’s global diet strategy (L’Abbé et al. 2010), but has long had concerns expressed about the extent to which it is dominated by food industry scientists, both as members of “bingos” (business-interested NGOs) and as part of national government delegations, and always in numbers disproportionate to public interest groups or researchers (Baby Milk Action 2011a, b). Two issues exist here. The first is that *Codex* standards may, for some countries, be considered too low for their food policy purposes, and thus vulnerable to an SPS trade dispute. The second is that labeling requirements that do not conform to international standards could also be challenged.

Conclusion

This chapter has reviewed some of the extant evidence on the role that trade and financial liberalization has played in increasing the global diffusion of risk factors for NCDs. There is some potential for trade treaties to aid in reducing the global diffusion of risk factors, such as enforcing an end to domestic subsidies for agricultural exports harmful to health (e.g., sugars, fats, tobacco) or removal of tariffs on the import of drugs used to treat NCDs—although the continued expansion of intellectual property rights in bilateral and regional trade treaties could price this NCD treatment option out of range for many LMICs. Indeed, as this chapter has elaborated, there remains considerable actual or potential health harm in trade treaties when such treaties are driven by liberalization as the policy end and with only minimal regard to the health consequences.

This potential has been noticed in the run-up to the UN Summit on Non-Communicable Diseases that took place in September 2011. A meeting of African health ministers in early April 2011 issued a declaration on NCDs stating, *inter alia*, that “although globalization, trade and urbanization are important in human development, they are also major external drivers responsible for widening health inequities within and between countries and populations” demanding “the integration of health in all policies across sectors in order to address NCD risk factors and determinants” (WHO 2011a). This declaration repeats a theme woven throughout the WHO’s *Global Status Report on Non-Communicable Diseases 2010*, which noted that “the rapidly growing burden of NCDs in developing countries is not only accelerated by population ageing; it is also driven by the negative effects of globalization, for example, unfair trade and irresponsible marketing” (WHO 2011b, p. 33). WHO Director-General, Margaret Chan, was even more forceful in her comments to the April 2011 First Global Ministerial Conference on Health Lifestyles and Non-Communicable Disease Control convened in Moscow, regarded as an agenda-setting event for the September UN Summit:

Today, many of the threats to health that contribute to noncommunicable diseases come from corporations that are big, rich and powerful, driven by commercial interests, and far less friendly to health. ... Today, more than half of the world’s population lives in an urban setting. Slums need corner food stores that sell fresh produce, not just packaged junk with a cheap price and a long shelf-life (Chan 2011).

While not referencing trade *per se*, the outcomes Chan cites are logically and empirically linked to trade and the globalized food, tobacco, and spirits industries. Yet, notwithstanding the exclusion of the tobacco industry from the Moscow Conference, many of these same globally trading corporations were present to participate in the Conference. Press reports of the Conference quote some of these corporate representatives complaining that companies are “unfairly blamed for consumer’s choices” or that “the overfed are voluntarily overfed” (Englund 2011), reinforcing a concern implicit in the Conference’s emphasis on “healthy lifestyles”

that intervention strategies for NCD control could take the easy path of regulating individual health behaviors rather than corporate economic or social practices.

The UN NCD Summit partly affirmed this concern. The Political Declaration that emanated from the Summit did contain several references to the social determinants of health, an inclusion to be applauded and seized upon by health promoters and public health practitioners. At the same time, much more was made of health behaviors, fueling worries that we are experiencing “lifestyle drift” where the focus is returning to individual behaviors and away from corporate actors. The Political Declaration was particularly conciliatory in this regard, using the language of partnership (rather than regulation) to urge companies to “consider producing and promoting more food products consistent with a healthy diet” and to “take measures ... to reduce the impact of the marketing of unhealthy foods and non-alcoholic beverages [soft drinks] to children.” This soft selling reflects the political influence of the food and beverage industry in the run-up to the Summit, and its hard selling of the ideas of corporate social responsibility and voluntary action. But social responsibility has a way of evaporating when it affects profit and market share. A few months before the Summit, Pepsi Co, which had let its soft drink advertising budget lag in order to promote its healthier products, lost ground to rival Coca-Cola, resulting in an about-face and a plan to massively increase its soft drink promotion budget (iStockAnalyst 2011). The US-based Campbell’s Company, seen as a leader in voluntarily reducing salt in some of its products, similarly announced in just prior to the Summit an almost 50 % increase in the salt of one of its previous low-sodium soup brands due to flagging market sales, a move welcomed by The Salt Institute as a cautionary tale to companies wanting to cut sodium in their products (Weeks 2011).

Paralleling this acquiescence to corporate power, the Political Declaration contained only one (very much passing) mention of trade and none of investment liberalization. Yet, as this chapter has argued, trade and investment treaties have become weapons of choice for companies

fighting new restrictions on their global hawking of unhealthy products. Health promoters must begin to understand better trade and investment policy, and to engage more effectively with the foreign affairs departments of their national governments negotiating such treaties, if they wish to put some brakes on these very communicable characteristic of non-communicable diseases.

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