



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

COVID-19 and the collapse of global trade: building an effective public health response

Pepita Barlow, May CI van Schalkwyk, Martin McKee, Ron Labonté, David Stuckler



Lancet Planet Health 2021;
5: e102–07

The scale of the COVID-19 pandemic is a consequence of international trade and globalisation, with the virus spreading along established trade and travel routes. However, the pandemic also affects international trade through reductions in both supply and demand. In this Viewpoint we describe the many implications for health and propose ways to mitigate them. Problems include reduced access to medical supplies (in particular, personal protective equipment and tests), budgetary shortfalls as a result of reduced tariffs and taxes, and a general decline in economic activity—leading, in many cases, to recessions, threats to social safety nets, and to increased precariousness of income, employment, and food security. However, in exceptional cases, the pandemic has also brought some transient benefits, including to the environment. Looking ahead, there will be great pressure to further liberalise rules on trade to encourage economic recovery, but it is essential that trade policy be informed by its many consequences for health to ensure that the benefits are maximised and threats are minimised through active identification and mitigation.

Introduction

The COVID-19 pandemic is primarily a health crisis, but it has become clear that it has ramifications that extend to many aspects of the international order. International trade is especially hard hit; global merchandise trade recorded its largest ever one-period decline in the second quarter of 2020, falling 14·3% compared with the previous period.¹ Although there has since been a partial rebound as lockdowns eased during summer in the northern hemisphere, total global merchandise trade for 2020 is forecast to fall by 9·2% in 2020, and a recovery to the precrisis trend is unlikely for several years. These changes to the global trading landscape have wide-ranging consequences for physical and mental health, as they affect supplies of drugs and medical equipment, nutrition and food security, and government income necessary to pay for health services.

To understand the possible health consequences of this evolving situation and how best to respond, it is first necessary to understand the reasons why trade is declining. Although most economic shocks are precipitated either by reductions in demand (eg, due to bank failures and income losses) or supply (eg, with sudden increases in prices and rising production costs), COVID-19 has created both situations simultaneously. For example, by April 24, 2020, more than 80 countries and customs territories had introduced export prohibitions or restrictions as an immediate response to the pandemic.² In a world characterised by integrated and often just-in-time manufacturing processes, these actions caused marked reductions in the supply of manufactured goods, initially in China, but then elsewhere. Labour shortages at ports, caused by the pandemic, further slowed the movement of goods. Meanwhile, workplace closures in many countries and subsequent wage losses reduced demand for retail goods and traded services. Many of these trends are expected to continue as further lockdowns are introduced in response to second waves of infections.

How might the drastic decline in world trade affect health? There are two initial mechanisms. The first is

through shortages of traded goods. For over a century, manufacturing has become increasingly globalised, with complex supply chains. Trade disruptions impair the production of goods that are dependent on imports (eg, for component parts), and the export or import of finished products.³ The second mechanism is the economic effect. Although critics of trade liberalisation appropriately question whether the benefits of trade liberalisation are equally distributed between and within countries, it is widely accepted that many firms depend on trade to produce goods and services and to expand their sales and profits.

The figure summarises selected pathways through which these two mechanisms affect health. We start with the health sector.

Effect on the health sector

Access to medical supplies

One immediate consequence that has already received substantial attention is the effect on access to essential medical supplies. The pandemic has generated an acute

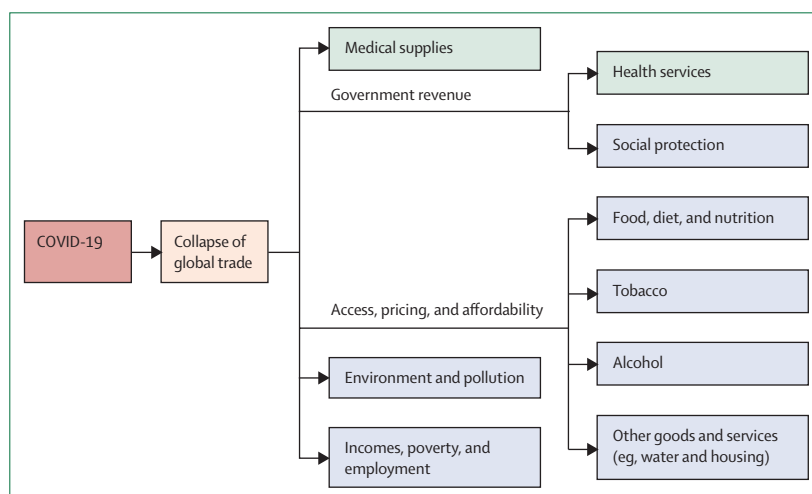


Figure: Selected pathways linking COVID-19, the trade crisis, and health^{4,5}

and unprecedented degree of demand for ventilators, some medicines, and personal protective equipment (PPE)—and health-care providers and governments have engaged in a frantic scramble to obtain supplies. Although some countries (eg, China and Turkey) have been able to repurpose clothing manufacturing to the production of PPE, this move alone has not been adequate to meet demand, and the problem of obtaining medical supplies is compounded by often chaotic purchasing arrangements.⁶ For example, in the USA, individual states are bidding not just against each other but also against the federal government, thereby driving up prices.⁷

Although the challenge of scaling up supply rapidly to meet demand and resulting price rises are creating major problems in meeting the needs of health-care providers, in some countries this issue has been exacerbated by trade barriers affecting medical goods. Importing countries can impose tariffs to restrict trade; in the case of facemasks, for example, tariffs can be as high as 55% of the import value.⁸ These difficulties are especially acute in countries dependent on imports of medical products, such as Armenia, Brazil, and Colombia. Also, several countries have been unable to produce and export domestically manufactured equipment during the pandemic to protect domestic supply, leading to high procurement costs and delays elsewhere.² Trade restrictions have also constrained access to other basic health services, besides those needed to target COVID-19, including vaccines needed for mass immunisation campaigns.⁹ These issues have been compounded by nationalist or regionalist approaches taken in many countries, including the USA, which have created a leadership vacuum and contributed to fragmented and uncoordinated pandemic responses.

One way in which countries could respond is to reduce temporarily all trade barriers for medical products and to repeal restrictive sanctions (ie, penalties imposed by states on each other owing to political disagreements). Pakistan, for example, exempted medical equipment from import duties, whereas Brazil eliminated tariffs on medical and hospital products.¹⁰ Trade can be further facilitated by the actions of exporters. China, for example, has compensated for some of the collapse in demand for its non-medical exports by expanding exports of PPE and medical equipment.¹¹ There have also been calls for the incoming US administration to lift sanctions on Iran's importation of medical supplies to help curb COVID-19 spread across the Middle East.⁹

Other measures can also facilitate trade. As a regional trading block, the EU created the COVID-19 Clearinghouse for medical equipment, to help member states to source supplies, and abolished temporary controls on exports of essential equipment (albeit somewhat belatedly, in response to criticisms of the EU response).¹² Other regions have also relaxed regulations to facilitate imports. The US Food and Drug Administration, for

example, issued a new emergency use authorisation to permit the import of respirators made in China, Brazil, Europe, and elsewhere, which had not been previously authorised for sale.¹³

Looking ahead, a way is needed to develop equitable and effective purchasing mechanisms that enable all countries to obtain life-saving materials and any vaccines or treatments that are found to be effective. Gavi, the Vaccine Alliance and UNICEF have considerable experience with such mechanisms, and the Gavi COVAX initiative, which brings together governments, international agencies, and pharmaceutical manufacturers, seeks to ensure an equitable distribution of COVID-19 vaccines.¹⁴

Budgetary shortfalls

A second challenge to health systems comes from budgetary shortfalls that directly result from collapsing trade. These shortfalls happen for two reasons. First, trade taxes are a major source of revenue in some low-income countries (contributing 5–25% of total revenue) because they are reasonably easy to collect.¹³ Typically, trade revenues expand the fiscal space needed to fund health systems in the absence of other tax sources, so any reduction in trade renders budgets vulnerable.¹⁵ This effect has implications for progress towards WHO's universal health coverage goal.¹⁶ Second, economic recession in the wake of collapsing trade, and with it reductions in personal and business tax revenue, affects developed economies and adds further pressure in economies that are developing.

In these circumstances, governments have to find additional support elsewhere—eg, by borrowing from the global financial institutions or regional development banks (depending on what the money is to be spent on). However, this borrowing can have adverse consequences if lending is subject to conditions, such as a requirement to reduce spending on infrastructure and essential services, including health, something that has been reported to leave countries susceptible to disease outbreaks.¹⁷ Similarly, concerns have been raised about how debt repayment delay schemes currently offered to low-income countries might impede progress towards universal health coverage, because the debt will not be cancelled and might even appreciate.¹⁸ Thus, it is essential that these financial institutions recognise the harm that they can do, and adapt their policies accordingly.

Effect on social protection

The fiscal consequences of reduced trade extend to social protection schemes and public services that protect health, such as water sanitation and education.¹⁹ These entities provide a buffer against the health consequences of economic hardship and social exclusion, so any decline in revenues and spending on social protection and public services is expected to undermine health, especially among families living in poverty or other precarious

situations, and in economic systems that are already strained.²⁰ This risk reinforces the importance of adequate financing, with fair and effective conditions, in helping governments respond to the wider effects of COVID-19.

Effect on social determinants of health

A collapse in trade is likely to have many consequences for the social determinants of health. For illustration, two pathways have been selected: first, employment and income; and second, food security, nutrition, and unhealthy commodities.

Employment and income

People working in sectors that are dependent on international supply chains, or which export a large share of their production, are especially at risk. The importance of an adequate income and employment for good health and access to health-sustaining goods and services is well established.²¹ Equally, falling into poverty, losing work, and financial insecurity can result in physical and mental illness.²² Other people at great risk include those living in border areas, especially if there is extensive cross-border trade.²³ The World Bank estimates that the contraction in global economic output as a consequence of the pandemic, and in particular the collapse of the many global supply chains on which workers in low-income and middle-income countries depend, will push between 88 million and 115 million people into extreme poverty in 2020.²⁴

Food security, nutrition, and unhealthy commodities

Declining trade could undermine food security as a result of changing access to nutritious food sources. The UN World Food Programme estimates that the number of people experiencing acute hunger will almost double by the end of 2020 as a result of the pandemic, adding 130 million people to those already at risk.²⁵ A loss of seasonal labour and the effect of supply-chain collapse on small farms in low-income countries is expected to have some negative consequences for outputs, whether for export or domestic markets.²⁶ In high-income countries, the effect on food outputs might be small, at least for staple products, because much food production is now mechanised and requires fewer workers than elsewhere.

Yet rising food insecurity is not necessarily due to falling production.²⁷ One alternative cause is the growth of restrictions on agricultural trade. By Oct 18, 2020, 21 countries had announced temporary measures restricting food exports,²⁸ which has exerted upward pressure on prices. These controls are nevertheless rare, and most important will be the reduced incomes of people involved in sectors exposed to wider supply-chain collapse, because an adequate income is essential to sustaining access to enough food.²⁹ High-income countries are not

exempt; in the USA, food insecurity has already doubled overall, and tripled among households with children.³⁰

There is a caveat: when trade is based on unhealthy commodities, reductions could be beneficial.³¹ Trade liberalisation during the post-war era has fostered the global diffusion of ultra-processed foods and their ingredients, sugary soft drinks and, with them, non-communicable diseases, such as obesity and diabetes.³ In Canada, the amount of high-fructose corn syrup used in food production tripled after a 5% import tariff on the syrup was abolished as part of the North American Free Trade Agreement.³² Similarly, the liberalisation of tobacco and alcohol trade stimulated rising consumption of these commodities globally.³³ Reduced trade could reduce consumption of these products and associated harms, yielding benefits to health.

Effect on environmental determinants

There are other potentially positive aspects of the pandemic that might seem paradoxical. Pollution associated with trade has direct health effects. A 2017 study estimated that, in 2007, international trade had caused the shift of more than 700 000 pollution-related deaths from regions that import goods, like western Europe, to regions that produce them, like China.³⁴ High-income countries are also major exporters of hazardous materials, such as electronic waste that releases toxicants, to low-income countries.³⁵ As trade declines, so too could the number of lives lost in low-income countries to the environmental harms created by fossil fuel emissions and toxic chemicals.

However, it is already becoming apparent that any beneficial changes might be transient. Partly because of growing evidence about how air pollution exacerbates the effects of respiratory infections such as COVID-19, there is a compelling need for governments not to miss the opportunity to build upon and sustain after the pandemic some of the changes that have taken place, such as reduced travel.³⁶ It will be necessary to return to past but failed efforts (eg, the Environmental Goods Agreement), and to find new ways of reconciling trade and environmental priorities, and to do so with strengthened global governance to ensure these opportunities are not squandered.³⁷

Towards an effective public health response

What do these pathways and caveats imply for how policy makers might respond to the health consequences of a reduction in global trade? Previous economic and trade crises have been followed swiftly by calls for greater liberalisation to sustain economies and livelihoods.³⁸ Several high-profile politicians and think tanks have already announced their support for further trade liberalisation to help the world recover from the COVID-19 pandemic.³⁹ However, such calls often take a narrow view of trade and health, either by assuming that aggregate economic gains translate into

widespread improvements in human welfare, or by focusing specifically on medical and food supplies while overlooking other health determinants.

Although there are important benefits from continued, or increased, liberalisation of trade (eg, to increase supplies of products conducive to health, such as medicines or healthy foods), there are also risks that should be considered. One example, noted previously, is that a reduction in trade can undermine fiscal space for health systems and social protection. It is not implicit that widespread tariff liberalisation will compensate for this. Tariff reductions might fail to yield their intended economic benefits and even erode government revenues further.^{28,40} Between 1970 and 2006, over 40% of low-income countries had a net fall in total tax revenues that lasted more than 10 years after trade liberalisation, in part due to difficulties in levying domestic taxes to compensate for trade revenue declines following tariff cuts.⁸ Increases in trade and economic growth stimulated by reduced tariffs did not necessarily compensate for the loss of revenue from those tariffs. Governments of low-income countries have long been advised to consider carefully the revenue implications of reducing tariffs, and to ensure first that alternative and non-regressive tax measures are in place to maintain health and social spending.¹⁵

Governments can also experience pressure to restrict regulations on trade to sustain commerce. For example, multinational food, tobacco, and alcohol corporations have long sought to minimise regulations targeting their products (eg, mandatory health-warning labels) that could increase trade costs but which help to discourage unhealthy consumption and so prevent non-communicable diseases.⁴¹ There is emerging evidence that companies seeking to maintain their sales in the context of collapsing trade are redoubling their efforts to limit these regulations, to support the economy. For example, several major processed-food exporters argued for Mexico to postpone its nutrition labelling regulations to help ease financial pressures caused by COVID-19.⁴² However, the economic balance sheets of the unhealthy-commodity industries ignore the rising costs of treating those who fall ill from consuming their products.^{43,44} For products that are harmful to health, maintaining or increasing the regulations that create trade and business costs might actually be a more effective route to long-term economic recovery, by reducing downstream health-care costs.

Certainly, so-called protectionist measures that erect trade barriers and retreat from globalisation can also be damaging, especially if they impede flows of goods that are important for health, as noted earlier. There are also wider ramifications of protectionism. Some governments and businesses are looking to move factories closer to home to prevent future supply-chain shocks. The Japanese Government, for example, earmarked ¥220 billion (US\$2 billion) to help manufacturers to reshore (ie, relocate) production back to

Japan.⁴⁵ This reshoring can reduce some forms of the pollution from fossil fuel emissions that is generated by the international transportation of goods, thereby reducing climate change and particulate air pollution. However, it could simply shift the location of environmental damage and associated health harms, especially if reshoring is adopted by countries with relaxed environmental standards.

An associated risk comes from pressure on governments to relax environmental standards to spur trade and recreate global supply chains. China, for example, has signalled its readiness to relax rules on coal power investment to stimulate its economy.⁴⁶ This risk underscores the importance of maintaining regulations that might create trade costs but which protect health and the environment, especially as economies recalibrate their trade relationships in response to COVID-19.

Conclusions

It is a cliché to say that every crisis is an opportunity. Yet the scale of disruption caused by the current pandemic provides renewed opportunities, not only for entities that seek to exploit the situation in ways that threaten health, as has often happened in the past,³⁹ but also for governments, acting in the interests of their people, to reassess globalisation and design trade instruments that are conducive to good health. In doing so, they will need to recognise an explicit link between trade and health, something that should now be obvious, given how the initial spread of the disease occurred along established trade routes, as have many large-scale disease outbreaks throughout history.⁴⁷

In the future, policy makers engaged in the use of trade instruments to mitigate the health effects of the trade collapse induced by COVID-19 should consider carefully the wide-ranging links between trade, trade policy, and the determinants of health and health inequalities that this Viewpoint has discussed. Effective global governance of trade and health will be crucial, and there might be fresh hope for a more co-ordinated global response, given President-elect Joe Biden's favourable view of multilateralism. These deliberations should be done in a transparent manner, using participative trade governance structures that give health experts a seat at the table, and with meaningful public participation. Otherwise, the world will face even greater health risks in future.

National governments and global institutions are now preparing to create a pathway for post-pandemic recovery after the collapse of the global economy and trade. As part of this recovery, there exists a precious opportunity to reform trade arrangements in ways that ensure healthy and sustainable lives for all—something that governments committed to do when they signed up to the increasingly fragile UN 2030 Sustainable Development Agenda. With the lives and livelihoods of billions of people globally now hanging in the balance, the opportunity must not be squandered.

Contributors

PB wrote the initial draft, which all the authors revised.

Declaration of interests

We declare no competing interests.

References

- WTO. Trade shows signs of rebound from COVID-19, recovery still uncertain. Press release. 2020. https://www.wto.org/english/news_e/pres20_e/pr862_e.htm (accessed Nov 9, 2020).
- BDI. Export controls and export bans over the course of the Covid-19 pandemic. April 29, 2020. <https://english.bdi.eu/publication/news/export-controls-and-export-bans-over-the-course-of-the-covid-19-pandemic/> (accessed Nov 9, 2020).
- Blackhurst J, Dunn KS, Craighead CW. An empirically derived framework of global supply resiliency. *J Bus Logist* 2011; **32**: 374–91.
- Labonté R, Schrecker T. Globalization and social determinants of health: introduction and methodological background (part 1 of 3). *Global Health* 2007; **3**: 1–10.
- Barlow P, McKee M, Basu S, Stuckler D. The health impact of trade and investment agreements: a quantitative systematic review and network co-citation analysis. *Global Health* 2017; **13**: 13.
- Mezzadri A, Ruqanpura K. How Asia's clothing factories switched to making PPE—but sweatshop problems live on. June 29, 2020. <https://theconversation.com/how-asias-clothing-factories-switched-to-making-ppe-but-sweatshop-problems-live-on-141396> (accessed Nov 9, 2020).
- Feiner L. States are bidding against each other and the federal government for important medical supplies—and it's driving up prices. *CNBC*, April 11, 2020. <https://www.cnbc.com/2020/04/09/why-states-and-the-federal-government-are-bidding-on-ppe.html> (accessed Nov 9, 2020).
- Billmeier A, Nannicini T. Assessing economic liberalization episodes: a synthetic control approach. *Rev Econ Stat* 2013; **95**: 983–1001.
- Espitia A, Rocha N, Ruta M. Trade and the COVID-19 crisis in developing countries. April 9, 2020. <https://voxeu.org/article/trade-and-covid-19-crisis-developing-countries> (accessed April 29, 2020).
- Nelson R. COVID-19 disrupts vaccine delivery. *Lancet Infect Dis* 2020; **20**: 546.
- Cheng E. As the coronavirus pandemic persists, here's one encouraging sign for Chinese exports. *CNBC*, July 1, 2020. <https://www.cnbc.com/2020/07/02/chinese-health-product-exports-on-the-rise-as-coronavirus-pandemic-persists.html> (accessed Nov 9, 2020).
- European Commission. COVID-19 clearing house for medical equipment. 2020. https://ec.europa.eu/info/live-work-travel-eu/health/coronavirus-response/emergency-support-instrument/covid-19-clearing-house-medical-equipment_en (accessed Nov 9, 2020).
- US Food and Drug Administration. Emergency use authorization. 2020. <https://www.fda.gov/emergency-preparedness-and-response/mcm-legal-regulatory-and-policy-framework/emergency-use-authorization#covid19euas> (accessed May 4, 2020).
- Gavi The Vaccine Alliance. COVAX. 2020. <https://www.gavi.org/covax-facility> (accessed Nov 9, 2020).
- Cagé J, Gadenne L. Tax revenues and the fiscal cost of trade liberalization, 1792–2006. *Explor Econ Hist* 2018; **70**: 1–24.
- Barlow P. Global disparities in health-systems financing: a cross-national analysis of the impact of tariff reductions and state capacity on public health expenditure in 65 low- and middle-income countries, 1996–2015. *Health Place* 2020; **63**: 102329.
- Kentikelenis A, King L, McKee M, Stuckler D. The International Monetary Fund and the Ebola outbreak. *Lancet Glob Health* 2015; **3**: e69–70.
- Khan M, Shanks S. Decolonising COVID-19: delaying external debt repayments. *Lancet Glob Health* 2020; **8**: e897.
- Reeves A, Gourtsoyannis Y, Basu S, McCoy D, McKee M, Stuckler D. Financing universal health coverage—effects of alternative tax structures on public health systems: cross-national modelling in 89 low-income and middle-income countries. *Lancet* 2015; **386**: 274–80.
- Barlow P. Does trade liberalization reduce child mortality in low- and middle-income countries? A synthetic control analysis of 36 policy experiments, 1963–2005. *Soc Sci Med* 2018; **205**: 107–15.
- Reeves A, Clair A, McKee M, Stuckler D. Reductions in the United Kingdom's government housing benefit and symptoms of depression in low-income households. *Am J Epidemiol* 2016; **184**: 421–29.
- Bambra C. Work, worklessness and the political economy of health inequalities. *J Epidemiol Community Health* 2011; **65**: 746–50.
- Marmot M, on behalf of the Commission on Social Determinants of Health. Achieving health equity: from root causes to fair outcomes. *Lancet* 2007; **370**: 1153–63.
- Lakner C, Yonzan N, Gerszon Mahler D, Castaneda Aguila RA, Wu H, Fleury M. Updated estimates of the impact of COVID-19 on global poverty: the effect of new data. *World Bank Blogs*, Oct 7, 2020. <https://blogs.worldbank.org/opendata/updated-estimates-impact-covid-19-global-poverty-effect-new-data> (accessed Nov 9, 2020).
- Mahler D, Lakner C, Aguilar R, Wu H. The impact of COVID-19 (coronavirus) on global poverty: why sub-Saharan Africa might be the region hardest hit. *World Bank Blogs*, April 20, 2020. <https://blogs.worldbank.org/opendata/impact-covid-19-coronavirus-global-poverty-why-sub-saharan-africa-might-be-region-hardest> (accessed May 4, 2020).
- Global Network Against Food Crises and Food Security Information Network. 2020 global report on food crises. 2020. https://docs.wfp.org/api/documents/WFP-0000114546/download/?_ga=2.91109523.869826042.1606834404-2071522185.1606834404 (accessed Nov 9, 2020).
- Barlow P, Loopstra R, Tarasuk V, Reeves A. Liberal trade policy and food insecurity across the income distribution: an observational analysis in 132 countries, 2014–17. *Lancet Glob Health* 2020; **8**: e1090–97.
- Baldwin R, Evenett S, eds. COVID-19 and trade policy: why turning inward won't work. London: CEPR Press, 2020.
- Laborde D, Mamun A, Parent M. COVID-19 food trade policy tracker. Washington, DC: International Food Policy Research Institute. 2020. <https://www.ifpri.org/project/covid-19-food-trade-policy-tracker> (accessed Nov 9, 2020).
- Schanzenbach D, Pitts A. How much has food insecurity risen? Evidence from the Census Household Pulse Survey. June 10, 2020. <https://www.ipr.northwestern.edu/documents/reports/ipr-rapid-research-reports-pulse-hh-data-10-june-2020.pdf> (accessed Nov 9, 2020).
- Nicholson L. Sign of the times: mile-long line of cars outside California grocery giveaway. *Reuters*, April 10, 2020. <https://www.reuters.com/article/us-health-coronavirus-usa-food/sign-of-the-times-mile-long-line-of-cars-outside-california-grocery-giveaway-idUSKCN21R3N3> (accessed May 9, 2020).
- Popkin BM, Mendez M. The rapid shifts in stages of the nutrition transition: the global obesity epidemic. In: Kawachi I, Wamala S, eds. Globalization and health. Oxford: Oxford University Press, 2007: 68–80.
- Barlow P, McKee M, Basu S, Stuckler D. Impact of the North American Free Trade Agreement on high-fructose corn syrup supply in Canada: a natural experiment using synthetic control methods. *CMAJ* 2017; **189**: E881–87.
- Schram A, Aisbett E, Townsend B, Labonté R, Baum F, Friel S. Toxic trade: the impact of preferential trade agreements on alcohol imports from Australia in partner countries. *Addiction* 2019; **115**: 1277–84.
- Zhang Q, Jiang X, Tong D, et al. Transboundary health impacts of transported global air pollution and international trade. *Nature* 2017; **543**: 705–09.
- Pozzer A, Dominici F, Haines A, Witt C, Münzel T, Lelieveld J. Regional and global contributions of air pollution to risk of death from COVID-19. *Cardiovasc Res* 2020; **116**: 2247–53.
- Musch M, De Ville F. Paradigms in the trade–climate nexus: 'liberal environmentalism', the Environmental Goods Agreement and the role of the EU. *Eur World Law Rev* 2019; **2**: 1–13.
- Wang Z, Zhang B, Guan D. Take responsibility for electronic-waste disposal. *Nature* 2016; **536**: 23–25.
- Klein N. The shock doctrine: the rise of disaster capitalism. New York, NY: Metropolitan Books/Henry Holt, 2007.
- Lilley P. Forget protectionism, we must keep our global trade flowing. *The Telegraph*, May 6, 2020. <https://www.telegraph.co.uk/business/2020/05/06/forget-protectionism-must-keep-global-trade-flowing/> (accessed May 8, 2020).

- 41 Koivusalo M, Schrecker T, Labonté R. Globalization and policy space for health and social determinants of health. In: Labonté R, Runnels V, Packer C, Schrecker T, eds. *Globalization and health—pathways, evidence and policy*. New York, NY: Routledge, 2009: 105–130.
- 42 World Trade Organization. Committee on Technical Barriers to Trade—minutes of the meeting of 13–14 May 2020. June 26, 2020. <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/TBT/M81.pdf&Open=True> (accessed Aug 14, 2020).
- 43 Lencucha R, Drope J, Labonté R. Rhetoric and the law, or the law of rhetoric: how countries oppose novel tobacco control measures at the World Trade Organization. *Soc Sci Med* 2016; **164**: 100–07.
- 44 Barlow P, Labonté R, McKee M, Stuckler D. Trade challenges at the World Trade Organization to national noncommunicable disease prevention policies: a thematic document analysis of trade and health policy space. *PLoS Med* 2018; **15**: e1002590.
- 45 Bloom DE, Chisholm D, Jané-Llopis E, et al. From burden to “best buys”: reducing the economic impact of non-communicable diseases in low- and middle-income countries. 2011. https://www.who.int/nmh/publications/best_buys_summary.pdf (accessed May 9, 2020).
- 46 Reynolds I, Urabe E. Japan to fund firms to shift production out of China. *Bloomberg*, April 8, 2020. <https://www.bloomberg.com/news/articles/2020-04-08/japan-to-fund-firms-to-shift-production-out-of-china> (accessed May 9, 2020).
- 47 Scott M. Coal is not the answer to the coming COVID-19 recession. *Forbes*, April 17, 2020. <https://www.forbes.com/sites/mikescott/2020/04/17/the-coming-covid-19-recession-should-be-no-excuse-for-clinging-to-coal/#1755a4c657e0> (accessed April 29, 2020).

Copyright © 2021 The Author(s). Published by Elsevier Ltd. This is an Open Access article under the CC BY-NC-ND 4.0 license.