Concentration and Power in the Food System

Who Controls What We Eat?

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Chapter 1

Food system concentration: a political economy perspective

Power is not a means, it's an end.
—O'Brien (*Nineteen Eighty-Four*)

If you go into a typical grocery store in the United States and make your way back to the margarine case, you will probably see approximately a dozen different brands. If you look very closely at the packaging, however, you may find a small seal, which signifies the majority of these are owned by either Unilever or ConAgra (Table 1.1). Although these two firms dominate the margarine market—Unilever accounts for 51.2 percent of sales in the US market and ConAgra for 16.9 percent (Grocery Headquarters 2013)—their power is hidden from us through an illusion of numerous competing brands. Margarine is not a unique case, and while the number of options offered may differ, similar patterns can be found in almost every food or beverage category. The bread shelves, for example, may provide slightly more choices, but this conceals the fact that Grupo Bimbo and Flowers Foods each own more than a dozen leading brands and together control approximately half of the US market (Thomas and Cavale 2013). The wine aisle may contain literally hundreds of brands, but it is very

Table 1.1 Ownership of margarine brands

Unilever	**ConAgra**
Becel	Blue Bonnet
Brummel & Brown	Fleischmann's
I Can't Believe It's Not Butter	Move Over Butter
Imperial	Parkay
Promise	
Shedd's Spread Country Crock	

difficult to discern that scores of these, as well as more than half of US sales, are controlled by only three companies: Gallo, The Wine Group, and Constellation (Howard et al. 2012). In nearly every other stage of the food system, including retailing, distribution, farming and farm inputs (e.g., seeds, fertilizers, pesticides), a limited number of firms or operations tend to make up the vast majority of sales.

Is this a problem? An increasing number of people argue that indeed it is: the firms that dominate these industries are criticized for a long list of purported negative impacts on society and the environment. Just a few examples include:

- Walmart, which controls 33 percent of US grocery retailing, is challenged for exploiting its suppliers, taking advantage of taxpayer subsidies, and paying extremely low worker wages.
- McDonald's, which controls more than 18 percent of US fast food sales, is also critiqued for extremely low wages, as well as the negative health consequences and environmental impacts of its products.
- Tyson, which controls more than 17 percent of US chicken, pork, and beef processing is reproached for its pollution, poor treatment of farmers, and contributions to the decline of rural communities.
- Monsanto, which controls 26 percent of the global commercial seed market, is denounced for its influence on government policies, spying on farmers it suspects of saving and replanting seeds, and the environmental impacts of herbicides tied to these seeds.

These impacts tend to disproportionately affect the disadvantaged—such as women, young children, recent immigrants, members of minority ethnic groups, and those of lower socioeconomic status—and as a result, reinforce existing inequalities (Allen and Wilson 2008). Like ownership relations, the full extent of these consequences may be hidden from public view.

This book seeks to illuminate which firms have become the most dominant, and more importantly, how they shape and reshape society in their efforts to increase their control. These dynamics have received insufficient attention from academics and even critics of the current food system. The power of dominant firms extends far beyond narrow economic boundaries, for example, providing them with the ability to damage numerous communities and ecosystems in their pursuit of higher than average profits. The social resistance provoked by these negative consequences is another area that is less visible to the majority of the population. When such resistance is evident at all, it frequently appears

insignificant, failing to challenge the direction of current trends. Even very small movements, however, may influence which firms end up winners or losers or close off particular avenues for growth. These accomplishments also suggest potential limits and therefore the possibility that dominant firms may experience much greater threats to their power in the future.

Increasing concentration

Concentration is a term used to describe the composition of a given market, and especially its potential impacts on competition. At one end of the spectrum are markets that are described as unconcentrated or fragmented, which economists consider to be freely competitive (Figure 1.1). In this type of market, sellers are "price takers" and lack the ability to raise prices. At the other end of the spectrum are concentrated markets, which in their most extreme form are monopolies controlled by just one firm. In these situations there are no alternatives, and the monopolists have substantial power to raise prices without losing customers. Also at this end of the spectrum are oligopolies, in which markets are dominated by several large firms but are characterized by very limited forms of competition; these are sometimes described by critics as "shared monopolies" (Bowles, Edwards, and Roosevelt 2005, 265). In the middle are partial oligopolies, in which large firms may have some control over

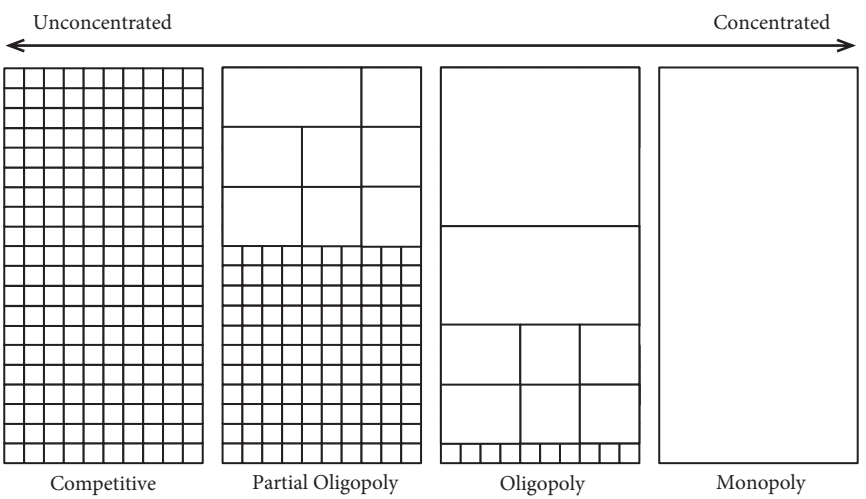

Figure 1.1 Levels of market concentration.
Each rectangle represents a single, hypothetical firm, with size proportional to market share.

their prices but lack the power to significantly reduce competition, as is the case with oligopolies. The word monopoly is derived from the Greek words for single (mono) and seller (polein), but concentrated markets may also occur among buyers, as found in a monopsony or oligopsony (derived from the Greek word for buy, opsōnía).

There has been a strong tendency in more industrialized countries, including the United States, to move away from competitive markets and toward higher levels of concentration (Heffernan, Hendrickson, and Gronski 1999; Du Boff and Herman 2001). As markets go through this process of consolidation, the average firm size increases, barriers to entry for other firms rise, and the remaining firms have more influence over prices, as well as a greater potential for higher profits. These are some of the widely recognized reasons why markets tend to become less competitive—firms understand the benefits to be gained by expanding their market share, reducing the number of competing firms, and increasing their leverage over the terms of exchange (Foster and McChesney 2012). These trends are most evident in industries such as airlines and telecommunications, in which the US government intervened to encourage greater competition, only for them to eventually return to more oligopolistic structures (Brock 2011).

Potential negative impacts

Governments sometimes intervene when industries reach a high level of concentration because such limited competition may lead to numerous negative outcomes. Market consequences could include consumers paying higher prices, suppliers receiving lower prices, or reduced innovation. Oligopolistic firms have disincentives to reduce profits by investing in research and development, particularly when doing so could lead to lower barriers to entry and increasing competition. In addition, large organizational size can discourage innovation indirectly, via complex bureaucracies that are reluctant to approve new ideas (Brock 2011). Increasing size can be an advantage for reducing prices paid for inputs, however, as smaller suppliers may have fewer alternative buyers for their products and less organizational capacity to negotiate the best possible terms (Calvin et al. 2001).

In order to raise consumer prices, it is not necessary for executives to gather in one room and conspire to achieve these markups. When just a few firms control a large share of the market, they can simply indicate their intention to raise prices, and the others will benefit by following suit, a strategy that is called

price signaling (Baran and Sweezy 1966). Oligopolistic firms can more easily pressure each other to avoid price wars that would lower their profits. The result is an unwritten rule that rivalries based on advertising, product differentiation, and reducing labor costs are expected, but competing on price is unacceptable. John Bell, a former CEO of a coffee company that was eventually acquired by Kraft, explained that he was constantly reinforcing this message to rivals through his speeches and media interviews in order to prevent "the natural competitive reaction." Lowering prices was given the code word "non-strategic" in public communications, and emphasizing his opposition to it was "an indirect means of telling competition to 'play ball' (Bell 2012)."

Nevertheless, executives in industries controlled by a small number of firms may go beyond signaling and are occasionally even caught conspiring to fix prices. A few examples include:

- The US Federal Trade Commission (FTC) discovered in the mid-1960s that leading bakeries and retailers in Washington State had met frequently and agreed to increase the price of bread by 15–20 percent (Parker 1976).
- In 2013, Hershey pleaded guilty to working with other large chocolate manufacturers (Mars, Nestlé, and Cadbury) to raise prices in Canada. While the other firms denied the charges, together they paid more than $22 million to settle a resulting class-action lawsuit (Culliney 2013).
- Western European governments have reported numerous schemes to raise food prices in recent years (e.g., beer, flour, bananas, chocolate and dairy products), which have resulted in fines totaling hundreds of millions of dollars.

As mentioned above, additional problems may result from increasing concentration in the food industry, including negative impacts on communities, labor, human health, animal welfare and the environment (economists define many of these impacts as "externalities").

Regardless of the consequences, as industries consolidate, fewer and fewer people have the power to make important decisions, such as what is produced, how it is produced, and who has access to these products (Heffernan, Hendrickson, and Gronski 1999). Dominant firms are typically controlled by a small board of directors (eleven people on average), with decision-making power concentrated in the hands of the chief executive officer (CEO). The individuals who serve on these boards typically do not reflect the composition of society and in the United States are most often men, of European ethnicity, with an average age of 60 and educated at elite institutions

like Ivy League schools (Lyson and Raymer 2000). They also tend to share very similar conservative worldviews through frequent socializing with other members of the upper class in exclusive clubs, summer resorts, philanthropic organizations, etc. (Domhoff 2014).

Unanswered questions

Despite its adverse impacts on society at large, increasing market concentration is frequently portrayed as unstoppable. Business historian Louis Galambos, for example, claims that, "Global oligopolies are as inevitable as the sunrise" (Zachary 1999). Scientists who study social networks, including business networks, have pointed to a tendency for the "rich to get richer" as their initial advantages are magnified and eventually snowball, leading to even greater success (Barabási and Bonabeau 2003; Easley and Kleinberg 2010). Yet these trends have been highly uneven temporally, geographically, and by position within the food system (Friedland 2004). The farming of commodity crops in the Midwestern United States or the regional distribution of many specialized foods, for example, can still be characterized as competitive markets, suggesting that establishing and maintaining an oligopoly is not always as easy as claimed (Lewontin and Berlan 1986; Lewontin 2000).

The interesting question, then, is why have some segments of the food system already become oligopolies and not others? Why don't they all resemble the global soft drink industry, which has been dominated by just two firms, Coca-Cola and Pepsi, for decades? This suggests additional questions, such as what specific factors currently constrain other food and agriculture industries from approaching this organizational model? What factors might enable them? The answers are important because they might help slow, or even reverse, current trends toward concentration. Even if they don't take us quite that far, a better understanding of how concentration occurs could help us to shape its direction and ameliorate some of its negative impacts.

Before answering these questions, however, a critical first step is simply to characterize the changes that have taken place, which can be more difficult than it sounds. Determining the level of concentration in different food industries is complicated by the inaccessibility of accurate sales data (Heffernan, Hendrickson, and Gronski 1999; Fernandez-Cornejo and Just 2007), even for "publicly" held firms. Uncovering just who owns what is also challenged by the opaque and constantly shifting corporate parentage of many brands and subsidiaries. Due to increasing public concern about food issues—evidenced by bestselling books by Eric Schlosser, Michael Pollan, and Barbara Kingsolver,

and numerous documentary films that critique the current food system—some firms are taking increasing measures to hide their dominance. Trade journals are less likely to report market shares for leading food and agricultural firms, for example, and the types of acquisitions that typically generated press releases in the late 1990s may now go unannounced.

Differing perspectives

Economics

Industry concentration is studied primarily by economists. One simple indicator that they developed to characterize the competitiveness of markets is a concentration ratio or the sum of the market shares of the top firms. A frequently used number is the top four, sometimes abbreviated as a CR4. Thresholds vary depending on the analyst, but most institutional economists suggest that when four firms control more than 40 percent or 50 percent of a market, it is no longer competitive (Scherer and Ross 1990; Shepherd and Shepherd 2004). A more recent measure, used by regulators such as the US Department of Justice (DOJ) to evaluate mergers and acquisitions, is the Herfindahl-Hirschman Index (HHI). The index is the sum of squares of market share for all the firms in a given market. If one firm, for example, controlled 100 percent of a market, the HHI would be 100 squared, or 10,000. If two firms divided the market, the HHI would be 5,000 (50 squared + 50 squared). The US government once considered markets with an HHI above 1,800 to be highly concentrated (Gould 2010). Notably, this level would not be exceeded if four equally sized firms controlled 80 percent of the market, despite the highly conducive environment for price signaling that would result. In 2010, the DOJ and the FTC raised the threshold even higher, to 2,500—the equivalent of four firms evenly dividing 100 percent of the market. Although the HHI is designed to be more sensitive to changes in market share among the top firms, it is less intuitive than concentration ratios.

A weakness of both measures is that they are designed to characterize *horizontal* integration within a national (or smaller than national) market. Concentration is increasingly occurring through *vertical* integration, however, as firms buy upstream suppliers or downstream retailers, both in national markets and at the global level. In addition to direct ownership, less formal but still effective means of control are becoming more common, such as strategic alliances or contracting arrangements (Heffernan 2000). As a result, the full extent of market power has become much more difficult to establish accurately, and

concentration measures may underestimate the ability of firms to enhance their own interests at the expense of others.

Mainstream economists tend to view concentration as unproblematic, due to a strong abstract belief in economies of scale, despite insufficient empirical evidence to support these supposed efficiencies (Johnson and Ruttan 1994; DiLorenzo 1996). Consumers are often claimed to benefit from synergies and lower transaction costs that are expected to result from mergers and acquisitions (Farrell and Shapiro 2001). Because of their organizational complexity, however, many large firms actually encounter diseconomies of scale and experience a loss of efficiency with increasing size (Adams and Brock 2004; Carson 2008). This may explain why acquisitions often fall short of expectations, and an estimated one out of three are eventually undone, via sales to competitors or spin-offs into new firms (Buono and Bowditch 1989).

Most economists also tend to focus on narrow criteria of economic power such as pricing or output measures and ignore other sources of power that can be utilized by large organizations. Walter Adams and James W. Brock (2004, 8), two economists who were critical of this tendency within their discipline, noted that additional powers include:

> the capacity to obstruct technological advance; to manipulate the alternatives from which society is allowed to choose; to coerce society to accede to its demands through threats to shut down facilities or to relocate them elsewhere; to infiltrate government agencies with influential decision makers drawn from the industries ostensibly being regulated; and to obtain government bailouts when collapsing giants are considered to be too big and too important to be allowed to fail.

Political economy

Political economy takes a broader view than economics, recognizing a much higher degree of interaction between governmental agencies and private economic organizations. This field draws on additional disciplines including sociology, political science, geography, and cultural studies. Although it is very diverse, many of its strands are more critical of the status quo than orthodox economics. Political economists are therefore likely to question why markets are organized in their current form, who played a role in this, and how their structure benefits some more than others (Lipschutz 2010). One consequence is a much greater emphasis on power, although this is a difficult concept to define precisely. A broad definition, slightly modified from one proposed by Bertrand Russell in 1938, is “the capacity of some

persons to produce intended and foreseen effects on others" (Wrong 1995, 2). Importantly, this capacity can be "naturalized" by institutions, so that the majority of people take it for granted and do not question it (Gramsci 1971; Gibson-Graham 2006).

A strand of political economy that focuses heavily on concentration is Paul Baran and Paul Sweezy's (1966) theory of monopoly capital, which challenges conventional economists' abstract emphasis on so-called perfect or free competition and their lack of attention to the rising number of oligopolies (Box 1). This theory has been expanded by colleagues to explore capitalists' impacts on labor (Braverman 1998) and their growing emphasis on speculative finance (Magdoff and Sweezy 1987; Foster and McChesney 2012). Although strongly influenced by Karl Marx, their work has interesting parallels with libertarian political economists, who emphasize the essential role of government regulations and subsidies in facilitating concentration (Stromberg 2001; Carson 2007).

A political economy approach that is frequently employed in food studies is value chain analysis or closely related approaches such as commodity systems analysis (Friedland 1984; Friedland 2004). These typically follow a single product, from its design and production to its consumption, to understand how the entire system works. Value chain analysis has become much more global, as more food and agricultural firms have expanded around the world in search of new markets and lower material and labor costs (Dixon 2002; Pritchard and Burch 2003). Although the general approach is also applied in economics and business, critical political economists place more emphasis on analyzing differences in power in the relationships between firms and individuals throughout the chain. Most commodity systems and value chain analyses of foods have heavily emphasized the production stages and particularly the role of labor. There is an increasing recognition of the need to place more emphasis on consumption, however (Lockie and Kitto 2000; Goodman 2002; Goodman and DuPuis 2002).

Karl Polanyi's *The Great Transformation* (1944) has also been influential among those who study food. Polanyi suggests that there is a "double movement" that results when the negative impacts of capitalist expansion incite a spontaneous, defensive reaction. This helps to explain a number of movements against the dominant food and agricultural system, from US farmer protests against railroads in the late 1800s (Constance, Hendrickson, and Howard 2014) to global certification of fair trade labels beginning in the late 1980s (Jaffee 2007). The theory can be criticized for being "underspecified" and failing to predict exactly what would trigger such a response, however (Munck 2006, 185).

"Counter-movements" have certainly not proven to be automatic, especially if the impacts of capitalists' actions are hidden or legitimized or if government repression is successful.

Box 1.1 The Missouri School of Agriculture and Food Studies

Although all of my grandparents were raised on farms and grew much of their own food, my childhood was spent in the suburbs. Virtually all of my food came from the supermarket, and I knew very little about the system that produced it. In the late 1990s, when I became a graduate student at the University of Missouri, I was quite surprised to learn of the increasing levels of concentration in US food industries, and how powerful a small number of firms had become.

This was a major focus of what has become known as the "Missouri School" of agricultural and food studies (although it has had far less influence than the Chicago School of economics that originated at the University of Chicago in the 1940s). The group developed as a result of the efforts of William D. Heffernan, along with students and colleagues at the University of Missouri's Department of Rural Sociology (Kleiner and Green 2009). Heffernan studied the dynamics of the poultry industry beginning in the 1960s, focusing on the increasing use of contracts between processors and producers. He found that this had some initial advantages for poultry growers, but power shifted dramatically toward processors over time (Heffernan 1972; Hendrickson et al. 2008a). Later, he and his co-authors examined concentration and its impacts on local communities for other Midwestern commodities, such as beef, pork, corn, and soybeans (Heffernan, Hendrickson, and Gronski 1999). My first collaboration with these researchers involved a study of structural changes in the retail and dairy industries (Hendrickson et al. 2001).

The approach of the Missouri School is pragmatic, with an emphasis on characterizing problems in the food system and assisting affected communities to address them (Constance et al. 2014). Rather than adhering to one specific theory, its practitioners draw on multiple perspectives, including those of Max Weber, Karl Marx, and Thorstein Veblen, as well as more recent approaches, such as those of monopoly capital theorists associated with the *Monthly Review* (Baran and Sweezy 1966; Foster and McChesney 2012). Bonanno (2009) notes that the Missouri School is most closely aligned with the philosophy of John Dewey, which is fundamentally anti-elitist. This means that we would oppose concentration even if it did not lead to any negative impacts on society or the environment, as it gives a small minority great power over the food we eat.

Capital as power

In this book, I employ a political economy approach but draw more specifically on Jonathan Nitzan and Shimson Bichler's theory of *Capital as Power* (2009). This theory seeks to understand capital from the point of view of capitalists, especially those who benefit the most from the current system: the largest corporations and the wealthiest individuals, who are typically major shareholders in these firms. Capital as Power recognizes that corporations quantify their perceived influence through "capitalization." Technically this is calculated as the firm's current share price multiplied by the number of shares outstanding, but it can be viewed as an estimate of the future stream of earnings in present values while adjusting for perceived risks. Another way of thinking about capitalization is that it is a quantification of capitalists' consensus expectations that people will continue to acquiesce to the firm's power. It therefore measures not just a firm's capacity to provide goods and services but "the power of its owners and directors to shape and reshape politics, society and culture" (Di Muzio 2013, 6).

Echoing O'Brien in the dystopian film, *Nineteen Eighty-Four*, they note that power is not only a means of accumulation but "also the *ultimate end* of accumulation" (Nitzan and Bichler 2009, 16). Capitalism as a system is therefore better understood as a mode of power rather than a mode of production. This shift, in comparison to other theories, places even more emphasis on social relations than on material objects (e.g., embodied labor or utility). It also seeks to understand both quantitative changes in markets and qualitative changes in society as part of the same process of the accumulation of power (Baines 2015).

An important aspect of this perspective is the view that dominant firms do not try to maximize profits, as is typically argued by other political economy perspectives (see Magdoff and Foster 2011). Instead, firms compare their performance to close competitors and use benchmarks, such as the S&P 500 share price index, to monitor the average capitalization for the largest firms. Differential accumulation may not sound substantially different than profit maximization, but it is a far more realistic description of corporate behavior and with some very important implications. In periods of stagnation, for example, growth rates may slow, but dominant capitalists are content to grow faster than the average or even to decline less than the average, as this means their capitalization and power are still increasing in relative terms. Conditions of high economic growth are actually riskier, because capitalists are more likely to lose power relative to others (Nitzan and Bichler 2014). Additional empirical support for this view comes from Thomas Piketty's (2014) analysis of several centuries of income and

wealth data in developed countries, which found increasing inequality during periods of low growth rates (Piketty 2014).

Conflict drives this competition, which means that capitalists have little choice but to try to increase their income and assets relative to those of others, or risk going out of business, sometimes via acquisition by a competitor (Bichler and Nitzan 2014). This requires active efforts to restructure markets and society in ways that increase their power, including encouraging increased consumption of their products and sabotaging potential alternatives, particularly those that would allow people to be more self-reliant. All of these actions focus on increasing profits but *in comparison to other firms*, not to achieve a theoretical maximum. An intended increase in inequality is one result, as well as numerous additional negative impacts, which, from the perspective of capitalists, could be viewed as collateral damage (Cochrane 2010).

The Capital as Power approach challenges some widely held categorizations. Many political economists, such as the monopoly capital group, view finance as "fictitious" or separate from material capital, such as physical plants and equipment (Hager 2013, 43). Nitzan & Bichler, in contrast, state that when the object of accumulation is viewed as power, "all capital is finance, and only finance (2009, 262)." They also claim there is no distinction between dominant capital and governments, suggesting that their interests overlap to such a great extent and the power of capitalists is so dependent on government actions that boundaries are meaningless (Nitzan and Bichler 2009). Sympathetic critics have pointed out, however, that governments are subject to other logics, in addition to accumulation (Starrs 2013). James O'Connor (1973), for instance, described the tension between accumulation and legitimation or the need for policies to be seen as justified by the majority of the population. A government's legitimacy can be undermined if the public recognizes harms resulting from policies that aid dominant capitalists' strategies of accumulation. Therefore, when resistance threatens to undermine the stability of the system, governments take at least symbolic actions to maintain an appearance of civic interest (Green and Heffernan 1984).

Concentration is a key strategy to increase power, one that Nitzan and Bichler (2009) call *breadth*. This path involves either internal growth (also called greenfield or organic growth) that is faster than competitors or external growth via mergers and acquisitions. External growth is often preferred because it is a less risky means of increasing size and power. Even if such combinations fail to increase, or even reduce, productive capacity or potential, they frequently result in a higher total capitalization—reflecting an expected increase in power (Nitzan 1998). Acquisitions are far more common than mergers, as firms that are already

dominant are more likely to have internally-generated resources or can borrow to finance buyouts of other firms.

The other key strategy is described as *depth*, which involves cost cutting or price increases (Nitzan and Bichler 2009). As discussed above, firms that are more successful with breadth, and therefore achieve greater market share, also gain significantly more power to enact price increases. Nitzan and Bichler suggest that cost-cutting strategies are more easily replicated by rival firms, and thus less effective for outperforming benchmarks, but this does not give enough attention to the possibility that the largest firms have more power to (1) demand lower prices from suppliers, (2) negotiate lower wages for workers, or (3) obtain government subsidies.

Power in the food system

Because we depend on food to live, concentration raises more concern in food industries than in most other economic sectors. The importance of food also makes it a key site of contestation in economic, political, and cultural realms. Virtually all governments have thus adopted special agricultural policies—for example, to ensure that food is produced in sufficient quantity and available at affordable prices while keeping farmers economically viable (Hendrickson et al. 2008b).

Which firms are the most dominant in the global food system? Table 1.2 lists those engaged in food and agriculture that are among the top 500 firms in the world according to market capitalization. Most of these focus on packaged foods (eighteen firms, $1.46 trillion), followed by retail (eleven firms, $685 billion) and agricultural inputs (nine firms, $557 billion). Commodity firms and distributors are represented by just one firm in each case, near the bottom of the list, while farming is a segment of the food system that does not have any firms of this magnitude. The result is an hourglass-shaped system, with a large number of farmers at the top, an even larger number of people who eat food at the bottom, but a much smaller number of firms in the middle that control how food is moved from producers to consumers (Heffernan, Hendrickson, and Gronski 1999).

Adopting a broad understanding of power, the following chapters explore how it is exercised in each major stage of the food system, as well as the organic food system—organic originated as an alternative to the mainstream but is an increasingly consolidating industry. With this value chain approach, I also focus on a more limited number of commodities/foods, such as soybeans, pork, milk, and leafy greens across some of these stages. The emphasis is on the United States, as nearly half of the firms in Table 1.2 are headquartered in

Table 1.2 Global market capitalization of dominant food firms, 2014

Firm (headquarters if not the United States)	Market capitalization in billions ($)	Primary stage of food system
Walmart	247	Retail
Nestlé (Switzerland)	243	Packaged Foods & Beverages
Coca-Cola	170	Packaged Foods & Beverages
Anheuser-Busch InBev (Belgium)	169	Packaged Foods & Beverages
PepsiCo	128	Packaged Foods & Beverages
Unilever (Netherlands)	119	Packaged Foods & Beverages
Ambev (Brazil—subsidiary of AB InBev)	118	Packaged Foods & Beverages
Bayer (Germany)	112	Agricultural Inputs
BASF (Germany)	102	Agricultural Inputs
McDonald's	97	Retail
SABMiller (UK)	80	Packaged Foods & Beverages
Diageo (UK)	78	Packaged Foods & Beverages
Caterpillar	63	Agricultural Inputs
DuPont	61	Agricultural Inputs
Monsanto	60	Agricultural Inputs
Dow	59	Agricultural Inputs
Mondelez	59	Packaged Foods & Beverages
Starbucks	55	Retail
Costco	49	Retail
Danone (France)	45	Packaged Foods & Beverages
Woolworths (Australia)	42	Retail
Heineken (Netherlands)	40	Packaged Foods & Beverages
Tesco (UK)	40	Retail
Target	38	Retail
Associated British Foods (UK)	37	Packaged Foods & Beverages
Syngenta (Switzerland)	35	Agricultural Inputs

(continued)

Firm (headquarters if not the United States)	Market capitalization in billions ($)	Primary stage of food system
Seven & I (Japan)	34	Retail
Deere	34	Agricultural Inputs
Kraft	33	Packaged Foods & Beverages
Yum! Brands	33	Retail
General Mills	32	Packaged Foods & Beverages
Femsa (Mexico)	32	Packaged Foods & Beverages
Pernod-Ricard (France)	31	Packaged Foods & Beverages
PotashCorp (Canada)	31	Agricultural Inputs
Archer Daniels Midland	28	Commodities
Carrefour (France)	28	Retail
Kweichow Moutai (China)	26	Packaged Foods & Beverages
Kellogg	23	Packaged Foods & Beverages
Kroger	22	Retail
Sysco*	21	Distribution

Source: Financial Times 2014. Note that many firms include sales of products or services unrelated to food and agriculture or extend into multiple stages of the food system through vertical integration. *Sysco was in the top 500 globally in 2013 but fell just below this threshold in 2014.

this country. In addition, market shares and concentration ratios, which provide quantitative indicators of their power, are more easily available at a national level. Comparisons are frequently made with other regions, however, particularly when these dominant firms extend their influence to other parts of the world.

Each chapter also focuses on a key qualitative strategy that these firms use to restructure society, overcome restraints on concentration, and increase their control. Although they make use of numerous strategies, an in-depth examination of specific techniques, and the resistance they often provoke, challenges the notion that current levels of concentration were inevitable. Instead, it details the enormous efforts that firms must expend in order to continually increase their power, using strategies that include:

- changing the interpretation of antitrust laws (Chapter 2)
- structuring exchange networks (Chapter 3)

- reshaping consumption habits (Chapter 4)
- manipulating prices (Chapter 5)
- maintaining government subsidies (Chapter 6)
- strengthening intellectual property protections (Chapter 7)
- influencing voluntary standards (Chapter 8)

In addition to the approaches noted above, a number of additional strategies are also briefly explored in boxes in subsequent chapters. Most of these boxes focus on the actions of second-ranked firms in food and agricultural industries, which typically receive less attention from researchers than the top firms, such as Walmart, AB InBev, and Archer Daniels Midland. Although the leading firms are likely to have the most disproportionate influence on society, a lower-ranked firm's choice of strategies may succeed in achieving a shift in power, quantified by overtaking the top position.

The pattern that emerges is that capitalists increase their influence on society by being extremely flexible. Because their initiatives are rarely unopposed, achieving firm and industry goals requires close cooperation with allied organizations and reacting quickly to potential threats to their success, even when they appear insignificant. They are often able to circumvent challenges, adapt to demands for change, and co-opt potential forms of resistance. Their power is frequently hidden by being exercised indirectly, such as through their influence on government regulations and enforcement, on upstream or downstream firms, and key organizations (e.g., the mass media, foundations, think tanks, and universities). An examination of these dynamics, however, indicates that capitalists can sometimes be pressured into ameliorating some of their negative impacts, especially when the cost of not doing so would threaten the foundations of the system that gives them so much control.

The next chapter describes how capitalists responded to one such challenge in the last century. At that time, the enactment of antitrust regulations helped restore public confidence in a political economic system that was becoming dominated by a small number of firms. These regulations are now being reshaped to reduce these limits to their power. Retailing is one stage of the food system that, as a result, has become much more concentrated in recent decades.