

18 How the Legacies of the Last Global Food Crisis Sowed the Seeds for the Next One

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Learning Objectives

Through studying this chapter, you will:

1. Learn about the origins and impacts of the 2007–08 global food crisis
2. Appreciate the legacies of the 2007–08 food crisis that remain today, in particular how it reshaped government policies toward business interests, increased the role of financial actors in the food system, and encouraged concentration among agri-food firms
3. Understand how the risks and challenges that resulted from these legacies made the food system more vulnerable to crisis during the COVID-19 pandemic

Introduction

The COVID-19 pandemic that erupted in late 2019 and intensified throughout 2020 and 2021 disrupted food supplies in many parts of the world and sparked a global economic slowdown that has had enormous consequences for food security.¹ Initial lockdowns to control the virus prompted panic-buying of food, leading to localized shortages of key food items. Closures of restaurants and other restrictions on movements and markets forced farmers around the world to destroy dairy products, specialty meats, fish, and fresh fruits and vegetables, as it proved impossible to get their goods to market before they perished. Food system workers in meatpacking plants and migrant farmworkers, often working and living in cramped conditions, contracted the disease in large numbers, forcing closures

of food processing facilities and shutdowns on farms. Economic turmoil led to unprecedented job losses and a massive decline in access to food around the world. The World Food Programme predicted that an additional 130 million people would be pushed to the brink of starvation as a result of the crisis (Anthem 2020). Did the impact of COVID-19 have to cause a food crisis of this scale? How have past food crises affected the world's ability to respond to pandemic-induced disruptions in the food system?

Over a decade ago, in 2007–08, an earlier food crisis erupted, during which food prices rose sharply, compromising access to food for many—a situation that lasted through 2013. This period of instability especially affected people in the world's poorest countries who spend a significant proportion of their income on food. Food riots broke out in a number of

countries in early 2008, including Haiti, Egypt, and the Philippines, among others. At the time, the Food and Agriculture Organization (FAO) of the United Nations estimated that the number of people experiencing severe, chronic undernourishment spiked from around 800 million to approximately 1 billion (Lappé et al. 2013). As the crisis unfolded, there was widespread debate about its principal cause. Some analysts argued that food demand and supply had become misaligned due to a growing world population that was increasingly eating more animal protein, which required grain as a feedstock (Headey and Fan 2008). Others pointed to policies that encouraged grain to be diverted from food markets and into biofuel production, as well as rampant speculation on commodity markets by financial actors, which drove up prices (Wise 2012; Ghosh 2010). Today, most analysts agree that the crisis was caused by multiple factors that interacted in complex ways.

Regardless of its main cause, the 2007–08 global food crisis was a catalyst for change in the global food system that affected its ability to respond to future crises. Both public and private sector actors responded in a variety of ways. Governments around the world were under enormous pressure to address the crisis, especially to increase public investment in the sector as it had fallen sharply in previous decades. Many governments also responded with policy changes that sought to encourage more private investment into agricultural production in order to increase supply and ease pressure on food prices. Private-sector actors ramped up investment in the sector, seeking to capitalize on rising food prices as a potential source of profit. While both public and private sector investment was directed toward improving the long-term productive capacity of the agricultural sector, much of the private-sector investment was channelled into speculative financial investments seeking a quick return on bets about prices of agricultural commodities and farmland, or invested in large agribusiness firms.

This chapter provides an overview of these trends and dynamics in the global food system

in the years since the 2007–08 global food crisis and analyzes the impact of those legacies for the 2020–21 COVID-19 food crisis. In doing so, it illustrates how the contours of the global food system shifted since that earlier crisis and outlines key considerations for understanding the new realities of the global food system. We argue that the responses to the 2007–08 crisis—emanating from both the private and public sectors—prompted deeper shifts in the global food system, which have left legacies that, ironically, made the food system more vulnerable when the COVID-19 crisis hit. These shifts include the adoption by many governments of policies designed to improve the climate for agribusiness; a deepening of the financialization of the food and agriculture sector; and growing concentration in global agribusiness firms. The result of these shifts is a consolidation of power in the food system in the hands of the private sector, and an undermining of the role of the state in safeguarding food security. These legacies reinforce one another in important ways and present significant challenges for food justice and sustainability in a global context during the COVID-19 pandemic.

A Friendlier Policy Climate for Agribusiness

During and after the 2007–08 food crisis, governments and global policymakers embraced an agricultural development agenda that favoured increased agricultural production, supported by private agribusiness investment. This agenda has remained prominent in lower-income, agriculturally dependent countries, particularly on the African continent. Even though pro-poor, peasant rights, and food sovereignty movements have demanded policy changes and public investment that would protect small-scale producers and low-income consumers, governments have continued to largely embrace policy reforms that encourage export-led agricultural development, the commercialization of small-scale and peasant farming, and the growth of agribusiness.

By and large, global institutions and state governments have continued to support export-led growth and the industrialization of agriculture in the global South. Several institutions established new principles for responsible agricultural investment, which aimed to create win-win scenarios wherein large-scale investment in land and agriculture could protect local producers as well as expand agricultural production. For instance, a number of guidelines and codes of conduct emerged from several institutions, such as the Principles for Responsible Agricultural Investment (PRAI) from the World Bank, International Fund for Agricultural Development, and FAO; and the Responsible Agricultural Investment Principles (CFS-Rai) from the United Nations Committee for World Food Security (CFS). While some of these initiatives focused on recommendations for how states can provide more secure land tenure for vulnerable peoples, they also endorsed large-scale agricultural investment in the name of food security, provided that compensation was fair and rights were recognized.

Although some of these initiatives have been viewed favourably by scholars and activists, many also note the limited effectiveness of such efforts (Duncan 2015; McKeon 2015). Some observers fear that these voluntary guidelines and codes of conduct largely served to rebrand large-scale agricultural investment as responsible. Former UN Special Rapporteur on the Right to Food Olivier De Schutter wrote that efforts to promote responsible investment tended to overestimate the capacity of states to enforce new rules, failed to acknowledge the risks of commodifying land, and promoted deeper dependence on global commodity markets in order to achieve local food security (De Schutter 2011). Moreover, despite some buy-in from major firms, these modes of global policymaking often have limited enforcement and accountability, and less obvious advantages for firms with lower profiles than major brands like PepsiCo, Unilever, and Nestlé. As a result, voluntary governance measures designed to mitigate the negative impacts of

agricultural investment are unlikely to be widely effective without political willpower and financial commitments from states. Consequently, these voluntary efforts have yet to result in widespread policy changes to protect both producers and consumers against fluctuations in global food markets (Clapp 2017).

More broadly, though, national-level policy changes during and after the 2007–08 food crisis deepened corporate involvement in the agricultural sector, often making countries more dependent on foreign firms and imports. Many of these policy shifts were nominally made in the interest of food security, though they typically focus on reducing or removing trade barriers, reducing uncertainties in global agricultural markets, and expanding private sector participation in agriculture. Although low public investment in agriculture combined with market-oriented approaches to agriculture are often viewed as factors that contributed to the 2007–08 food crises (Wise and Murphy 2012), the current climate for agribusiness has continued to build on the presumption that the best way to address food insecurity is through expanded partnerships with private actors. This strategy rests on two complementary ideas: first, that food insecurity in the global South—and the African continent in particular—is driven by low productivity, which needs to be increased by using modern agricultural inputs; and second, that this strategy is best achieved by integrating peasant farmers into global value chains (Moseley et al. 2015). These strategies have been endorsed by state governments, donor and development agencies, the World Bank, and non-profit organizations like the Gates Foundation (McKeon 2015).

A key example of this model in action is the New Alliance for Food Security and Nutrition (NAFSAN). Launched in 2012, the NAFSAN established partnerships between the G8 (now G7) states, ten African governments, a number of multinational corporations—including Cargill, Coca-Cola, DuPont, Monsanto, SAB Miller, Syngenta, Unilever, and Yara

International—and dozens of locally based private firms. Each African government established a Cooperation Framework Agreement, which included funding commitments from each of the G8 states and announced the investment intentions of private firms, as expressed in signed Letters of Intent (LOIs).

Importantly, the Cooperation Frameworks also outlined the policy changes that each African state would undertake as a NAFSAN partner. The focus of these policy commitments was on improving the climate for agribusiness in each country, rather than the needs of small-scale producers or the nutritional needs of consumers. As a result, the policy commitments made by states often focused on easing import restrictions on agrochemicals and seeds, streamlining or clarifying land registration rules, and/or expanding public–private partnerships and consultations in agriculture.

For instance, all but one of the ten NAFSAN African countries committed to changes to their seed laws or seed policies in order to improve market access for seed companies.² While the Cooperation Frameworks for some countries—like Ethiopia—included caveats to protect small-scale farmers, Indigenous peoples, and certain plant varieties, others committed to policy changes that provided no such guarantees. For example, in its NAFSAN Cooperation Framework, the government of Tanzania committed to revising its Seed Act in order to align plant breeders' rights with the International Union for the Protection of New Varieties of Plants (UPOV), to reviewing the time required to release imported seeds, and to introducing new seed-testing accreditations. Tanzania enacted its new Plant Breeders' Rights Act aligned with UPOV in 2012 and revised its Seed Act in 2017 in line with these commitments. The revised Seed Act included new provisions requiring that any seeds distributed in the country be certified. This new requirement sparked public outcry because of the limited protections for small-scale farmers: the new laws stated that the trade and sale

of any uncertified seeds was illegal, and punishable by fines and imprisonment (Daems 2016). Although there have yet to be any documented cases of these laws being enforced upon small-scale producers for saving and sharing seeds, civil-society organizations continue to advocate for changes to the seed law and the development of a National Seed Policy.

In addition to expanded market access for agricultural inputs, the Cooperation Frameworks also often promoted other ways in which partner countries could facilitate agricultural investment and the commercialization of agriculture. Ethiopia's Cooperation Framework included changes to land laws and practices to encourage more long-term land leases, and Ghana's Cooperation Framework includes a commitment to develop a land database for investors, with upward of 10,000 ha of land available. Nigeria's Cooperation Framework included an agreement to establish Staple Crop Processing Zones, fast-track land titling and registration in these zones, liberalize the agricultural insurance market, and draft legislation to allow the private sector to enter the insurance market. Dozens of policy reforms were proposed across these ten countries, all designed to increase private-sector investment, improve the agribusiness climate, and, in some cases, connect smallholder producers to global value chains.

This orientation toward commercializing agriculture on the African continent and elsewhere around the world can create new risks for small-scale food producers. Bringing small-scale producers into global value chains has often not delivered higher wages or job security to labourers, and can deepen the risks for food producers (Tsikata and Yaro 2014). Producers who work on an outgrower model—that is, they produce crops on their own land for a central estate or plantation that manages the processing and sale of the product—absorb many of the risks of farming, including the debt required to purchase the required inputs. Moreover, the outgrower model often relies on monocultures, meaning less diversity in the crops produced, as well as threats

to local biodiversity (McMichael 2013). Finally, in the event of adverse weather, low yields, or fluctuations in crop prices, the producers still bear the greatest burden of agricultural risks, risks that the central plantation and larger producers are more likely to be able to weather (McMichael 2013). Although some research reveals some positive impacts from the commercialization of peasant farming, these benefits are deeply context specific and still need to be considered alongside broader patterns of dispossession and exclusion (Hall et al. 2017). Small-scale producers without sufficiently large land plots or clearly demarcated land rights remain further marginalized from the agricultural industry, and often cannot compete with industrial agriculture (Amanor 2012).

Although the commercialization of farming and the establishment of public–private partnerships for food security still guide agricultural development policies in many parts of the world, there is increasing skepticism about these policy initiatives from key actors. In 2018, France formally announced its withdrawal from the NAFSAN, citing a damning report produced by the French Agricultural Research Centre for International Development (CIRAD). A French official explained that “the approach of this initiative is too ideological, and there is a real risk of land grabbing at the expense of peasants” (Caramel 2018). Non-governmental organizations like Oxfam, GRAIN, and the Oakland Institute continue to challenge these models of agricultural development alongside international peasant movements. And some observers do still hold out hope for the role of global institutions in helping to facilitate policy changes. The reformed CFS, which creates policymaking space for both civil society and private sector actors, is viewed by some as a potential space for small-scale food producers to be heard at the international level (Duncan 2015; McKeon 2015). Yet at the same time, the policy changes at the national level described here continue to create new vulnerabilities for small-scale producers who enter the global value chain.

Financialization Has Infiltrated the Food System

The 2007–08 food crisis can be seen as a key moment when financialization became more deeply entrenched in the food system. Financialization is a process that gained momentum during the 1980s as the productive sectors of advanced economies declined, and markets shifted toward accumulation through financial means (van der Zwan 2014). Part of this shift involves the presence of new financial actors, including private equity firms, sovereign wealth funds, hedge funds, and pension funds—all of which have proliferated since the 1990s and are profoundly altering dynamics in the global economy (Lawrence and Smith 2018). In addition to these new actors operating in the food system, novel financial instruments have been introduced in the last two decades, shaping the role of finance in the economy. The process of financialization can be understood as exhibiting a “dual movement” whereby non-financial firms behave increasingly like financial firms to generate profits, while financial firms and actors extend their reach and influence into non-financial spheres (Schmidt 2016). For financial firms to infiltrate previously non-financialized sectors of the economy, potential sites for investment must be reformatted or abstracted in a way that is legible in purely financial terms (Clapp and Isakson 2018). This type of abstraction is occurring in various ways throughout the food system.

First, food commodities have become “normalized” as financial assets on a significant scale, linking food and financial markets to a much greater extent than was the case prior to the crisis. Food commodities became financialized, in part, due to deregulatory policies and the development of new financial products such as a tradable Commodity Index Funds (CIFs) and Exchange Traded Funds (ETFs) (Schmidt 2016). Even before the food crisis, regulations on commodity futures markets in the United States

were gradually relaxed in the late 1980s and early 1990s, which allowed for a greater number and diversity of investors to participate in agricultural commodity trading and opened up these markets to financialization. Position limits in agricultural futures markets had originally been set in the 1930s to restrict the number of futures contracts held by non-commercial traders (Clapp and Isakson 2018). The loosening of these regulations provided financial speculators with more opportunities to participate in agricultural commodities markets and paved the way for the development of new financial products. These products served to “assetize” agricultural commodities, making them “interchangeable with other financial assets” and increasing their exposure to fluctuations in global markets. Asset prices are typically volatile and susceptible to bubbles because they are subject to the portfolio decisions of investors (Schmidt 2016).

Together, deregulatory changes and the creation of new financial tools led to the rapid growth of financial firms’ participation in food commodities markets. Investments in commodity markets accelerated from \$6 billion in 2000 to \$270 billion in 2008 (Schmidt 2016). The onset of the food crisis turbo-charged this type of investment, and by 2011 non-commercial traders represented the majority of the wheat futures market, whereas they only represented 12 per cent in 1990 (Bjorkhaug, Magnan, and Lawrence 2018). Though many are divided about the degree to which speculative investment fuelled the food crisis, there is general agreement that at the very least, it exacerbated the peaks and valleys of world food prices at that time (Lagi et al. 2011).

Second, farmland was also transformed into a new financial asset on a global scale. The high commodity prices characteristic of the food crisis increased the value of farmland, attracting investors to what had typically been overlooked as a site of investment because of the inherent risks involved in the farming sector (Larder et al. 2018). The belief that farmland is uncorrelated with other asset classes, offers higher risk-adjusted returns, and is a “seemingly straightforward,

tangible investment” also appealed to investors in the wake of the 2008 financial crisis (Ouma 2018). Moreover, farmland was viewed as an increasingly scarce resource in the face of rising global populations, greater demand for meat in industrializing economies, and the burgeoning biofuel market—all factors that drove up land prices. As with the agricultural commodity markets, farmland became financialized through economic liberalization policy reforms and the growth of financial speculation through new derivative products in land (Clapp and Isakson 2018).

Initially, the land rush focused on Africa and provoked global alarm about the ethics of outside investors purchasing large tracts of farmland in areas with weak land governance, which could lead to the dispossession of small-scale farmers and threaten local food security. A mainstream counterargument to objections around land grabs positions “land transactions” and “land deals” as a win-win scenario (Gheller 2018): countries rich in farmland benefit from investments via job creation and increased agricultural productivity through technology transfer while investors enjoy reasonably secure returns (Ouma 2018).

Starting in the mid-2000s, developed countries such as Canada and Australia, which at the time had relatively low farmland values, also began to attract private and institutional farmland investments (Magnan 2018:108). The province of Saskatchewan, often referred to as “Canada’s breadbasket,” liberalized farmland ownership rules in 2003, which allowed Canadians outside of the province to purchase farmland (Magnan 2018). Several farmland investment companies were launched in the province following these regulatory changes, and investment picked up momentum. As a result of this influx in investment activity, Desmarais et al. (2017) found that the amount of farmland owned by financial investors increased sixteen-fold between 2002 and 2014 and Magnan (2018) found that between 2008 and 2015 farmland prices in the province shot up by an average of 16 per cent annually. Quebec saw a similar

trend. Since 1990, land prices have skyrocketed by more than 600 per cent and the number of farmland transactions has increased by 67 per cent since 2010 according to Gheller (2018). International players including American financial funds and Chinese investors have expressed interest in acquiring farmland in Quebec, but so have domestic banks and investment companies. While foreign investors only account for 3 per cent of rental-land owners in Canada, suggesting that the land-grabbing situation is not comparable to regions in Africa or Asia, corporate ownership of farmland is quite substantial. Walton International, a multinational real estate company, owns 13,000 acres in Ontario; and Assiniboia Capital, a farmland investment corporation, owns 115,000 acres in Saskatchewan (Lavoie and Heminthavong 2015).

The presence of new financial actors in farmland fuelled backlash in Canadian farming communities. As a result, the government of Saskatchewan has changed its rules on farmland ownership and the Quebec government launched a public inquiry on land grabs in 2015. Sensitive to the reputational risks of farmland investments, in 2017 the Canadian Pension Investment Board committed to selling its farmland portfolio in North America and not making any further investments in farmland (Tilak and Scuffman 2017). These cases of contestation demonstrate the uneven ways in which food systems become financialized depending on context. However, it must be noted that the debate on land grabbing in Canada as it relates to farmland investing tends to overlook the long history of land grabs of Indigenous territories by white settlers (Gheller 2018).

Third, a deepening of financialization has influenced the opportunities available for those working toward building more sustainable food systems. The involvement of investment funds in land acquisitions puts pressure on small-scale agroecological farmers who are attempting to produce food in a way that is more socially and environmentally sustainable than the mainstream industrial model. Rising farmland prices often puts acquiring land out of reach for smaller

farmers and retiring family farmers can find themselves in a position where the only buyer is an investment fund looking to consolidate their land (Tomky 2018). In addition to this, the products and services made available through the banking sector also largely dictate the degree to which sustainable food entrepreneurs can grow and thrive in the market economy. Banks tend to rate larger businesses as less risky than smaller or medium-sized enterprises and in the farming sector they frequently view industrial modes of production as less risky than agroecological methods (Carlisle et al. 2019). This means that smaller, innovative food entrepreneurs struggle to access financing from mainstream institutions and turn to alternative sources whose terms tend to be less favourable (Vander Stichele 2015). Because “financial capital has been democratized,” poorer populations including small-scale farmers now have access to microloans, derivative markets, and hedging services (Isakson 2015). Whether this is a positive scenario for marginalized populations is up for debate, as there is skepticism about the degree to which these changes alleviate poverty and improve the situation of farmers in developing countries (Isakson 2015).

Agribusiness Consolidation Has Intensified

Although corporate concentration has been rampant in the agri-food system since at least the 1980s, there has been an accelerated pace of consolidation among the world’s largest agri-food companies in the period since the 2007–08 food crisis (Howard 2016). Many agri-food firms were positioned to benefit financially from the extended period of high and volatile food prices during the 2008–2013 period. Agricultural commodity trading companies, for example, saw massive profit increases during these years. The dominant agricultural commodity trading firms, also known as the ABCD firms, which stands for the prominent letter in each of their

names—Archer Daniels Midland, Bunge, Cargill, and Louis Dreyfus—benefited handsomely from food price volatility. These firms, which control around 70–90 per cent of the global grain trade (Murphy et al. 2012), engaged heavily in the agricultural commodity futures markets, explained earlier, which is a common way that these firms have long hedged price risks in the bulk commodity trade. When prices for wheat, maize, and soy—grains these firms trade in large quantities—rose during the food crisis, these companies, which were already invested in futures markets for those crops, experienced windfall profits on those investments. Profits in these firms surged by over 20 per cent in the 2000–2010 period, far outpacing the 2 per cent growth they experienced in the previous decade (Blas 2013).

Agricultural input companies—that is, those companies selling seeds and agrochemicals—also saw benefits from the 2007–08 food crisis. In the years immediately following the global food and financial crises that erupted in 2008, the agricultural input industry performed well. High agricultural commodity prices meant that the demand for farm inputs soared with farmers and corporate farmland investors seeking to increase production in order to capitalize on higher food prices. But after 2013, when agricultural commodity prices began to drop off, the performance of these firms weakened. In this context, the shareholders of these firms began to demand higher returns, which they felt could be gained by consolidating firms into larger companies that commanded a larger share of the market (Clapp 2018). At the end of 2015, Dow and DuPont—two of the biggest and oldest chemical firms in the United States that produce agricultural pesticides—announced that they would merge into a new US\$130 billion company. In both firms, hedge fund investors who had amassed significant shares in each firm were able to push for restructuring (IPES Food and ETC Group 2017). This merger prompted other firms to also merge, in order to keep up with the competition. Over the course of 2016, two other major mergers in the sector were announced—the purchase of

Syngenta, a major seed and chemical company, by a major Chinese chemical firm, ChemChina; and the purchase of Monsanto, a leading agricultural biotechnology seed and chemical firm, by Bayer, also a large agrochemical firm. These mergers have radically transformed the sector. Prior to these mergers, six firms accounted for 75 per cent of the US\$54 billion agrochemical market, and 62 per cent of the US\$39 billion global seed market. After the mergers, just four firms control 70 per cent of the agrochemical market and now have a 67 per cent share of the global seed market (Mooney 2018).

Consolidation has also occurred in other industries in the agricultural input sector in the years since the 2007–08 food crisis, responding to similar pressures experienced in the agricultural seed and chemical industry. In the global fertilizer industry, for example, two giant Canadian fertilizer firms—Agrium and Potash Corp.—merged in 2016 to create a new US\$30 billion firm, known as Nutrien, which is now the largest fertilizer company in the world (Chemnitz et al. 2017). In the farm equipment industry, where just four firms—Deere & Co., CNH Industries, AGCO, and Kubota—command nearly 40 per cent of the global farm machinery market, consolidation is also occurring. The dominant firms, for example, are increasingly acquiring start-up firms that are developing software which links farm equipment to big data platforms to analyze farm data. Deere & Co., for example, has purchased several tech firms specializing in precision planting in recent years in order to establish itself as a leader in the digital agriculture market.

Mergers have also characterized the food processing and distribution sectors since the 2007–08 food crisis due to pressure from shareholders to increase profits. In this part of agri-food supply chains, recent mergers have resulted in new megacompanies that dominate in the processed and packaged food market. Some recent examples include the US\$100 billion combination of Kraft and Heinz in 2015, under pressure from shareholders to boost profits through restructuring. In 2016, InBev (Anheuser Busch)

merged with SAB Miller, creating a US\$275 billion firm that commands nearly 30 per cent of the global beer market (Fontanella-Khan et al. 2015). The meat industry, which was already concentrated in many countries, has also seen increased consolidation in the past decade with a rash of mergers and acquisitions. JBS, a Brazilian firm, acquired a number of other firms in the past decade and is now by far the world's largest meat company. Other global meat giants include WH Group, based in China, as well as Tyson and Cargill, both based in the United States. Together these three firms control a significant share of the global meat market (IPES Food 2017). In Canada the meat sector is highly concentrated, with just two firms controlling 95 per cent of beef processing, for example (NFU 2020).

In the distribution sector, there were also a number of mergers between top food retail companies in recent years. In Canada, Sobeys and Safeway merged in 2014 in a deal worth US\$5.5 billion. And in 2017 the sector was shaken up when Amazon, the world's largest online retail firm, purchased Whole Foods, a health food chain based in the United States, for around US\$14 billion (Nicolaou et al. 2017). In 2018, a proposed deal to merge the two largest food retail companies in the United Kingdom, Asda and Sainsbury's, attracted considerable scrutiny due to its expected increase in concentration in the UK grocery market, and the deal was blocked by regulators.

The growing consolidation of transnational agri-food firms that occurred since 2008 has important implications. First, growing corporate consolidation reinforces inequality in the food system. Extreme corporate concentration—when the top four firms control more than 40 per cent of a market—weakens competition and opens up opportunities for firms to raise prices without necessarily improving product quality. Price mark-ups by firms in concentrated markets constitutes a massive transfer of wealth from consumers to firms, exacerbating an already highly unequal distribution of wealth in society, while also making those products less accessible to

people with fewer resources. The recent mergers in the input sector, for example, have resulted in highly concentrated markets, raising concerns about farmer access to affordable seeds and other agricultural inputs (Clapp 2018). Higher food production costs are also often passed on to consumers in the form of higher food prices (Goodman and Finke-Haynes 2018). Less industrialized countries are especially vulnerable to price increases on the part of transnational firms in the agri-food sector, because many of these countries have a higher proportion of their population engaged in farming, and poor people in those countries typically spend a higher proportion of their income on food compared with more industrialized countries. In addition to the effects of higher prices that concentrated sectors can charge, mergers generally result in job losses, as a key rationale for mergers is to achieve efficiencies by combining and reducing the workforce in those firms.

Growing corporate consolidation in the agri-food sector is also seen by many to be a threat to long-term food system sustainability. Input industry firms claim that they need to merge for advancing expensive research and development and that their solutions will ensure environmental sustainability. For example, they posit that digital farming, which relies on big data and sophisticated farm machinery, can enable more precise applications of chemical herbicides and designer seeds that resist drought and pests, and will utilize more “climate smart” farming practices, such as no-till agriculture to reduce greenhouse gas emissions (e.g. Monsanto 2017). But critics argue that these high-tech farming models perpetuate a reliance on genetically modified seeds and the associated use of chemical herbicides, putting farmers on a high-tech farming treadmill that is difficult to escape (Mooney 2018). Despite similar sustainability claims made by the largest seed companies with the advent of genetically modified seeds in the 1990s, the application of the chemical herbicide glyphosate increased fifteenfold between 1996 and 2014 (Benbrook 2016). This herbicide has been

determined by the World Health Organization (WHO) to be “probably carcinogenic to humans” (cited in Clapp 2018).

More broadly, corporate concentration works to crowd out efforts to foster other forms of sustainable agriculture at a smaller scale, such as through the promotion of agroecology. Agroecological farming systems reduce reliance on external inputs and instead work with nature to foster natural resistance to pests and build up soil fertility through diverse cropping systems. Food sovereignty activists, for example, call for farmer-to-farmer research and extension programs to promote agroecological practices (Holt-Giménez and Altieri 2013). The agroecological approach to farming has been scientifically shown to be carbon absorbing and more resilient than the kinds of monocultural and high-tech practices promoted by the largest agribusiness firms. An agroecological farming model is also more accessible to farmers because it is not reliant on the purchase of corporate-controlled farm inputs.

Ongoing Challenges and Risks in the Age of COVID-19

Although the global community responded to the 2007–08 food crisis with a number of initiatives to reduce susceptibility and vulnerability to further crisis, these initiatives often facilitated the shifts we have outlined here. Ultimately, we argue, the friendlier policy environment for agribusiness in developing countries, heightened financialization in the food system, and consolidation of agribusinesses work to reinforce each other and made the system more vulnerable, despite the adoption of policy initiatives that seek to avoid their worst effects. The result was a food system that was already fragile when the COVID-19 pandemic hit. At the same time, initiatives that work toward addressing these weaknesses could build greater food system resilience. In this section, we outline the ways in which the

legacies of the last food crisis left the food system vulnerable to the next crisis.

Volatility

As outlined in the previous sections, the main trigger for the 2007–08 food crisis was higher and more volatile food prices. While extreme food price volatility has not been the main concern in recent years, the risk of a return to food price volatility remains and, in some ways, has intensified over the past decade. The deepening of financialization in the agri-food sector, heightened corporate concentration, and a friendlier policy context for agribusinesses in many developing countries has created a more conducive environment for agribusiness actors to engage in speculative investments that could affect food prices (Clapp and Isakson 2018).

These legacies of the 2007–08 food crisis also make developing countries more vulnerable to such an outcome. Business-friendly policy changes, for example, have resulted in more small-scale producers working directly with the transnational corporations that dominate global value chains, making those producers more vulnerable to global market swings because they increasingly rely on purchased food (McMichael 2013). Moreover, with increased participation in production to serve global value chains, the income of small-scale producers has become more dependent on global agricultural prices, making them vulnerable to future price volatility that could go in either direction. These increased vulnerabilities are especially pronounced in countries where there are large numbers of poor people who are hardest hit when crisis strikes.

When the COVID-19 pandemic hit, volatility not just in prices, but also availability of food, convulsed through the global food system. The crisis has emphasized how hyper-concentrated food systems are at risk during times of crisis. Meatpacking plants, for example, became hotspots for COVID-19 outbreaks in Canada, the United States, and Ireland, and were forced to close for a period of time to limit the spread of

the virus among workers. Because the industry is so concentrated, even the closure of just a few plants was noticeable to consumers, with shortages and rising meat prices. Moreover, relying on a handful of plants means that if workers are unable to function in a healthy and safe way, there are major repercussions for the food system as a whole. Prices also rose for staple crops, including wheat, as demand soared for flour and several countries, including Russia and Ukraine, restricted exports at the start of the pandemic. Prices for perishable commodities, including vegetables and dairy, did not rise as much due to closure of restaurants and an inability to move these fresh goods to markets before they went bad.

Inequality

Inequality remains a global issue, which increases vulnerability to crises for those facing extreme poverty. As noted, food price fluctuations created by the 2007–08 global food crisis had the greatest impact on the world's poorest people. Global interest in arable farmland also continues to put traditional, peasant, and small-scale farmers at risk. Corporate concentration in agribusiness is also deepening global inequality, as those firms are able to charge higher prices for agricultural inputs, which not only further enriches agribusinesses but also contributes to higher food prices for consumers all over the world. Moreover, the heightened financial investment in agriculture has deepened ties to trade, meaning that trade disruptions might have a disproportionate impact on agriculturally dependent economies.

Smallholder producers working within agricultural value chains are now more readily exploited by more concentrated agribusiness firms that can easily set prices due to their dominance in the marketplace. This dynamic creates further inequality in the food system as it makes smallholders more reliant on the global food system. As we have seen, farmland is still an attractive asset class, and the displacement of rural people and small-scale farmers continues,

despite initiatives that promote “responsible” investment. Clear inequalities persist in the ways in which consultation and compensation for land acquisition occurs, often excluding marginalized voices within communities (Collins and Mitchell 2018).

The COVID-19 crisis has laid bare the inequities that exist within the food system. Disruptions within global food markets and agricultural supply chains pose various risks to producers and food system workers. Travel barriers implemented to prevent the spread of disease affected the delivery of agricultural inputs, seeds, and extension services to producers in several African countries as well as access to food itself for many populations. Migrant agricultural workers, who often travel from lower-income regions to higher-income regions for temporary seasonal agricultural work, were often still permitted to travel as essential workers. However, the crisis exposed vulnerabilities for these workers too: temporary foreign agricultural workers in Canada often live in cramped living quarters, which increased their exposure to the virus. Hundreds of migrant farmworkers in Canada contracted the virus in the early months of the pandemic. The spread of COVID-19 among industrial food workers, including hundreds of workers in meat processing plants across North America, further highlights and exacerbates the inequalities within the food system.

Ecological Fragility

There are multiple ecological risks associated with the global food system that have, in the view of many observers, reached crisis proportions. Indeed, there is growing acknowledgement of the linkages between the global industrial agriculture model and environmental problems such as climate change and the loss of biodiversity. In the wake of the 2007–08 food crisis, global policy initiatives, while promoting the notion of sustainable food security, have tended to reinforce that type of agricultural model rather than make a major shift away from it.

The legacies of the food crisis outlined in this chapter increase the risks of ecological crisis associated with agriculture. As food commodities are transformed into financial assets, there is a drive to increase production for greater profits with little attention paid to the ecological ramifications on the ground. Moreover, corporate consolidation limits the choices available to farmers, often locking them into an industrial model of agriculture, which is widely recognized as being harmful to the environment. Despite this awareness, the industrial model is spreading worldwide as developing countries adopt policies that increasingly link their agriculture sectors to global markets. These trends do not bode well from the perspective of improving the sustainability of food systems.

The industrial model of agriculture poses both ecological and human health risks. Industrial, large-scale farming poses risks to biodiversity and the climate, and often requires encroaching on forests and other habitats. At the time of writing, the precise origins of the COVID-19 virus had yet to be determined, but experts on ecosystems and biodiversity have argued that the encroachment on ecosystems created by industrial agriculture is likely to create more zoonotic disease risks for the human population. In 2016, the United Nations Environment Programme (UNEP) *Frontiers Report* identified new and neglected zoonotic diseases as an emerging issue of environmental concern. The land-use change associated with industrial agriculture reduces natural habitats, brings wildlife in closer contact with humans, and increases the risk of zoonotic disease transmission (UNEP 2016). As a result, there is a pressing need to take stock of the ecological costs of the current food system, including the health risks to humans.

Conclusion

Over a decade since the 2007–08 food crisis, the global agri-food system is still at great risk. We have experienced major disruption due to

COVID-19, and the spectre of widespread hunger and a full-fledged global food crisis remains. The 2007–08 food crisis was the product of a complex interplay of factors, many of which remain in the global food system today. Rather than instituting protections for farmers and consumers, many countries continue to implement policies that attract large-scale investment and industrial agriculture. Such policy shifts deepen local reliance on the global food system along with all of its risks and volatility. Increased commodity speculation helped to drive food price increases in 2007–08, and today commodities and farmland continue to be normalized as financial assets. This speculation has continued to drive up farmland prices in both Western countries and the global South and has crowded out alternative modes of agricultural production. The consolidation in the agribusiness sector was already well underway prior to the 2007–08 food price crisis, but in the years since, this consolidation has further intensified. A decline in food prices after 2013 led to further consolidation in the agrochemical, fertilizer, and food processing industries, with shareholders seeking higher profits.

All of these features of the post-crisis food system create new challenges for the twenty-first century as the threat of new food crises continues to loom. Agribusiness investment, financialization, and consolidation all risk deepening inequalities between the world's rich and poor people, and policy initiatives have not sufficiently shifted to protect those who are most vulnerable. Particularly concerning, as we face the uncertainties of climate change and biodiversity loss, is that there has been insufficient appreciation of the ecological costs of the industrial food system. Although some efforts have been made to try to reform the global food system—by global institutions, social movements, researchers, and activists—such efforts have not yet turned the tide. Much work remains for those actors seeking food system transformation that improves rather than undermines their resilience in the face of future shocks.

Some regions are also seeing increased demand for locally produced food in the face of supply chain disruptions due to COVID-19. However, building resilience into the food system needs to address the vulnerabilities that currently exist. This could include building shorter and more localized supply chains by investing in local, sustainable agriculture. For example, a small number of investment funds—like FarmWorks Investment Co-Operative and the Fair Finance Fund in Canada—have emerged to cater to the financial needs of small-scale

food entrepreneurs to help scale up sustainable alternatives to the industrial model. The amount of capital these types of local investment funds channel into the food system is minuscule compared to the investment flow in the mainstream financial system, however. Nonetheless, such initiatives represent an attempt to support small and medium-scale enterprises in the food system. But systemic change also requires states to shift their support away from financialized, industrialized, and export-led food policies toward a more diverse food system.

Discussion Questions

1. How has the global food system changed since the 2007–08 food crisis? What have been the major trends?
2. Which actors and institutions are important in the global food system? Who holds power in the global food system?
3. What are the current challenges and risks in the global food system? What could be done to address these challenges and risks?
4. Given what we know about the COVID-19 crisis, how can we build a more resilient global food system?

Further Reading

1. Clapp, Jennifer, and S. Ryan Isakson. 2019. *Speculative Harvests: Financialization, Food, and Agriculture*. Black Point, NS: Fernwood Publishing. Clapp and Isakson delve into the complex and changing relationship between the agri-food and financial sectors and illustrate how a greater role for financial actors in the sector has reconfigured food systems. Through a close examination of financial actors in agricultural commodity trading, farmland ownership, agricultural risk management, food processing, and food retailing, they illustrate the profound challenges that financialization presents to the food system.
2. Howard, Philip. 2016. *Concentration and Power in the Food System: Who Controls What We Eat?* London: Bloomsbury. Howard provides a comprehensive look at the growing problem of corporate concentration in the agri-food system. He examines this process at all points along agri-food supply chains, from inputs, to farming, to commodity trading, food processing, and retail, in each case detailing the ways in which corporations have sought to extend their power and discussing the implications for food security, the environment, and health.

3. **McKeon, Nora. 2015. *Food Security Governance: Empowering Communities, Regulating Corporations*. New York: Routledge.**

McKeon draws on her experience working with grassroots organizations and within international institutions in this analysis of food systems and the prospects for improving food security governance. Her analysis links both local and global considerations and reminds us of the importance of paying attention to small-scale producers and social movements as we grapple with global food governance issues.

4. **Wise, Timothy A. 2019. *Eating Tomorrow: Agribusiness, Family Farmers, and the Battle for the Future of Food*. New York: The New Press.**

Wise investigates the influence of major agribusinesses and philanthropic organizations across several countries, highlighting how food and agricultural policies have often been reshaped to encourage industrial agriculture. He also illustrates the interlinkages between food, fuel, and financial markets and how this has continued in the post 2007–08 period, while also showing us how small-scale farmers and the food sovereignty movement are working to restore soil health and counter corporate influence in food policies.

Notes

1. The work in this chapter was supported by the Social Sciences and Humanities Research Council of Canada (SSHRC) under Grants #435-2013-0040 (Clapp) and #430-2016-00900 (Collins).
2. Of the ten partner countries, only Benin did not include a commitment to revise its seed laws.

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