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Growth Regimes

Although it has a durable institutional shape, the operation of capitalism takes different forms across space and time with varying distributive effects. This article contributes to a growing literature considering the successive forms taken by capitalism in the developed democracies since World War II. It develops a distinctive conception of these forms as “growth regimes” that are mutually constituted by the core practices of firms and reinforcing public policies specific to each historical era. The movement of firm practices and government policies is then examined with a view to identifying the growth regimes of three postwar eras of modernization, liberalization, and knowledge-based growth.

Keywords: growth regimes, capitalism, firm strategies, Europe, liberalization, knowledge economy

Across space and time, capitalism retains a distinctive institutional shape, as Marx famously noted, based on private ownership of the means of production. But its actual operation varies dramatically across countries with consequences for the types of goods that are produced and how the fruits of production are distributed. A significant literature considers that cross-national variation.¹ In recent years, however, attention has shifted toward the problem of understanding how the operation of capitalism varies over time. This is not a new endeavor. Several classic accounts see capitalism as an economic system that moves through multiple stages, whether with progressive or retrograde results.² But,

¹ For representative works, see Peter A. Hall and David Soskice, eds., *Varieties of Capitalism* (Oxford, 2001); Bruno Amable, *The Diversity of Modern Capitalism* (Oxford, 2003); Kathleen Thelen, *Varieties of Liberalization and the New Politics of Social Solidarity* (New York, 2014); Lucio Baccaro, Mark Blyth, and Jonas Pontusson, eds., *Diminishing Returns: The New Politics of Growth and Stagnation* (New York, 2022)

² Prominent examples include Werner Sombart, *Der Moderne Kapitalismus* (Leipzig, 1902); Vladimir Ilyich Lenin, *Imperialism, the Highest Stage of Capitalism* (Petrograd, 1917); Joseph Schumpeter, *Capitalism, Socialism and Democracy* (New York, 1950).

in contrast to works taking a very long-term view of that movement, recent research focuses on how capitalism has changed since World War II.³

There are good reasons for wanting to understand how the operation of capitalism has changed over the postwar period. Across these decades, the locus of employment shifted from manufacturing toward services, and a new technological revolution transformed both the types of products available and the ways in which they are produced.⁴ Perhaps most important, these years saw dramatic changes in the distribution of well-being, encompassing working conditions, the security of employment, the terms governing access to jobs, and levels of income inequality.⁵ Tracing changes in the character of capitalism over the postwar years is central to understanding changes in the wellsprings of economic growth and the dramatic shifts in the distribution of material benefits that affected so many people's lives in this period.

If the operation of capitalism has assumed different forms over the postwar decades, the primordial question is: What are the constitutive elements that distinguish one form from another? On this, there is no settled consensus. Some scholars emphasize variation in levels of debt over this time followed by efforts to contain it through austerity programs.⁶ Others focus on the extent to which electoral politics has encouraged policies of investment rather than consumption.⁷ The most ambitious effort to date associates successive stages of capitalism with the sectors contributing the most to wealth creation, changes in the institutions organizing the economy, and shifts in the main components driving aggregate demand.⁸ There is something to be said for each of these perspectives. They fasten upon important features of the postwar political economies. But, in my view, for the purpose of identifying successive forms of capitalism, they suffer from two limitations.

First, some are insufficiently systematic. Any account of changes in the forms taken by capitalism must cite more than contingent collections of events. It should be grounded in a systemic perspective that highlights the core interdependencies of capitalism seen as a system of economic

³For influential synthetic works, see Wolfgang Streeck, *Buying Time* (London, 2014); Pablo Beramendi, Silja Häusermann, Herbert Kitschelt, and Hanspeter Kriesi, eds., *The Politics of Advanced Capitalism* (Cambridge, U.K., 2015); Anke Hassel and Bruno Palier, eds., *Growth and Welfare in the Advanced Capitalist Economies: How Have Growth Regimes Evolved* (Oxford, 2020).

⁴For overviews, see Barry Eichengreen, *The European Economy since 1945* (Princeton, 2007); Jonathan Levy, *Ages of American Capitalism: A History of the United States* (New York, 2021).

⁵David Weil, *The Fissured Workplace* (Cambridge, MA, 2014); Thomas Piketty, *Capital in the 21st Century* (Cambridge, MA, 2014).

⁶Streeck, *Buying Time*.

⁷Beramendi et al., *Politics of Advanced Capitalism*.

⁸Hassel and Palier, *Growth and Welfare*.

and political relationships that are often mutually reinforcing. Those relationships may be only loosely coupled, less than mechanical, and more like the symbiotic relations found in an ecology, but capitalism should be seen as a system whose effects are generated by mutual interaction among its constituent parts. Some years ago, French regulation theory provided a model for such formulations with its account of how collective bargaining and Keynesian economic policies in the immediate postwar decades underpinned Fordist production regimes.⁹ But efforts to extend that account beyond those decades have not been especially successful.

Second, most of the efforts by comparative political economists to characterize the stages through which postwar capitalism has moved have been enlightening about the roles played by states in the evolution of capitalism but insufficiently attentive to the key roles of firms in this evolution. Business enterprises are, of course, the principal units superintending production in a capitalist economy and, as their strategies change, so do the terms on which capitalism operates. Moreover, if one of the core objectives of examining forms of capitalism is to understand why the distribution of well-being shifts over time, firms must be at the center of the analysis since their practices condition the distribution of well-being at least as much as public policies do.

Growth Regimes

With these considerations in mind, I seek an account of the successive forms taken by postwar capitalism that understands capitalism as an economic system in which firms as well as governments play important roles. In keeping with the emerging literature, I will refer to each of these forms as a distinctive “growth regime.” The point is not that economic growth should be the sole objective of contemporary political economies, especially in a moment of looming climate change, but that new approaches to securing growth are central to changes in capitalism. Each growth regime is distinguished by the distinctive ways in which it generates economic growth and distributes its fruits. My focus is on the developed democracies of Europe and North America, although some aspects of this perspective should apply to the developing world as well.

The fulcrum on which my concept of growth regimes turns is the observation that, in all capitalist economies, there are two sets of

⁹ Michel Aglietta, *A Theory of Capitalist Regulation* (London, 1979); Robert Boyer, *The Regulation School: A Critical Introduction* (New York, 1990); see also David M. Kotz, Terrence McDonough, and Michael Reich, eds., *Social Structures of Accumulation: The Political Economy of Growth and Crisis* (New York, 1994).

agents whose practices impinge deeply on the lives and livelihoods of all citizens, namely, firms and governments. At the micro level, their institutional practices condition many features of the working and waking lives of people. At the macro level, economic output, and therefore growth, is generated by firms operating within the purview of government policy, and together these two agents distribute the fruits of that growth in the form of income, working conditions, and economic security.

Accordingly, a growth regime is constituted by the principal institutional practices that firms and governments use for securing and distributing economic output, and substantial shifts in those practices mark the movement from one regime to another. The latter include major changes in how companies organize production, regulate work, raise capital, or market their products. The relevant policies include those governments use for macroeconomic management, the regulation of labor and financial markets, skill formation, advancing trade or industry, and supporting people without employment. What renders a growth regime more than a disparate collection of practices, however, is how the practices of firms and governments interlock to reinforce each other and yield distinctive patterns of growth. Only in tandem do their actions yield specific rates of economic growth as well as an associated distribution of well-being.

There is nothing functionalist in this formulation: my point is not that the strategies of firms and governments *must* reinforce one another—sometimes they do and sometimes they do not—although we see a coherent growth regime only when they do, and scholars of capitalism will not be surprised to find that they often do. Governments tend to adapt their policies to the strategies of large companies, partly because the resources of those companies give them privileged access to policy-makers, and partly because democratic governments facing reelection seek an economic prosperity that depends on retaining the confidence of the business community.¹⁰ By the same token, firms respond to the incentives offered by governments just as they do to market incentives.

Although a detailed discussion of the processes whereby growth regimes change is beyond the scope of the article, this approach also carries some implications for understanding those processes. Because the analysis places two sets of actors at the heart of such regimes, it

¹⁰ Claus Offe and Helmut Wiesenthal, "Two Logics of Collective Action: Theoretical Notes on Social Class and Organizational Form," *Political Power and Social Theory* 1, no. 1 (1980): 67–115; Thomas Philippon, *The Great Reversal: How America Gave Up on Free Markets* (Cambridge, MA, 2019); Charles Lindblom, *Politics and Markets* (New York, 1980). For more functionalist formulations, see James O'Connor, *The Fiscal Crisis of the State* (New Brunswick, NJ, 1979); Wolfgang Streeck, *How Will Capitalism End?* (London, 2017).

yields an agent-centered account of change. Firms and governments are not simply responsible for the core practices of a growth regime. They are also the central agents of adjustment in a capitalist economy—whose actions determine how an economy adjusts to socioeconomic developments and shocks. The two agents act in response to different sets of signals and incentives. Firms are especially sensitive to changes in market access, relative prices, and the availability of finance or technology. Democratic governments respond to electoral incentives and to signals from producer groups about how to secure prosperity.

Hence, the movement from one growth regime to another involves both economic and political dynamics. Firms sensitive to market signals often move quickly to take advantage of emerging market opportunities and new technologies or to respond to changes in the terms on which capital and labor are available. But large-scale change usually depends on government action to shift related trade or regulatory regimes. In some cases, those shifts take place via pressure from business under the radar screen of electoral politics, but highly visible changes in social or economic policies require the mobilization of electoral consent. Hence, economic policymaking always entails coalition building in the arenas of electoral and producer group politics.¹¹

In these contexts, although material interests animate both firms and governments, ideas also play central roles because interests do not arise unambiguously from the world. Facing economies permeated by uncertainties, the actors must turn to interpretive frameworks to envision the most advantageous courses of action.¹² Hence, shifting economic theories are central to policymaking and often permuted into popular nostrums that provide the economic gestalt legitimating current policies.¹³ For firms, managerial ideologies play a corresponding role, popularizing specific approaches to management and the organization of production.¹⁴ Ultimately, these interpretive frameworks provide a cement that helps consolidate each growth regime.

Using this framework, we can identify three growth regimes in the postwar history of the western democracies, which I label those of an

¹¹ Greta Krippner, *Capitalizing on Crisis* (Cambridge, MA, 2011); Jürgen Beyer and Martin Höpner, “The Disintegration of Organised Capitalism: German Corporate Governance in the 1990s,” *West European Politics* 26, no. 4 (2003): 179–98; Pepper Culpepper, *Quiet Politics and Business Power* (New York, 2010); Peter A. Hall, “The Electoral Politics of Growth Regimes,” *Perspectives on Politics* 18, no. 1 (2020): 185–99.

¹² Jens Beckert and Richard Bronk, *Uncertain Futures: Imaginaries, Narratives and Calculation in the Economy* (Oxford, 2018).

¹³ Peter A. Hall, ed., *The Political Power of Economic Ideas: Keynesianism across Nations* (Princeton, 1989); Mark Blyth, *Great Transformations: Economic Ideas and Institutional Change in the Twentieth Century* (New York, 2002).

¹⁴ Neil Fligstein, *The Transformation of Corporate Control* (Cambridge, MA, 1990).

era of modernization, running from 1945 to 1975; an era of liberalization, from 1980 to about 2000; and an era of knowledge-based growth, beginning at the turn of the twenty-first century. In this compass, I can present these regimes only in stylized form, emphasizing cross-national similarities in the overall movement of capitalism at the expense of noting some important variations between firms and countries, which scholars associate with national growth models.¹⁵ My analytical objectives are to identify the key features of firm practices and government policies at the heart of each growth regime, to show how extensively these changed from one regime to the next, and to indicate how the practices of firms and policies of governments reinforced each other to constitute distinctive growth regimes.

An Era of Modernization

In the thirty years after 1945, most of the developed economies grew rapidly, in part because they moved workers from the land into factories where they were twice as productive but also because firms and governments developed practices that established an effective growth regime.¹⁶ Three key features distinguished corporate practices during this period, especially among large firms: a drive for economies of scale, Fordist modes of mass manufacturing, and, later in the period, a turn toward diversification in the form of professionally managed conglomerates.

The expansion of production and sales became one of the principal goals of large firms in this era, partly to take advantage of pent-up demand following the war, and partly because scale came to be seen as a critical element of competitive advantage. As one review of the era's most influential book on management put it in 1954, "Automation will bring drastic changes in the economics of factory production. Higher capital requirements and more indirect labor may offset direct labor savings, unless the plant can run at very high volumes."¹⁷ Firms that could become larger did so. In 1954 the Fortune 500 companies employed 34 percent of American workers, but by 1979 they accounted for 58 percent of employment.¹⁸ Europeans saw the success of large American companies as a model and a challenge. The best-selling book of the 1960s in France called for "the creation of large industrial units which are able both in size and management to compete with the

¹⁵ See Hassel and Palier, *Growth and Welfare*; Baccaro, Blyth, and Pontusson, *Diminishing Returns*.

¹⁶ Eichengreen, *European Economy*.

¹⁷ Robert P. Ulin, "Review of The Practice of Management by Peter F. Drucker," *Challenge* (Dec. 1954): 61.

¹⁸ David B. Audretsch, *Innovation and Industry Evolution* (Cambridge, MA, 1995), 4.

American giants.”¹⁹ Between 1953 and 1972, the number of firms employing ten thousand workers or more increased from 65 to 160 in Britain, from 26 to 102 in Germany, and from 20 to 62 in France.²⁰

This drive for scale was underpinned by the prominence of manufacturing, which still accounted for about 40 percent of employment in the United States and Europe in 1960, and by the spread of Fordist modes of manufacturing that used semiskilled labor assigned routinized tasks on automated assembly lines to turn out high volumes of standardized goods.²¹ This type of production rendered labor highly productive but required large amounts of capital investment that was likely to be forthcoming only if demand remained high and predictable. However, this system allowed firms to pay the higher wages that fueled such demand because it made labor more productive. Variants of it, still dependent on capital investment but relying more on skilled workers and favorable institutional ecologies, were used to produce capital goods in regions of Germany and luxury goods in Italy.²² As a force for the integration of labor and rising standards of living, manufacturing remained the backbone of the developed economies for most of this era.

By the 1960s, however, as consumer demand for standardized commodities became saturated, firms seeking a way to grow in domestic markets began to diversify into other products, often forming large conglomerates to manage a variety of subsidiaries. By 1972, 70 percent of the largest companies in nine European nations had diversified; under the influence of American models, many had also adopted a multidivisional form, based on semi-autonomous operating units under the supervision of a central office dedicated to strategic planning.²³ That approach was pursued more loosely in Europe than in the United States, but by 1970 about 40 percent of the largest firms in France and Germany had a multidivisional form.²⁴

¹⁹ Jacques Servan-Schreiber, *The American Challenge* (New York, 1968), 153; Richard Kuisel, *Seducing the French* (Berkeley, 1993), 154.

²⁰ Youssef Cassis, *Big Business: The European Experience in the Twentieth Century* (Oxford, 1997), 63.

²¹ For classic discussions, see Boyer, *Regulation School*; Bob Jessop, “Fordism and Post-Fordism: A Critical Reformulation,” in *Pathways to Regionalism and Industrial Development*, ed. Alan J. Scott and Michael J. Storper (London, 1992), 43–65.

²² Wolfgang Streeck, “On the Institutional Conditions for Diversified Quality Production,” in *Beyond Keynesianism*, ed. Egon Matzner and Wolfgang Streeck (Aldershot, 1991), 21–61; Gary Herrigel, *Industrial Constructions: The Sources of German Industrial Power* (Cambridge, 1996); Michael J. Piore and Charles F. Sabel, *The Second Industrial Divide* (New York, 1984).

²³ Lawrence G. Franko, “The Move to a Multidivisional Structure in European Organizations,” *Administrative Science Quarterly* 19, no. 4 (1974): 493–506; Alfred D. Chandler, *Scale and Scope: The Dynamics of Industrial Capitalism* (Cambridge, MA, 1990).

²⁴ Marie-Laure Djelic, *Exporting the American Model: The Postwar Transformation of American Business* (Oxford, 1998).

The managerial ideologies of this era also saw the firm as an entity with multiple responsibilities. For many of the family-controlled enterprises in Europe, that was a natural outlook, but it extended to the professional managers of American companies as well. In 1957, Carl Kaysen could say, “No longer the agent of proprietorship seeking to maximize return on investment, management sees itself as responsible to stockholders, employees, customers, the general public and, perhaps most important, the firm itself as an institution.”²⁵ There were certainly exceptions, but in many parts of Europe strong regulatory regimes reinforced that outlook, and even those who criticized this orientation as overly bureaucratic recognized it as a dominant feature of business management in this era.²⁶

Reinforcing public policies did much to make the firm strategies of this era possible and productive. Four features of policy in this period deserve emphasis: activist economic management, the promotion of new trade regimes, the regularization of collective bargaining, and the gradual expansion of a welfare state. Economic activism was the watchword of the era. A classic account notes that one of the outstanding features of policymaking in these years was “the vastly increased influence of the public authorities on the management of the economic system.”²⁷ Although Keynesian prescriptions were followed only in some countries, this approach was animated by a set of broadly Keynesian ideas that saw the economy as a set of aggregates susceptible to governmental manipulation.²⁸ The new activism took various forms across countries. Keynesian demand management was most central in Britain. France relied more heavily on indicative economic planning and Sweden on an activist manpower policy; however, even in Germany where a “social market economy” inspired by ordo-liberalism implied a lighter touch, interventionist steps were taken to establish new institutions for the postwar economy.²⁹ In many countries, a significant number of newly nationalized enterprises spearheaded efforts to increase and rationalize industrial capacity.

²⁵ Quoted in Gerald F. Davis, *Managed by the Markets: How Finance Reshaped America* (New York, 2009), 10. See also Ralph Gomory and Richard Sylla, “The American Corporation,” *Daedalus* 142 (Spring 2013): 102–18.

²⁶ Wolfgang Streeck, “Beneficial Constraints: On the Economic Limits of Rational Voluntarism,” in *Contemporary Capitalism: The Embeddedness of Institutions*, ed. Rogers Hollingsworth (Cambridge, U.K., 1997), 197–219; William H. Whyte, *The Organization Man* (New York, 1956); Schumpeter, *Capitalism, Socialism and Democracy*.

²⁷ Andrew Shonfield, *Modern Capitalism* (New York, 1965), 66.

²⁸ Hall, *Political Power*.

²⁹ François Godard, “The Purposeful State: Rise of Postwar Technocratic Governance in Germany and France” (PhD dissertation, University of Geneva, 2020); for overviews, see Shonfield, *Modern Capitalism*; Peter A. Hall, *Governing the Economy* (Oxford, 1986).

This economic activism reinforced firm strategies in various ways. Agricultural reforms that pushed people off the land provided a labor supply for industry. Countercyclical fiscal policies and efforts to plan the economy were designed to provide the predictable growth in demand that firms needed to justify high levels of capital investment in mass manufacturing. Many governments actively encouraged firms to merge into larger entities, using quantitative controls over the banking system to provide the incentives or funding to do so.³⁰ A contemporary observer of French planning remarked that “any combination of French industrial firms [was] almost automatically approved as a step in the right direction.”³¹

International economic policies were equally important to the construction of this growth regime. The establishment of new international monetary regimes, such as the European Payments Union and Bretton Woods agreement, coupled with trade agreements, such as the 1947 General Agreement on Tariffs and Trade (GATT) and the 1958 Treaty of Rome, revived trade, creating new export markets that fueled demand for manufactures and the capital goods required to produce them. The initial round of the GATT reduced tariffs by 26 percent, and the Kennedy Round of the 1960s cut them by an additional 37 percent, while the number of signatories to the GATT increased from 26 to 118 between 1947 and 1963.³² As Barry Eichengreen notes, exports from the EU15 countries, which rose steadily by 12 percent a year between 1950 and 1973, were crucial to the expansion of manufacturing.³³

At the same time, most governments established institutions to regularize the process of collective bargaining between employers and workers, which fit well with the firm strategies of this era. Although the character of these bargaining systems varied across countries, most offered firms a modicum of industrial peace. They simultaneously ensured that wages would continue to rise, thereby fueling domestic demand for manufactures, and that these increases would be restrained enough to leave room for the profits out of which investment was to come.³⁴

³⁰ Djelic, *Exporting the American Model*; John Zysman, *Governments, Markets and Growth: Financial Systems and the Politics of Industrial Change* (Ithaca, 1983).

³¹ Marie-Laure Djelic and Rolv Petter Amdam, “Americanization in Comparative Perspective: The Managerial Revolution in France and Norway, 1940–1990,” *Business History* 49, no. 4 (2007): 490.

³² Richard Baldwin, *The Great Convergence* (Cambridge, MA, 2016), 74.

³³ Eichengreen, *European Economy*.

³⁴ Barry Eichengreen, “Institutions and Economic Growth: Europe after World War II,” in *Economic Growth in Europe since 1945*, ed. Nicholas Crafts and Gianni Toniolo (Cambridge, U.K., 1996), 38–72; Adam Przeworski and Michael Wallerstein, “The Structure of Class Conflict in Democratic Capitalist Societies,” *American Political Science Review* 76, no. 2 (1982): 215–38.

The gradual expansion of social security programs, providing aid for the unemployed, the disabled, and the elderly, complemented these measures. By supplementing wages with a social wage, they stabilized the new bargaining systems. In exchange for giving up trade protection, workers were offered social protection, and this social safety net underpinned support for the process of industrial rationalization that was yielding more competitive economies.³⁵ In northern Europe, generous unemployment benefits linked to wages also offered workers incentives to acquire the high levels of skill on which those economies depended.³⁶ Moreover, since levels of unemployment remained low for much of the period, these systems were less expensive than they were to become in the 1970s.

This is not to say that every step governments took in these decades was efficient. Many policies misfired in part if not in whole. In Britain, demand management gave way to stop-go cycles, and a succession of industrial relations acts never tamed the fissiparous trade union movement. In France, economic planning sometimes led firms to become larger instead of more competitive, and by the end of this era many state-owned enterprises were deemed inefficient. But there was a congruence between the strategies of firms and governments in these years that can be said to constitute a distinctive growth regime.

An Era of Liberalization

Developments in the 1980s and 1990s ushered in a new growth regime. With the advent of a new era of liberalization, corporate strategies, especially of large firms, changed again. The shift began most dramatically in the United States during the 1980s, and many European firms followed suit in the 1990s. Three distinctive changes in firm strategy are characteristic of this growth regime. The first was a movement that focused firms on delivering shareholder value, the second a substantial restructuring of companies around their core competencies, and the third a movement toward outsourcing labor and services that had previously been performed in-house.

Although far from benevolent, the corporate strategies of the 1950s and 1960s tended to treat the firm as an entity with considerable responsibilities to its employees and other stakeholders, and the orientation of

³⁵ Peter J. Katzenstein, *Small States in World Markets* (Ithaca, 1985); John G. Ruggie, "International Regimes, Transactions and Change: Embedded Liberalism in the Postwar Economic Order," *International Organization* 36, no. 2 (1982): 379–415; Gösta Esping-Andersen, *Three Worlds of Welfare Capitalism* (Princeton, 1990).

³⁶ Torben Iversen and David Soskice, "An Asset Theory of Social Policy Preferences," *American Political Science Review* 95, no. 4 (2001): 875–93.

many managers was to the long-term survival of the firm. However, the orientation of large American corporations shifted during the 1980s and 1990s to assign primary importance to increasing the value of the firm's shares. That reorientation was pressed on firms by increasingly assertive actors in financial markets and rationalized by new managerial ideologies.³⁷ As a result, dividends as a share of after-tax corporate profits in the United States rose from about 42 percent during the 1960s and 1970s to almost 50 percent in the 1980s and 1990s, and share repurchases began to consume more than 20 percent of profits.³⁸ Although less frequent in Europe, share repurchases became common there too, and the proportion of European profits distributed to shareholders increased.³⁹ To align the incentives of top managers with these objectives, an increasing share of their compensation was tied to the company's share price. By 2015, three-quarters of the compensation of the chief executives of large U.S. corporations turned on the price of the company's shares, as did about half of CEO compensation in Europe, and the ratio of CEO compensation to the wage of an average production worker in large American firms rose from about 37 to 1 in 1979 to 277 to 1 in 2007.⁴⁰

At the same time, many companies that had diversified their operations to secure growth in domestic markets wound down those conglomerates in the 1980s and 1990s to refocus their operations on products that took advantage of the firm's core competencies, namely activities in which it had a substantial advantage over competitors. This movement was facilitated by the opening of international markets, such as the European Single Market legislated in 1986. It was pressed on firms by investors seeking shareholder value and enforced by the threat of hostile takeovers in markets for corporate control. Among the leading firms (by sales revenue) in each major sector of the world economy, the number that were diversified fell by half between 1980 and 2000; two-thirds of these leading firms were "focused" by the turn of the century.⁴¹ In Europe, parallel developments occurred more slowly, but

³⁷ For overviews, see William Lazonick and Mary O'Sullivan, "Maximizing Shareholder Value: A New Ideology for Corporate Governance," *Economy and Society* 29, no. 1 (2000): 13–35; Peter Cappelli, Laurie Bassi, Harry Katz, David Knoke, Paul Osterman, and Michael Useem, *Change at Work* (Oxford, 1997).

³⁸ Lazonick and O'Sullivan, "Maximizing Shareholder Value," 22, 24.

³⁹ Dimitris Andriosopulos and Meziane Lasfer, "The Market Valuation of Share Purchases in Europe," *Journal of Banking and Finance* 55, no. C (2015): 327–39; Phil Almond, Tony Edwards, and Ian Clark, "Multinationals and Changing Business Systems in Europe: Towards the 'Shareholder Value' Model," *Industrial Relations Journal* 34, no. 5 (2003): 435.

⁴⁰ Patricia Kotnick, Mustafa Erdem Saking, and Dejan Guduras, "Executive Compensation in Europe: Realized Gains from Stock-Based Pay" (Working Paper 78, Institute for New Economic Thinking, July 2018), 5; Weil, *Fissured Workplace*, 48.

⁴¹ Lawrence G. Franko, "The Death of Diversification? The Focusing of the World's Industrial Firms 1980–2000," *Business Horizons* 47, no. 4 (2004): 41.

unrelated diversification gradually gave way to related diversification and then to a renewed focus on core competencies after 1993.⁴² This was accompanied by a new emphasis on exports. Refocused firms with more limited product lines sought foreign markets for those products via exports or the purchase of foreign companies. Between 1993 and 2007, the share of sales of the hundred largest German firms going elsewhere in Europe rose from 26 percent to 31 percent, and the proportion going beyond Europe rose from 27 percent to 37 percent, while sales of French firms going elsewhere in Europe rose from 19 percent to 30 percent and the share going beyond Europe increased from 35 percent to 41 percent.⁴³

These shifts in corporate strategy soon led to further moves that were highly consequential for the labor force and its management. To meet new demands for shareholder value and focus on their core competencies, many firms began to downsize their workforce and outsource tasks to cheaper subcontractors. Between 1980 and 1993, the five hundred largest American manufacturing companies laid off a quarter of their workforce; by 1989, more than three-quarters of American employers were using subcontractors for tasks previously performed by their own employees.⁴⁴ In 2002, a survey of 180 large European manufacturing companies found that on average they were outsourcing seven of their activities, most often IT services, industrial maintenance, waste management, logistics, and telecommunications. In West Germany, the number of full-time workers employed by temporary agencies or subcontractors of cleaning, logistics, and security services quadrupled between 1980 and 2008.⁴⁵

Changes in the management practices of many firms accompanied these developments. Influenced by Japanese models of “lean and mean” production, the corporate watchword in this era became “flexibility.” The objectives were to reduce inventories and readily redeploy

⁴² Richard Whittington and Michael Mayer, *The European Corporation: Strategy, Structure and Social Science* (Oxford, 2002), esp. 143; Richard Whittington, Michael Mayer, and Francesco Curto, “Chandlerism in Post-War Europe: Strategic and Structural Change in France, Germany and the UK, 1950–1993,” *Industrial and Corporate Change* 8, no. 3 (1999): 519–51.

⁴³ Michael Mayer, Julia Hautz, Christian Stadler, and Richard Whittington, “Diversification and Internationalization in the European Single Market,” *Business History Review* 91, no. 2 (2017): 279–99.

⁴⁴ Cappelli et al., *Change at Work*, 45, 73; David B. Audretsch and A. Roy Thurik, “Capitalism and Democracy in the 21st Century: From the Managed to the Entrepreneurial Economy,” *Journal of Evolutionary Economics* 10, no. 1 (2000): 22.

⁴⁵ Bertrand Quélin and François Duhamel, “Bringing Together Corporate Outsourcing and Corporate Strategy: Outsourcing Motives and Risks,” *European Management Journal* 21, no. 5 (2003): 652; Deborah Goldschmidt and Johannes F. Schmieder, “The Rise of Domestic Outsourcing and the Evolution of the German Wage Structure” (IZA Discussion Paper 9194, July 2015).

workers and other resources to meet the variegated tastes of more sophisticated consumers. Many companies began to give more autonomy to work units, albeit subject to the metrics of financial managers, who replaced engineers as the preeminent force inside firms. By 1990, more than half of the Fortune 1000 companies in the United States had self-managed work teams, up from a quarter only a few years before.⁴⁶ And many firms abandoned the multidivisional form in favor of organizing their activities through subsidiaries whose contribution to the share price could be measured more readily.⁴⁷ Across the Western economies, the production of goods and services was being organized differently and oriented to a different set of goals than those that had dominated the previous era.

This sea change in the strategies of large firms was reinforced by corresponding shifts in the economic strategies of governments. The economic climacteric of the 1970s, marked by a stagflation that remained impervious to existing policies, inspired a widespread disillusionment with state intervention and led many governments to search for new policies that would accord markets a greater role in the allocation of resources. They found a rationale for this approach in monetarist economics and the growing popularity of a new classical economics built on rational expectations foundations, which specified that activist fiscal and monetary policies had few durable effects on the real economy while the sources of unemployment lay not in demand management but on the supply side of the economy in the structure of product and labor markets.⁴⁸ Under Thatcher and Reagan, Britain and the United States moved first, but most European governments moved in parallel directions during the 1990s.⁴⁹

Accordingly, demand management was downgraded on the premise that issues of unemployment and growth could be addressed only through market-conforming reforms to the supply side of the economy, and this view was institutionalized during the 1990s in moves to make central banks more independent of political control and to target monetary policy on inflation. During the 1980s and 1990s, three shifts in policy were especially important for facilitating

⁴⁶ Fligstein, *Transformation of Corporate Control*; Cappelli et al., *Change at Work*.

⁴⁷ John Boies and Harland Prechel, "Capital Dependence, Business Political Behavior and Change to the Multilayered Subsidiary Form," *Social Problems* 49, no. 3 (2002): 301–26.

⁴⁸ Kathleen McNamara, *The Currency of Ideas* (Ithaca, 1998); Michel De Vroey, *A History of Macroeconomics from Keynes to Lucas and Beyond* (Cambridge, U.K., 2016).

⁴⁹ For overviews, see Martin Höpner, Alexander Petring, Daniel Seikel, and Benjamin Werner, "Liberalization Policy: An Empirical Analysis of Economic and Social Interventions in Western Democracies" (WSI Working Paper 192, Institute of Economic and Social Research [WSI], Hans Böckler Foundation, November 2014); Anna Fill, *The Political Economy of De-liberalization* (Berlin, 2019).

the changes in firm strategy that took place in this period: steps to liberalize the availability of finance and free up markets for corporate control, measures to intensify competition in product markets, and policies that promoted the emergence of dual labor markets.

The reorientation of firms toward a focus on core competencies and shareholder value was often forced on them by aggressive merger and acquisitions activity. But the latter was made possible by the growing availability of finance for such purposes, which turned on steps taken by governments in this era. As Greta Krippner notes, the initial steps were changes to American regulations adopted in the late 1970s and early 1980s, largely in response to the distributive issues raised by a decade of inflation.⁵⁰ Amendments to the Employee Retirement Income Security Act of 1974 (ERISA) and the Federal Reserve Board's Regulation Q as well as the 1982 Garn-St. Germain Depository Institutions Act fueled a market in the "junk bonds" that investors used to launch the leveraged buyouts and hostile takeovers that forced firms to unwind conglomerates and focus on their share price. In 1981 regulations on mergers were also loosened; Rule 10b-18 adopted in 1982 by the Securities and Exchange Commission made it easier for American companies to shore up their share price by buying back their own shares, and the 1986 Tax Reform Act encouraged firms to develop multiple layers of subsidiaries by making it easier to transfer funds among them.⁵¹ By 1990, one-third of the companies in the Fortune 500 of 1980 had faced a hostile takeover bid.⁵²

A parallel set of developments opened up European financial markets. Once again, shifts in international regimes were important. Beginning in 1979, the removal of exchange controls substantially increased international financial flows, making cross-border merger and acquisition activity more feasible. French governments liberalized their markets for corporate control to take advantage of that.⁵³ The large German banks successfully pressed for measures that would allow them to become international investors.⁵⁴ A big bang liberalized the City of London, and the European Community relaxed takeover

⁵⁰ Krippner, *Capitalizing on Crisis*.

⁵¹ See Davis, *Managed by the Markets*; William Lazonick, "Profits without Prosperity," *Harvard Business Review*, Sept. 2014, 47–55; Harland Prechel, "Corporate Transformation to the Multilayered Subsidiary Form: Changing Economic Conditions and State Business Policy," *Sociological Forum* 12, no. 3 (1997): 405–39.

⁵² Cappelli et al., *Change at Work*, 33.

⁵³ Pepper D. Culpepper, "Capitalism, Coordination and Economic Change: The French Political Economy since 1985," in *Changing France: The Politics that Markets Make*, ed. Pepper D. Culpepper, Peter A. Hall, and Bruno Palier (Basingstoke, 2006), 29–49.

⁵⁴ Gregory Jackson and Martin Höpner, "Revisiting the Mannesmann Takeover: How Markets for Corporate Control Emerge," *European Management Review* 3, no. 3 (2006): 142–55.

regulations.⁵⁵ Between 1993 and 2001, there were almost 90,000 mergers and acquisitions in western Europe—a ninefold increase from the 1980s—and, by 2000, 40 percent of French listed companies were owned by foreigners.⁵⁶ As the size of global financial assets tripled between 1980 and 2006, financial activities now accounted for a much larger proportion of national profits, especially in the Anglo-American economies.⁵⁷

Just as firms began to face heightened pressure from financial markets, a series of public policies exposing them to more intense competition in product markets further accelerated shifts in corporate strategy. Deregulation of the American airline, rail, trucking, and broadcast industries, followed by others, stimulated many companies to downsize or restructure, as did large-scale privatization in Britain.⁵⁸ In Europe, the Single European Act exposed firms to increasing competition within a continental market and gave the European Commission sweeping powers to liberalize industries.⁵⁹ As a result, many firms that had been diversifying to grow in protected national markets refocused on their core competencies in order to compete more effectively in larger transnational markets.

To do so, many firms began to shed labor and outsource more of their activities to subcontractors recruiting workers on secondary labor markets. But the capacities of firms to adopt such strategies, especially in Europe, depended on government moves to relax employment protection and promote the use of temporary or part-time contracts. Governments obliged and employment protection for employees on fixed contracts dropped dramatically across Europe; by 2008 more than 20 percent of European workers were on such contracts. Secondary labor markets expanded. In Germany, for example, the rate of part-time employment doubled between 1991 and 2007.⁶⁰

⁵⁵ Michael Moran, *The British Regulatory State* (Oxford, 2003).

⁵⁶ Martina Martynova and Luc Renneboog, “Merger and Acquisitions in Europe” (Tilburg University Discussion Paper, Jan. 2006); Mary O’Sullivan, “Analysing Change in Corporate Governance,” in *Corporate Governance: Accountability, Enterprise and International Comparisons*, ed. Kevin Keasey, Steve Thompson, and Mike Wright (New York, 2005), 373.

⁵⁷ Suzanne Berger, “Toward a Third Industrial Divide?,” in *Economy and Society: Essays in Honor of Michael J. Piore*, ed. Paul Osterman (Cambridge, MA, 2012), 65–87.

⁵⁸ Robert B. Horowitz, “Understanding Deregulation,” *Theory and Society* 15, no. 1–2 (1986): 139–74; Michael Moran, *Privatization and Regulatory Change in Europe* (Philadelphia, 1994).

⁵⁹ Nicolas Jabko, *Playing the Market: A Political Strategy for Uniting Europe* (Ithaca, 2012); for an example, see Catherine Casey, Antje Fiedler, and Ljiljana Erakovic, “Liberalising the German Model: Institutional Change, Organisational Restructuring and Workplace Effects,” *Industrial Relations Journal* 43, no. 1 (2011): 53–69.

⁶⁰ Torben Iversen and David Soskice, “Democratic Limits to Redistribution: Inclusionary versus Exclusionary Coalitions in the Knowledge Economy,” *World Politics* 67, no. 2 (2015): 185–225; Anke Hassel, “The Paradox of Liberalization: Understanding Dualism and the

To accommodate the growth of these secondary labor markets, governments also adjusted the social policy regimes of the postwar welfare state. Although social spending remained high, many European governments reduced the levels or duration of social benefits and made the terms of eligibility for them more stringent, effectively forcing people into the low-paid jobs that had proliferated with outsourcing. In the United States, the earned income tax credit (EITC) program was expanded in the 1980s and 1990s, effectively subsidizing low-wage work, and, in 1996, work requirements were attached to traditional welfare programs. The British government soon followed suit and, under the aegis of “active labor market policies,” many European governments began to subsidize social charges or make the receipt of benefits contingent on training or work.⁶¹ Policies such as these sustained the low-wage labor markets on which outsourcing depended. Once again, corporate strategies and government policies moved in tandem to reinforce each other, albeit this time in the service of a different growth regime.

An Era of Knowledge-Based Growth

Since many of the firm practices and public policies adopted during the era of liberalization remain in place, some analysts are reluctant to suggest that the growth regime has shifted again. To be sure, there is a certain seamlessness to the process whereby such regimes change: they rarely shift abruptly and the pace of change varies across countries. But close examination suggests that, from the late 1990s, business practices and public policies began to change in ways consequential enough to merit seeing them as a new growth regime.

Three changes in firm practices have been especially significant. First, although some firms had gradually been applying a new information and communications technology (ICT) to their operations since the 1980s, the advent of the Internet in the late 1990s had a transformative impact on many more businesses; by the early 2000s, the success of many types of firms had become highly dependent on how well they exploited that technology. Second, in tandem with the growing role of ICT has come a turn toward intangible, as opposed to tangible, investment. Levels of intangible investment have exceeded those of tangible

Recovery of the German Economy” (LSE “Europe in Question” Discussion Paper 42, Sept. 2011); Goldschmidt and Schmieder, “Rise of Domestic Outsourcing”; Werner Eichorst and Paul Marx, “Reforming German Labor Market Institutions: A Dual Path to Flexibility” (IZA Discussion Paper 4100, Mar. 2009).

⁶¹ Giuliano Bonoli, “The Political Economy of Active Labor Market Policy,” *Politics & Society* 38, no. 4 (2010): 435–57.

investment as a share of sector value-added since about 2000 in the United States and Britain.⁶² Third, although firms had been outsourcing labor for several decades, in the wake of the World Trade Agreement of 1995 and the accession of China to it, outsourcing was joined by offshoring, as increasing numbers of firms began to move production abroad into global value chains. New developments in ICT made these global value chains much more feasible, and their rise changed the ways that many firms produced what they sold. In short major changes in technology and new developments in the international economy transformed the ways in which many firms created value, the types of workers they sought, and the investments they made, with significant consequences for how economic growth is generated and distributed—defining features of a growth regime.

The products of a revolution in ICT began to find business applications during the 1980s. But the volume of email in the United States did not exceed that of postal mail until 1996, and only toward the end of the century did the competitive advantage of many firms come to depend on how effectively they made use of this technology. By 2016, however, almost 80 percent of large enterprises in the Organisation for Economic Co-operation and Development (OECD) were using software to plan their operations or manage their resources; almost a quarter of the sales of large firms stemmed from e-commerce; and 40 percent of the development costs of a new automobile were software related.⁶³ In this context, information about the preferences of customers, the performance of employees, the use made of products, and the operations of suppliers became increasingly abundant and valuable assets, and the capacities to gather and monetize that information became key components of a firm's core competencies. Walmart, for instance, connects the activities of its 245 million customers to its logistics chain at the rate of a million transactions per hour.⁶⁴

These new flows of information inspired many manufacturers to bundle services with their products, as an important source of value added. As the gap between the cost of using robots and labor halved

⁶² Jonathan Haskel and Stian Westlake, *Capitalism without Capital* (Princeton, 2018), 24–25. For a view putting more emphasis on firm structure and intellectual property rights, see Herman Mark Schwartz, “From Fordism to Franchise: Intellectual Property Rights and Growth Models in the Knowledge Economy,” in Baccaro, Blyth, and Pontusson, *Diminishing Returns*, pp. 74–97.

⁶³ Organisation for Economic Co-operation and Development (OECD), *Data Driven Innovation: Big Data for Growth and Well-Being* (Paris, 2015), 28; OECD, *OECD Digital Economy Outlook 2017* (Paris, 2017); OECD, *Supporting Investment in Knowledge, Capital, Growth and Innovation* (Paris, 2013), 26.

⁶⁴ Cédric Durand and William Milberg, “Intellectual Monopoly in Global Value Chains” (Working Paper, Department of Economics, New School for Social Research, July 2018), 27.

between 1990 and 2015, other firms substituted capital for labor. The number of employees in U.S. manufacturing fell by five million over these years, even though the value of manufacturing output increased by about a third.⁶⁵ For providers of software and some services, network effects yielded large economies of scale that often translated into first-mover advantages. The first disk of the Windows 95 operating system cost \$250 million to develop, but subsequent disks cost virtually nothing to produce.⁶⁶ The new technologies shifted the ways that many firms operated, and they brought new types of firms to the fore, including platform firms matching suppliers of goods or services with buyers, such as Amazon, eBay, Upwork, and Google. On some estimates, platform firms accounted for 31 percent of the profits of Western companies in 2015.⁶⁷

Partly to take advantage of the new technologies, many firms shifted their use of capital away from tangible investment in physical assets toward investment in intangibles, including patenting, trademarking, marketing, research, and firm organization. This trend is most obvious within the platform economy. The American hospitality industry, for instance, relies on \$340 billion of physical assets like hotels, while its recent competitor, Airbnb, can leverage \$17 trillion in residential assets without owning any of them.⁶⁸ Since innovation drives the appeal of many products, patents have also become a more important preoccupation for companies, and investments in branding have become more important to commercial success now that consumers no longer depend on local availability and can choose from a wide array of products on the Internet. Across the globe, the number of inventions and industrial designs that were filed for patent protection tripled between 2001 and 2015, while the number of trademark applications doubled.⁶⁹ Between 2000 and 2014, income from intangible investments increased by 75 percent in real terms.⁷⁰

⁶⁵ McKinsey Global Institute, *Playing to Win: The New Global Competition for Corporate Profits* (London, 2015); Stephen J. Rose, "Manufacturing Employment: Fact and Fiction" (Urban Institute, Washington, DC, Apr. 2018).

⁶⁶ David J. Teece, "Strategies for Managing Knowledge Assets: The Role of Firm Structure and Industrial Context," *Long Range Planning* 33, no. 1 (2000): 35–54.

⁶⁷ McKinsey Global Institute, *Playing to Win*.

⁶⁸ McKinsey Global Institute.

⁶⁹ Durand and Milberg, "Intellectual Monopoly," 10; Schwartz, "From Fordism to Franchise."

⁷⁰ Leonard I. Nakamura, "Intangible Assets and National Income Accounting: Measuring a Scientific Revolution" (Working Paper 09-11, Federal Reserve Bank of Philadelphia, May 2009), fig. 2; Haskel and Westlake, *Capitalism without Capital*, 26; Bart van Ark, Janet X. Hao, Carol Corrado, and Charles Hulton, "Measuring Intangible Capital and Its Contribution to Economic Growth in Europe" (EIB Papers 3/2009, European Investment Bank, Economics Department, 2009), 70.

Some of this investment has gone into the sophisticated technology required to manage global value chains. A successor to the vertical integration of earlier decades, these transnational supply chains reflect the efforts of companies refocused on their core competencies to source many components of their products, and in some cases services, from firms in other countries.⁷¹ The components of some products now pass through several borders before final assembly and sale. Global value chains expanded exponentially during the early 2000s to take advantage of new supplies of labor and expertise in emerging economies, and the capacity to manage such chains has become a key competency of many companies. One study found that the share of foreign value added in these supply chains rose by 75 percent between 1995 and 2008.⁷² Moreover, as firms built up their global value chains, investment shifted from the domestic to the international sphere. Between 1990 and 2010, gross fixed capital formation in the high-income countries declined from about 23 percent to 20 percent of GDP, but foreign direct investment out of those countries rose dramatically—from about 10 percent to 30 percent of GDP in the United States and Germany, and from 20 percent to 60 percent of GDP in Britain and France.⁷³

The concomitant of global value chains has been a large increase in the offshoring of jobs, which compounds the social effects of domestic outsourcing. It is difficult to estimate the total number of jobs offshored but indicative that, between 1990 and 2008, the United States added 26.7 million jobs in non-tradeable sectors but only 600,000 new jobs in industries producing tradeable goods and services.⁷⁴ Firms deploying a wide range of strategies could find profitable niches in these value chains.⁷⁵ As a consequence, however, some domestic firms have relatively few domestic employees. In 2012, for instance, Apple, the world's most valuable publicly traded company, had about 43,000 American employees, with about 30,000 working in its retail stores, but it relied on more than 730,000 workers in other countries to manufacture

⁷¹ For a highly insightful overview, see Suzanne Berger, *How We Compete* (New York, 2005).

⁷² Marcel P. Timmer, Abdul Azeez Erumban, Bart Los, Robert Stehrer, and Gaaitzen J. de Vries, "Slicing Up Global Value Chains," *Journal of Economic Perspectives* 28, no. 2 (2014): 99–118; see also William Milberg and Deborah Winkler, *Outsourcing Economics: Global Value Chains in Capitalist Development* (New York, 2013).

⁷³ Cédric Durand and Maxime Gueuder, "The Profit-Investment Nexus in an Era of Financialisation, Globalisation and Monopolisation: A Profit-Centered Perspective," *Review of Political Economy* 30, no. 2 (2018): 140.

⁷⁴ Michael Spence and Sandile Hlatshwayo, "The Evolving Structure of the American Economy and the Employment Challenge" (Council on Foreign Relations Working Paper, Mar. 2011).

⁷⁵ Berger, *How We Compete*.

its products.⁷⁶ One study estimated that, by 2007, about 12 percent of American firms were “factoryless” producers, selling their products in the United States but without any manufacturing facilities in the country.⁷⁷

In the first instance, these shifts in firm strategy were stimulated by new technologies and regime transitions that doubled the global labor supply available to capitalist companies.⁷⁸ But governments are gradually offering support for the new growth regime, even if wide cross-national variation exists in the levels of such support. Three types of government policies have been especially important in the transition to this new growth regime. These include efforts to increase the sources of finance for innovation, the establishment of new trade regimes, including expanded protection for intellectual property rights, and the reorientation of social policy toward social investment, especially in tertiary education.

Some of the relevant policies date from the 1980s. Public subsidies to the U.S. defense industry were instrumental to many of the innovations fueling the new knowledge economy, and many governments have recently increased public funding for research and development.⁷⁹ However, many regulatory reforms have also been designed to increase private investment in it. The Bayh-Dole Act of 1980 allowed American researchers to patent inventions made with federal funds that were previously considered government property. The U.S. Congress established a new appeals court to streamline the enforcement of intellectual property rights (IPR) claims and, in several steps, expanded the types of innovations subject to patent, including a 1998 move to allow business models involving automated processes to be patented. The American venture capital industry benefited from a regulatory change in 1984 that allowed the listing of loss-making firms on the NASDAQ exchange provided they had high levels of intangible capital.⁸⁰ Shortly thereafter, the German government experimented with a new stock exchange designed to stimulate innovation, and during the 1990s, French governments made serious efforts to increase the availability of venture capital

⁷⁶ Weil, *Fissured Workplace*, 173.

⁷⁷ Andrew B. Bernard and Teresa C. Fort, “Measuring the Multinational Economy: Factoryless Goods Producing Firms,” *American Economic Review Papers and Proceedings* 105, no. 5 (2015): 518–23.

⁷⁸ Richard Freeman, “The Challenge of the Growing Globalization of Labor Markets to Economic and Social Policy,” in *Global Capitalism Unbound*, ed. Eva Paus (London, 2007), 23–40.

⁷⁹ Fred Block, *State of Innovation: The US Government’s Role in Technology Development* (New York, 2011); Mariana Mazzucato, *The Entrepreneurial State* (London, 2013).

⁸⁰ See Benjamin Coriat and Olivier Weinstein, “Patent Regimes, Firms and the Commodification of Knowledge,” *Socio-Economic Review* 10, no. 2 (2012): 267–92.

and facilitate the formation of new enterprises.⁸¹ In Sweden, regional development funds were turned into venture capital funds, and trade unions and employers were enlisted in joint efforts to stimulate high-tech industry.⁸²

On the international level, the negotiation of new trade agreements proved crucial for the formation of global value chains. The 1994 North American Free Trade Agreement, the expansion of the European Single Market toward the east in the 1990s, and the end of the Agreement on Textiles and Clothing in 2005 were important steps. Moreover, these trade agreements had new features especially enabling for the development of global value chains. While reducing barriers to trade, many of them created new protections for the intellectual property shared within such chains. The World Trade Agreement of 1995 and the admission of China to it in 2001 were landmark steps. The adjunct to the World Trade Organization (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) subjected IPR to effective international dispute settlement for the first time, and hundreds of bilateral investment treaties (BITS) that followed stiffened those protections.⁸³

Across the developed democracies, policymakers have also taken important initiatives to improve the skills of the labor force to meet the demands of firms for more highly skilled labor in this new knowledge economy and to offset the adverse effects on employment of skill-based technological change. The principal approach of most governments has been to increase enrollments in tertiary education. Between 2000 and 2014, the proportion of young Europeans in tertiary education rose dramatically, from 39 percent to 62 percent. However, this is part of a wider reorientation of social policy, notably in northern Europe, away from an emphasis on income maintenance for the unemployed or retired toward “social investment” in human capital designed to respond to the needs of a knowledge economy.⁸⁴ Some countries, such as Sweden, mounted ambitious programs of continuing education, and many of the continental countries that rely on vocational training have

⁸¹ Steven Casper, *Creating Silicon Valley in Europe* (Oxford, 2007); Gunnar Trumbull, *Silicon and the State: French Innovation Policy in the Internet Age* (Washington, DC, 2004).

⁸² Gerhard Schnyder, “Like a Phoenix from the Ashes? Reassessing the Transformation of the Swedish Political Economy since the 1970s,” *Journal of European Public Policy* 19, no. 8 (2012): 1126–45; Darius Ornston, *When Small States Make Big Leaps: Institutional Innovation and High-Tech Competition in Western Europe* (Ithaca, 2012).

⁸³ Herman Mark Schwartz, “American Hegemony, Intellectual Property Rights, Dollar Centrality and Infrastructural Power,” *Review of International Political Economy* 26 (2019): 490–519; Durand and Milberg, “Intellectual Monopoly.”

⁸⁴ Natalie Morel, Bruno Palier, and Joakim Palme, eds., *Towards a Social Investment Welfare State* (Bristol, 2012); Anton Hemerijck. *Changing Welfare States* (Oxford, 2013).

reformed their training schemes to impart higher levels of the more general skills required by a knowledge economy.⁸⁵

In short, although the governments of some developed democracies have moved more aggressively than others to provide policies supportive of firm strategies in this era, most are moving in that direction; and the combination of firm practices and reinforcing public policies is distinctive enough to constitute a new growth regime.

The Importance of Growth Regimes

If growth regimes had few significant consequences for the people living through them, this account would be of purely antiquarian interest. But the firm strategies and government policies that combine to form growth regimes inflect capitalism in terms that profoundly affect the distribution of well-being as well as economic growth. The growth regime of the era of modernization promoted rapid economic growth, but it also ensured that more than 60 percent of national income in the developed political economies went to labor and reduced income inequality to the lowest levels it was to see in a century.⁸⁶ Employment became increasingly secure and prosperity spread geographically, as industries moved to smaller towns and cities.⁸⁷ The expansion of white-collar employment shifted the occupational structure in ways that increased social mobility.⁸⁸ This was not a perfect society. Pockets of poverty remained, and opportunities were more limited for women than for men, but an expanding social safety net supported people without employment and the fruits of economic prosperity were widely shared.

By contrast, the growth regime of the era of liberalization shrank the labor share and increased levels of income inequality, especially at the top of the income distribution in Anglo-American economies, as managerial salaries increased more rapidly than those of production workers and rising returns to financial assets privileged people with access to them.⁸⁹ Employment security declined for large swaths of the population, and outsourcing trapped many people in low-wage

⁸⁵ Marius Busemeyer and Christine Trampusch, eds., *The Political Economy of Collective Skill Formation* (Oxford, 2011).

⁸⁶ Eichengreen, *European Economy*; OECD, *The Labour Share in G-20 Economies* (Paris, 2015); Piketty, *Capital*.

⁸⁷ Joan R. Rosés and Nikolaus Wolf, "Regional Economic Development in Europe, 1900–2010" (Working Paper 218, Department of Economic History, London School of Economics, Mar. 2018).

⁸⁸ Robert Erikson and John H. Goldthorpe, *The Constant Flux: A Study of Class Mobility in Industrial Societies* (Oxford, 1992).

⁸⁹ Piketty, *Capital*.

secondary labor markets. In some countries, the prospects for social mobility declined with each successive cohort entering the labor force after 1980.⁹⁰ Slower rates of economic growth, which cannot be ascribed entirely to the growth regime, contributed to some of these outcomes. However, many of these distributive consequences were linked to changes in firm strategies and government policies.⁹¹

The era of knowledge-based growth has brought further dislocation, as technological revolutions do.⁹² The rapid offshoring of manufacturing jobs has polarized the occupational structure, eliminating many middle-skill jobs that were once stepping-stones to social mobility. Forty percent of workers in Europe are now employed in nonstandard work.⁹³ The movement of skilled jobs in high technology to urban clusters has exacerbated regional disparities in income and employment.⁹⁴ The turn toward social investment has improved the lives of working women and expanded educational opportunities for some young people, but it has done so on a far from equal basis and at the cost of tying social benefits for many to work in low-wage labor markets.⁹⁵ Although competition policies are gradually responding, the economies of scale and network effects associated with new technology have generated monopoly rents, especially for firms at the apex of global value chains, increasing interfirm inequalities in profits and wages.⁹⁶

However, some of the most notable, if less noted, consequences of growth regimes are political. The institutions of the postwar growth regime consolidated a political compromise between the organizations

⁹⁰ European Commission, *Ten Trends Shaping the Future of Work in Europe* (Brussels, 2019); Raj Chetty, David Grusky, Maximilian Hell, Nathaniel Hendren, Robert Manduca, and Jimmy Narang, "The Fading American Dream: Trends in Absolute Income Mobility since 1940," *Science*, 28 Apr. 2017, 398–406.

⁹¹ Weil, *Fissured Workplace*; Capelli et al., *Change at Work*; Werner Eichhorst and Paul Marx, eds., *Non-Standard Employment in Post-Industrial Labour Markets* (Cheltenham, 2015).

⁹² See Carles Boix, *Democratic Capitalism at the Crossroads: Technological Change and the Future of Politics* (Princeton, 2019).

⁹³ David H. Autor and David Dorn, "The Growth of Low-Skill Service Jobs and the Polarization of the US Labor Market," *American Economic Review* 103, no. 5 (2013): 1553–97; Maarten Goos, Alan Manning, and Anna Salomons, "Explaining Job Polarization: Routine-Biased Technological Change and Offshoring," *American Economic Review* 104, no. 8 (2014): 2509–26; European Commission, *Ten Trends*, 4.

⁹⁴ Enrico Moretti, *The New Geography of Jobs* (New York, 2012); Michael Storper, *Keys to the City* (Princeton, 2013).

⁹⁵ Giuliano Bonoli, Bea Cantillon, and Wim Van Lancker, "Social Investment and the Matthew Effect," in *The Uses of Social Investment*, ed. Anton Hemerijck (Oxford, 2015), 66–76; David Grusky, Peter A. Hall, and Hazel Markus, "The Rise of Opportunity Markets: How Did It Happen and What Can We Do?," *Daedalus* 148, no. 3 (2019): 19–45.

⁹⁶ Durand and Milberg, "Intellectual Monopoly"; Jason Furman and Peter Orzag, "A Firm-Level Perspective on the Role of Rents in the Rise of Inequality," in *Toward a Just Society*, ed. Martin Guzman (New York, 2018), 19–47.

of the working class, many of which entered the era committed to revolutionary change, and representatives of a middle class initially seeking a laissez-faire economy. The activist economic policies adopted in that era did so by supplying full employment without having to nationalize the means of production.⁹⁷ As that growth regime revived economic growth and reduced class-based inequalities, the result was a centrist politics dominated by mainstream center-left and center-right parties.

This politics was disrupted in the late 1960s by a revolution of rising expectations, which is one of the paradoxes of prosperity, and was then cut short by the economic climacteric of the 1970s, which set in motion a search for alternatives to activist policies that seemed to have failed. This search yielded the policies of a new growth regime oriented to containing inflation and unleashing the productive power of market competition. But those market-oriented policies were rarely endorsed fulsomely by national electorates, and their adverse effects on employment security and incomes rendered the centrist compromise presiding over them increasingly fragile.⁹⁸ Hence, national governments delegated the implementation of many market-oriented policies to independent regulatory agencies, central banks, and the European Commission.⁹⁹ Voter turnout declined, especially among the lower classes bearing the brunt of liberalization, and new challengers began to eat away at the electorate of mainstream parties.¹⁰⁰

Their political vulnerability reached an apex, however, only under the growth regime of the 2000s, as middle-class manufacturing jobs disappeared, spending cuts reduced public services, and regional disparities increased. A new technological revolution disorganized politics as well as the economy, opening the door to a populist revolt led by radical parties in Europe and populist politicians in the Anglo-American democracies. That backlash has not yet altered the firm practices of the new growth regime, but it is calling into question the ability of many governments to support those practices, as populist politicians call for new forms of trade protection and old forms of social protection.¹⁰¹ The proximate

⁹⁷ Adam Przeworski and Michael Wallerstein, "Democratic Capitalism at the Crossroads," *Democracy* 2 (1982): 52–68; Claus Offe, "Competitive Party Democracy and the Keynesian Welfare State: Factors of Stability and Disorganization," *Policy Sciences* 15 (1983): 225–46.

⁹⁸ Hall, "Electoral Politics."

⁹⁹ Jonathan Hopkin and Mark Blyth, "The Global Economics of European Populism: Growth Regimes and Party System Change in Europe," *Government and Opposition* 54, no. 2 (2019): 193–225.

¹⁰⁰ Hans-Peter Kriesi, Edgar Grande, Romain Lachat, Martin Dolezal, Simon Bornschie, and Timotheos Frey, eds., *West European Politics in the Age of Globalization* (Cambridge, U.K., 2008); Cas Mudde, *Populist Radical Right Parties in Europe* (Cambridge, U.K., 2007).

¹⁰¹ Menno Fenger, "The Social Policy Agendas of Radical Right Populist Parties in Comparative Perspective," *Journal of International and Comparative Social Policy* 34, no. 3 (2018): 188–209.

path forward is unusually open: techno-optimists and techno-pessimists now have their political counterparts.¹⁰²

The sinuous route that capitalism takes across history is never easily divided into stages, and this article offers only one way of doing so. However, this view of growth regimes has the advantage of focusing on the two types of organizations—firms and governments—most responsible for distributing well-being and responding to the shocks buffeting capitalist economies. By emphasizing how the practices of firms and governments reinforce each other, it also speaks to the systemic character of capitalism. Firms and governments need not support each other, but *grosso modo* they usually do, and examining how firm practices and government policies interact and move together explains many of the conditions under which people live.

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¹⁰² Cf. Streeck, *How Will Capitalism End*; Torben Iversen and David Soskice, *Democracy and Prosperity: Reinventing Capitalism through a Turbulent Century* (Princeton, 2019).