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Fast-Food Value Chains and Childhood Obesity: A Global Perspective

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Introduction

A decade after Glass and McAtee's [1] ground-breaking article that called for an integration of the natural, behavioral, and social sciences to study childhood obesity, there is still a need for a broader analysis regarding the economic, political, and social contexts that shape children's food choices. This is particularly evident when we analyze the growth and diffusion of fast food globally. By 2020, expected yearly sales of fast food in the United States will total \$257 billion [2]. As concern over fast-food consumption peaked during the last decade, fast-food companies changed their menus, adopted new marketing strategies, and, notably, looked abroad to open more fast-food outlets. This global push was accompanied by a steady rise in the rates of overweight and obese children in low- and middle-income countries, which now carry "the majority of the obesity and chronic disease burden" [3].

According to the World Health Organization (WHO), in 2013 there were roughly 42 million overweight children under the age of 5; 31 million

were in developing countries [4]. Figure 41.1 shows the steady increase of combined prevalence of overweight and obesity in children aged 0–5 in developed and developing countries since 1990 [5]. Developing countries refer to the United Nations Classification Scheme which encompasses Africa, the Americas (excluding Northern America), the Caribbean, Central America, South America, Asia (excluding Japan), and Oceania (excluding Australia and New Zealand). The 2016 *WHO Report on Ending Childhood Obesity* documents that low- and middle-income countries have more absolute numbers of overweight and obese children under the age of 5 than high-income countries, although Europe still has the highest proportion of overweight children (Fig. 41.2). Asia had 48% of the world's children under 5 who were overweight and Africa 25% [6]. Although there is wide variation among countries, certain developing nations have seen drastic shifts. In China and Brazil, for example, obesity rates rose more rapidly in children than adults. By 2020 the number of children overweight or with obesity is estimated to reach 60 million [3, 7, 8].

The presence of the fast-food industry and its web of economic relations that connect the global food system together encompass the "complex system in which behavior is affected by multiple individual-level and socioeconomic factors" [9]. Food choices, as Glass and McAtee argue, are embedded within social contexts that place "constraints," "inducements," and "pressures" upon individuals and consumption habits. These multilayered, nested

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Fig. 41.1 Combined prevalence of overweight and obesity for preschool children in developed and developing countries (Data taken from Wang Y, Lim H. The global

childhood obesity epidemic and the association between socio-economic status and childhood obesity. *International Review of Psychiatry* 24(3) (2012):176–188)

Fig. 41.2 Percent of overweight children under 5 years of age, by WHO region and World Bank Income Group, comparable estimates, 2014. Notes: AFR, African Region; AMR, Region of Americas; SEA, Southeast Asia Region; EUR, European Region; EMR, Eastern Mediterranean

Region; WP, Western Pacific Region (Used with permission of WHO from World Health Organization, Report of the Commission on Ending Childhood Obesity, Geneva: WHO, 2016; p. 3)

social determinants exert influence at the micro level of households all the way to macro global systems. Although multiple factors influence childhood overweight and obesity rates, an analysis of the global food environment and the lead firms that shape it, such as fast-food TNCs, is necessary to fully understand the constraints and pressures on food choice in rapidly globalized geographies.

This chapter seeks to advance the multilevel approach to studying childhood obesity by focusing on the “macro” level of corporations in the global economy and connecting it to the theory of “dietary dependence” [10]. The theory of “dietary dependence” posits that a country’s mode of integration into the global economy accelerates its population’s dependence on imported products and processed

food from transnational corporations (TNCs). Here we use a global value chain (GVC) framework to explain how the structure of the fast-food industry shapes a country's role in the global economy and controls its food availability and food choices. We also seek to determine if or how the global fast-food industry, in general, and food value chains, in particular, have changed since the first publication of this volume in 2010. Essentially, our GVC approach highlights how these macrostructures in the global food system shape national food systems, while local actors impact food options (Fig. 41.3).

The GVC model is based on a series of steps that can be applied to any global industry in terms of how it is organized and evolves (for more information on global value chain analysis, see the Concepts and Tools section of the Global Value Chains website (<http://www.globalvaluechains.org>) maintained by the Center on Globalization, Governance & Competitiveness at Duke University). First, one identifies the lead firms in the industry and defines how their strategies and roles are changing. Second, the linkages between economic activities that con-

stitute the input-output structure of the chain are highlighted, from raw materials to the production, distribution, and sale of the final product, which helps us understand how value is distributed across the chain and who captures value at each stage. Third, there is an analysis of the governance structure that dictates how the chain operates and who can control the diffusion of technology, standards, and business practices within the chain. Lastly, a review is carried out of the institutions (i.e., governments, unions, nongovernmental organizations, and multilateral agencies) that establish the rules, incentives, and norms that guide the behavior of firms in the chain.

The global value chain for food operates at both the global and local levels. In Fig. 41.3, we highlight the interactions of global and local food value chains that help to cultivate dietary dependence in developing countries. There are different types of lead firms at the global level, including the fast-food franchises that are household brand names in the United States (e.g., McDonald's, KFC, Wendy's, and Domino's), the TNC food and

Fig. 41.3 Interaction of global and local food value chains and dietary dependence

beverage manufacturers (e.g., Kraft, PepsiCo, Coca-Cola, Nestlé), and large supermarkets and food retailers (e.g., Kroger and Walmart). These corporations develop elaborate global sourcing and production networks to procure agricultural and food inputs from around the world that are used to generate their final products.

We focus on the organization of the fast-food segment because of its connections to food consumption habits and obesity. A 2014 study in the *Bulletin of the World Health Organization* found that fast-food consumption is associated with an increase in mean BMI (body mass index) in high-income countries and in countries that liberalized their economies for globalization [11]. Several obesity studies over the last few years spotlight the global influence on changing national food systems that directly connect to GVC dynamics [3, 10]. At every stage where the global and local interact—liberalized trade dynamics, foreign direct investment, franchising, and firm imitation effects—the wider food systems are changed, which dramatically transforms people's food availability.

Global food value chains shape consumption and dietary dependence in various ways. Obviously they have a direct impact on the availability of food. Local agriculture producers and suppliers shift their production to cater to multinational firms or go out of business. New local businesses emerge that follow the industrial fast-food model. The international dissemination of Western consumption patterns through the interplay between global and local food chains accelerates. In this way TNCs play key roles in using marketing to define the consumer's perception of food.¹

An industrial system of ultra-processed and fast foods greatly alters and constrains food choices. A powerful example is provided by an analysis of meat consumption connected to fast-food diets. Fast-food-led firms demand meat

products of specific quantity, safety, and processing standards. To satisfy these requirements, meat manufacturing is commonly performed by TNCs that scale up and vertically integrate to guarantee meat supply. The new demand for meats shifts agricultural production from direct human consumption to animal feed. Therefore, meat production for fast food not only produces industrial meat but also facilitates ripple effects in agriculture and processed food varieties due to the new scale and technological diffusion of food manufacturing. In this way, fast-food GVCs establish a global political economic context that supports dietary dependence dynamics and its link to childhood overweight and obesity patterns.

In the remainder of this chapter, we first update fast-food trends in the United States and the emergence of new dominant fast-food companies such as Subway. Next we explore the continued growth of fast food in developing economies and the means by which they shape and impact food value chains by spotlighting China, India, and Russia. Lastly, we analyze recent limited legislative efforts to regulate fast food and the implications for healthier fast food with the recent protests over the wages of fast-food workers.

Fast-Food Trends in the United States

According to Austin and colleagues, US fast-food sales soared around 900% from \$16 billion in 1975 to \$153 billion by the mid-2000s [12]. By 2015, sales reached \$228 billion [13]. Fast-food brands continue to lead chained restaurants in the United States, with McDonald's remaining the dominant firm with \$35.8 billion in sales and 14,000 outlets, followed by Yum! Brands (KFC, Taco Bell, Pizza Hut), Subway, Burger King, and Wendy's. Yet, McDonald's is in a highly competitive industry as fast-food chains have looked to pricing deals and new menu items to retain and attract customers.

The recent growth of fast-casual operators, epitomized by the New York City-based Shake Shack (with the highest growing value shares at 59%) and

¹For a more detailed analysis of GVC methodology and its linkage to consumption, see Gereffi G, Christian M. Trade, transnational corporations and food consumption: a global value chain approach. In Hawkes C, Blouin, Henson S, Dräger N, Dubé L, eds. *Trade, Food, Diet and Health: Perspectives and Policy Options*. Oxford, UK: Wiley-Blackwell; 2010.

Panera Bread (in the top ten for chained fast-food company shares), along with newly dominant traditional brands like Subway, exposes a trend in fast-food consumption toward higher quality and healthier food options, while traditional fast food continues to dominate. Fast casual is a part of chained fast food but represents a slightly higher price point and the perception of higher quality. Chained fast-food categories include burger, convenient store, and retail shopping, in addition to various ethnic food chains. The value chain implications for how these firms may shape food choice differently and whether or not these growing fast-casual brands are indeed healthier overall remain to be seen, particularly with the strength and power of traditional fast-food marketing to kids and continued use of industrial food production.

The largest traditional fast-food chains (like McDonald's and Yum! Brands) brought the mass production concept to foodservice and, in the process, changed how food is produced, distributed, and marketed. These fast-food chains have the market power and visibility to shape consumer choices and business-to-business relationships throughout the entire industry. As lead firms they have dominant shares of the market, which gives them the power to set the performance standards for other firms along the chain. While purchasing power is key [14], the strength of lead firms also comes from their direct and/or indirect control of production, market concentration, brand recognition, and technological innovation.

Multidimensional control of market forces is integral to lead-firm status [15]. Hence fast-food lead-firm decisions have ripple impacts in agricultural inputs, food-processing techniques, and the types of food options that become more abundantly available. The fast-food brands determine the production of food through their requirements for how food products should be cultivated, manufactured, packaged, distributed, and displayed. They work directly with food processors, who in turn work with farmers (Fig. 41.3). The stringent standards placed on farmers and food suppliers spearheaded the rise of industrial agriculture and food processing.

The demands of fast-food brands on their suppliers facilitated the further concentration of

giant firms throughout the chain (a process known as “coevolution”). French fries are a good example. The French fries served by fast-food chains (e.g., McDonald's, Burger King, and Wendy's) are supplied by a few very large manufacturers (e.g., McCain Foods and J.R. Simplot), which purchase russet potatoes from big growers/shippers (e.g., United Fresh Potato Growers of Idaho) that receive seeds, herbicides, and pesticides from a specialized corps of crop science firms (e.g., Bayer Crop Science and Monsanto). McDonald's is the largest purchaser of potatoes in the United States, with McCain Foods being the biggest supplier followed by J.R. Simplot. These two potato processors have expanded globally to meet McDonald's exacting standards as they enter new markets.

In addition to revolutionizing and expanding fast-food branded products, the rise of fast food created a platform for the proliferation of processed food varieties that typically are higher in saturated fats and sodium and lower in fiber, iron, and other nutrients [16]. Processed chicken (i.e., patties, breaded strips, and nuggets) is emblematic of the shift from whole foods toward processed varieties channeled through fast-food venues.

The trend of fast-casual and new lead-firm players like Subway raises interesting questions regarding how they shape the value chain and subsequently the quantity of healthy food options. Subway in particular has experienced enormous growth, surpassing McDonald's in 2010 to become the worldwide leader in unit restaurants with over 43,000 units in 2015 (Fig. 41.4). Subway had peak year-on-year growth percentages of 11% in 2010–2011 but has slowly declined since then, although it is still growing faster than McDonald's. Subway's marketing strategy of discounts and “Eat Fresh” slogan highlighted its weight loss potential if Subway was part of consumer diets. In 2015, Subway moved away from highlighting weight loss to a new tagline—“Founded on Fresh”—that sought to position how Subway was going to no longer source meat from animals treated with antibiotics by 2025 [17]. To further compete in the fast-casual market segment, Subway also said it was dropping artificial flavors, colors, and preservatives from its US menu.

Fig. 41.4 McDonald's and subway: global unit restaurant growth (Data from: Euromonitor International. Fast Food in the United States, 2016)

It is unclear how these moves will shape health outcomes. Although Subway once lauded its weight loss potential, a 2011 study showed that the density of Subway outlets was positively associated with the prevalence of obesity [18]. Their menu options include a foot-long Big Philly Cheesecake containing 1000 calories and meatball subs. Subway's scale and demand for processed meats and ingredients with longer shelf lives follow traditional fast-food models even with the new push away from "flavor enhancers." Furthermore, Subway's value chain looks similar to traditional fast-food brands. Including cost standards, its value chain requires temperature-controlled transportation, speed in distribution, and meats and breads that withstand prolonged storage. Subway's franchisee-owned Independent Purchasing Cooperative works closely with suppliers to pursue efficiency in their supply chain. In essence, Subway relies on the same mass industrial meat production suppliers as other fast-food brands with similar coevolution, vertical integration, and scale dynamics, all of which are part of industrialized food production. Subway also spends heavily on marketing, about half a billion dollars each year during 2012–2014, like the other traditional fast-food brands [19]. Subway allocated \$41 million to spend on advertising to children between 2014 and 2017 [20].

Marketing and branding helped to spur the meteoric rise of fast-food chains and to solidify their market power. Rather than being passive consumers subject to adult wishes, children are often the target in the messaging and creation of fast-food identities. In 2012, the fast-food industry spent \$4.6 billion to advertise to young consumers while still advertising through popular film and television studios like Disney's Pixar. In addition to traditional television and print advertising, food marketing at schools occurs through product placements, soft-drink pouring rights, and sole vendor contracts [21], as well as fast-food global alliances with film studios. Social media and gaming is the latest expanding medium for marketing to children. Facebook placed 6 billion display ads from fast-food restaurants. Advergaming and informational exchange portals on sites like YouTube and other social media are new ways fast-food brands target children.

Global Fast-Food Expansion: China, India, and Russia

Global expansion of traditional fast-food brands was part of their rapid growth strategy and remains a path to continued growth in the increasingly competitive and health-conscious US market.

The pace has increased exponentially in developing countries since the 1990s, where the gradual removal of market barriers and trade restrictions made the process of internationalization smoother for leading companies. A United Nations Food and Agricultural Organization study on agriculture estimates that, between 2015 and 2030, developing countries will turn from net exporters to net importers of food commodities [22]. In 2015 McDonald's changed its organizational structure, placing high priority on international expansion under International Lead Markets, High-Growth Markets, and Foundation totaling 22,266 restaurants [23]. Yum! Brands opened 2365 global restaurants in 2015 for their brands (KFC, Taco Bell, Pizza Hut) [24]. When fast-food firms enter emerging markets, they have the strength, technological prowess, and modern Western image to impact local food projection in various ways. Matejowsky claims the "efficiency and regimentation" of fast-food production styles reinforce the idea that fast food is often superior to local food because it is "scientifically designed" [25].

Interaction effects between global and local fast-food value chains are seen in the global agribusinesses that buy products from local farms around the world or set up their own farms where they lease out plots to local growers to cultivate the crops that agribusinesses want. These local farms may supply internationally based fast-food units, local food manufactures, or TNCs that have set up operations in developing countries in order to serve the domestic market. In developing economies, TNCs are certainly not the only actors that practice industrialized farming, make processed foods, and set up fast-food restaurants. Domestic companies do this as well. However, the global and local food chains are connected because the standards, practices, and technological achievements of local farmers, manufacturers, and fast-food companies were generally adopted from Western firms [26]. Schlosser argues that McDonald's and other fast-food chains impart to developing countries new systems of agriculture and food production, which reorient local food systems from staple domestic crops to externally induced needs [27]. A closer

look at China, India, and Russia highlights these trends.

China is one of the most important markets for fast-food expansion. Since China opened its global doors in the 1980s, the fast-food industry has attained high annual growth, amounting to 9% in 2015 [28]. China is part of McDonald's High Growth Market, with the company opening 400–500 stores there in 2016. Yum! Brands chose to spin off their China business as an independent company—Yum! China—becoming China's largest independent restaurant company with roughly 5000 KFC stores. Its growth is changing the local food system. When J.R. Simplot entered China in 1993 and created the first commercial French fry for the Chinese market, agricultural producers began cultivating potatoes to meet this new demand for processed food.

The food-processing industry in China has grown at double-digit rates. Large foreign food manufacturers continue to set up facilities and expand into China. Tyson Foods operates Jiangsu Tyson Foods Co. and Tyson Rizhao as fully integrated poultry complexes, Shandong Tyson Dalong Food Co. as two modern processing plants, and retail outlets with Tyson Shandong. Tyson's vertical integration strategy in China shapes agriculture as farmers switch to soybean cultivation to satisfy food manufacturing markets [29]. Imports of cereal crops for animal and human consumption are expected to increase with China accounting for 40% of the global demand for poultry by 2020 [30]. After Yum! China and McDonald's, the third largest fast-food company in China is the Taiwanese Ting Hsin International Group, which operates Dicos fast-food brand. Dicos draws from Fujian Sunner Food, China's largest breeder, and Tyson, further elaborating the imitation and interaction effect of fast food throughout the food system.

Marketing to China's youth is also part of fast-food companies' global strategy. McDonald's and KFC have appealed to kids through Internet texting, in-store prizes, and the marketing of "cool" [31]. KFC created a new mobile game app combining "K-pop and cute boy bands" and got 1.3 million downloads in a month. Campaigns centered on "love and friendship" to boost

“consumer affections” and loyalty were part of McDonald’s and KFC’s Chinese marketing strategy [32]. The nutrition transition in China, with the growth of cheap imported oils, a shift to animal-sourced foods over vegetables, and Western food supply cultivated through fast-food value chain dynamics, accentuates a dietary dependence on energy-dense highly processed foods [33].

The Indian global fast-food market is not as strong as that in China but is growing at a rate of 30–35% per annum, and many fast-food TNCs are expanding in India. Pizza fast food is particularly popular and commands the highest value [34]. Domino’s Pizza is the largest chained fast-food brand at 32% of foodservice value. Domino’s plans to open 60–65 outlets every year, with Yum! Brands (with KFC and Pizza Hut) following closely behind. After Domino’s, McDonald’s and KFC are the leaders. Burger King entered the market in 2013 with plans to invest over \$100 million to open 500 outlets throughout the country over the next decade [35]. In addition to pizza fast food, dessert options such as ice cream brands like Baskin-Robbins (part of Dunkin’ Brands) and Swirls (part of Unilever) are popular and growing.

As in China, India’s food system is changing to meet the needs of these global firms. After importing processed French fries for several years, by 2010 each McDonald’s French fry came from Indian soil but was processed by McCain Foods. McCain worked with Indian growers for 9 years to change their potato crop to the Shepody variety to meet McDonald’s exacting standards [36].

Domino’s supply chain tells a similar story of exacting standards. Only the largest food-processing companies can serve as suppliers. Chatha Foods is India’s leading processed-meat company and not only supplies Domino’s but also Subway and Papa John’s. Domino’s requires HACCP certification on food safety, to which vendors must comply. Hazard analysis and critical control points (HACCP) is a systematic preventive approach to food safety from biological, chemical, and physical hazards in production processes that has become a global industry standard. Domino’s works closely with vendors in what they call “linking up the chain” to ensure consistency, efficiency,

and storage [37]. India’s rich culinary tradition is quickly being altered, contributing to a loss of traditional food practices according to what Kaushik and colleagues call the globalization of diet [38]. Moreover, the large fast-food outlets in India rely on similar marketing strategies to reach young consumers through social media, discounts, and television commercials.

Lastly, Russia’s fast-food growth and impact on the value chain typify the global networks that spur local fast-food sales. McDonald’s leads fast-food sales in Russia at 20%, operating 543 McDonald’s and 64 McCafé stores in 2015. They are quickly expanding into regional and second-tier markets. McDonald’s impact on the fast-food value chain is significant, as highlighted in Berman’s [39] insightful study of the Russian fast-food value chain. Berman argues that the foods available in the domestic market are shaped by the “direction of global corporations” that supplies fast-food brands with ripple effects throughout the food system. Furthermore, global trade supports Russian fast-food expansion. Because local agriculture producers cannot meet the exacting standards of fast-food companies, almost all potatoes for fries, half of the ground beef McDonald’s uses, and Brazilian poultry are imported. Supplier global firms like Heinz, Sadia, and McCain entered the Russian market to help fill demand.

The Chinese, Indian, and Russian cases expose how the expansion of fast food directly shapes food availability and food options in the global market, strengthening and expanding dietary dependence on imported, processed, and fast-food varieties. The long-term impacts of this process include negative health outcomes and the potential elimination of diverse food varieties and cultural social traditions.

Fast Food on the Defensive

During the mid- and late 2000s, health advocates and government bodies stepped up warnings about the health dangers of excessive fast-food consumption and the irresponsibility of fast-food marketing campaigns oriented toward children.

The US government responded by regulating trans fats, a common component of fast-food products, and requiring nutritional labeling, mostly on a state-by-state basis. Fast-food companies responded by attempting, with varying levels of success, to “re-brand” themselves in the United States by offering healthier options, advocating for healthy lifestyles, and agreeing to voluntarily monitor their marketing practices. Since 2010, the biggest trends shaping the US industry surround the passage of the Affordable Care Act, the power of the fast-food lobby in thwarting government legislation to curb fast-food consumption, and fast-food companies being less publicly targeted for dietary implications and more for the working conditions of fast-food employees, embodied by the Fight for \$15 campaign.

The 2010 Affordable Care Act comprehensively changed how health-care insurance was structured, health-care provisions were provided, and individuals gained access to health-care options. It also focused on the prevention of maladies, including obesity prevention. Section 4205 of the Affordable Care Act mandates that chain restaurants display nutrition and caloric information on all menu items [40]. More stringent state regulation that monitored direct consumption was vigorously fought by the industry. In 2012, New York passed a ban on the sale of sugary drinks in quantities larger than 16 ounces, but after pushback from the industry, the New York Supreme Court rejected the ban in 2014 [41]. States such as Arizona, California, and Florida have attempted to pass “Happy Meal laws” that would require that children’s meals containing toy merchandise meet certain nutritional standards. This was fought by the fast-food lobby, which succeeded in blocking the right of local governments to regulate consumer incentive items at restaurants in Arizona [42].

More indirect government actions to foster and promote healthy eating options are exemplified by local initiatives employing zoning and licensing laws to regulate the density of fast-food outlets and encourage grocery store development in underserved communities [43]. This is particularly meaningful since McDonald’s has been criticized by Corporate Accountability International

for “targeting children of color” in their marketing campaigns [44].

Fast-food companies have attempted to deflect criticism by voluntarily changing their menu items; this trend has continued most notably around additives. Subway is removing “flavor enhancers,” and other companies such as Taco Bell, Domino’s, Papa John’s, Noodles and Co., and Chipotle have pledged to varying degrees to end or reduce the use of artificial flavors and colors [45]. This trend follows the re-branding begun by McDonald’s after a widespread barrage of harsh criticism, notably in the 2004 documentary “Super Size Me” and bestseller books and documentaries that excoriate the economic and social abuses of our industrialized fast-food culture and agricultural systems that support it (e.g., Food, Inc.; Fast Food Nation; *Omnivore’s Dilemma*; and *In Defense of Food*). In the aftermath, McDonald’s introduced new salad and fruit options for kids’ Happy Meals and promoted a balanced lifestyle.

It is unclear, however, if these initiatives are merely what Simon [46] labels “nutriwashing” or represent attempts to cover up what Brownell and Horgen call the epidemic of a “toxic food environment” [47]. The fast-food lobby continues to strenuously counter any government regulation to directly intervene in changing fast-food consumption patterns. We know little about how these initiatives shape and impact the fast-food value chain, particularly because they seem to do little to change the practices of industrialized food production connecting agriculture and processing, which generates wider ripple effects across the entire food system beyond fast food.

The fast-food industry’s attempts to counter criticism need to be placed in a global perspective. The rapid expansion of fast-food restaurants abroad, particularly in developing countries, not only brings fast-food menu items to new markets but also changes local food production systems through global-local interactions that facilitate food dependence on a globalized diet. Fast-food companies typically are not altering their menu options and input ingredients in these geographies to meet health-conscious demand. Although in China there is a growth of salad fast-food

markets, fast-food chicken remains dominant. Similarly, there is a growth of “wellness consciousness” for Indian urban middle class adults but not for kids [48]. The youth demographic in these markets is cultivated through a marketing of “cool” and Western brand ideals actively encouraged by global fast-food companies. This has long-term implications for a diversity of healthy food options and the maintenance of cultural food varieties.

Lastly, the public furor over fast-food marketing practices has largely dissipated since it reached a cultural zeitgeist level in the mid-late 2000s, only to be replaced with protests over the working conditions for fast-food retail employees. McDonald’s is once again a key target. The Fight for \$15 [49] and Fast-Food Forward Movement that began in 2012 was financially supported by the Service Employees International Union (SEIU). The first protest was in New York City and spread throughout the United States. In 2016 the movement won minimum-wage increases in New York, New Jersey, and California and in cities such as Seattle, Pittsburgh, Missoula, and San Marcos [50]. The movement is riding a wave of public discontent about increased income inequality and job prospects in the post-Great Recession of 2008. Thus far, linking poor nutrition options and poor jobs has not been a consistent strategy of organizers of the fast-food debate, but it could be an important coalition-building tactic to exert influence over the fast-food industry. A coalition that linked workers and nutrition throughout the fast-food GVC would be a particularly powerful symbol for change, both in the United States and internationally.

Conclusion

The severity of the global childhood obesity pandemic calls for new theoretical frameworks and research agendas that take into account the broad factors that affect consumption patterns and behavioral choices related to public health crises. The GVC paradigm gives us a foundation to examine how corporate strategies and international processes relating to the production, distribu-

tion, and marketing of fast-food companies are linked to childhood obesity as a health problem.

The rise of the fast-food industry has influenced both social conditions and cultural norms in developed as well as developing countries in ways that contribute to childhood obesity. Many fast-food companies have already been compelled to change certain practices within the fast-food GVC, but research is still needed to determine if the health-related initiatives of top firms are merely superficial or if they might have wider impact throughout the agriculture and food value chains. The structural environment that these companies shape, nationally and globally, continues to constrain, induce, and pressure individuals, and especially children, to make food choices that can adversely affect their health.

Editor’s Comment and Questions

The legacy of fast food embodies monopolization of food production and distribution, loss of crop diversity, widespread use of toxic pesticides, contamination of the water supply, reductions in the number of small farmers and shop owners, destruction of natural habitat, restrictive and in some cases abusive animal housing, exacerbation of global warming through emission of greenhouse gases, homogenization and impoverishment of global diets, loss of cultural diversity, and a global obesity epidemic. Yet as soaring sales and proliferation of restaurants throughout the world clearly demonstrate, fast food remains powerful and popular because it is highly palatable (being rich in saturated fat, starch, and sugar), readily available at nearly all times of day or night, and delivered at relatively low cost in clean and

child-friendly surroundings. Round-the-clock work demands for most mothers as well as fathers in rapidly urbanizing populations and limited support for childcare make fast food attractive to people of all classes. The vigorous marketing of fast food to children as well as adults appears to promote loyalty to specific foods and brands and, as you point out, increasingly constrains the ability of people to make healthy and “free” choices about food. I am reminded of the blue sweater scene in *The Devil Wears Prada*, in which the lead character played by Meryl Streep notes that the color “chosen” by millions of people to wear that fall has in reality been selected and thereby “directed” by a few leading figures in the fashion industry. At least wearing chartreuse or mauve is not likely to make you sick!

In any case, major economic and social forces limit our ability to reverse trends that in many ways seem malignant and self-destructive. You argue that a coalition of people concerned about both food quality as well as fast-food employment practices might galvanize a movement to reduce fast-food consumption. Such an appeal might resonate with millennials; indeed a growing locavore movement has taken hold in many cities, but its costs and inconvenience make it less attractive to those with fewer means. Ongoing government action to protect the health of children and prevent the environmental consequences of fast food value chains could prove effective. In what ways could the government act to achieve these goals? Will this be possible in the Trump administration?

Authors' Responses

Efforts to promote healthy choices in eating have been pervasive for decades, and they have been amply justified on multiple levels. The global childhood obesity pandemic is well documented, and the

proportion of overweight or obese children in societies across the globe appears to be accelerating. This trend is associated with the extraordinary popularity in the consumption of fast foods, not only in the advanced industrial societies of the Western world, but also in developing regions like Asia, Africa, and Latin America, as well as large emerging economies such as China, India, and Russia, as this chapter has demonstrated. Curbing the trend toward fast-food consumption has proven notoriously difficult. Numerous articles have chronicled the need to adopt multilevel approaches to tackle this problem at the level of individuals, institutions (families, schools, communities), and national as well as international public policies [1, 3, 7]. These measures have been countered, however, by the extensive marketing campaigns of multinational food conglomerates, which combine their 25 global reach with very adept messaging oriented to youth markets that tap into iconic cultural imagery and fast-food identities that are reinforced by popular films, television shows, and social media. In this environment, what can be done? The locavore movement and its “go local” approach to food consumption has devoted adherents, especially in higher-income markets, but it has a limited appeal to lower-income and younger populations, where the nutritional deficiencies and caloric excesses of the fast-food diet are most striking and dangerous. International agencies like the World Health Organization and specialized national food and drug agencies clearly have the expertise and evidence to pitch healthier eating campaigns, but their legitimacy is too remote and abstract to disrupt a fast-food culture that has adapted to diverse global and social settings, fueled by powerful corporate inter-

ests that link the growth of local franchises and jobs to global supply chains. In the United States, the most lucrative fast-food market in the world, there was hope that national policy could make a difference. The 2010 Affordable Care Act mandated that chain restaurants display nutritional and caloric information on all menu items [40] and various states sought to impose higher nutritional standards related to fast-food sales, but the fast-food corporate lobby has sought to block more stringent regulations at the state level [41, 42]. Furthermore, the incoming Trump administration has vowed to limit the regulatory powers of key government agencies, especially in the realm of social services and health. Therefore, national policy will be hotly contested terrain in the near future, and many fear a reversal of hard-fought gains related to health and wellness issues. The main hope for progressive and innovative policies is likely to come from decentralized approaches to twenty-first century governance. Although President-elect Trump appears to be stacking his cabinet with nominees who dispute the science of climate warming, California is poised to continue to be a leader in climate change regulation, not only in the United States but internationally as well (e.g., California's cap-and-trade program is linked with one in Quebec, and state officials have also had discussions with other countries, including Mexico and China, about joining forces on cap-and-trade measures).^a A similar approach to regional governance might also pay off in efforts to reduce fast-food consumption. In an essay on "what will regional gover-

nance look like by 2030," the World Economic Forum suggests that "we're likely to see a 'pop-up culture' of regional governance as cities and ideologically linked groups take centre-stage."^b The rapid social changes brought about by the Fourth Industrial Revolution are creating pressures that allow production to be decentralized to communities and even households (think about 3D printing). These same trends may prove effective in shaping consumption as well. As "regions" and communities become more virtual in 2030, it could open the door to a new "tribal" form of identity politics oriented around healthy lifestyles. These could scale up far more rapidly than traditional campaigns and also counter the cumbersome and uncertain progress of policy-driven change.

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