

The Financialization of the U.S. Corporation: What Has Been Lost, and How It Can Be Regained

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I. INTRODUCTION: WHAT HAPPENED TO ECONOMIC PROSPERITY?

Many of us know what a prosperous economy looks like. People who want to work have no problem finding jobs. People who want to build careers can accumulate the necessary work experience over time. People who want to start their own businesses can tap into sources of committed finance enabling them to get their firms up and running. When the work has been done, careers have been built, and businesses have become going concerns, the prosperous economy yields a distribution of income that most people regard as fair. The prosperous economy has a large and stable middle class, with hard-working and dedicated people finding opportunities to climb up the economic ladder. The intergenerational expectation is that children will do better than their parents. And after several decades of remunerative work, their parents can retire with enough savings to at least remain in the middle class for the rest of their lives.

Many of us know what a prosperous economy looks like because, for people who are old enough to remember, it is what the U.S. economy used to be. For most college-educated people that economy existed as recently as the 1990s, while for most high-school-educated people, it disappeared a decade before that. More generally, the past thirty years or so have seen an unrelenting disappearance of middle-class jobs accom-

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panied by ever-growing economic inequality with an increasingly extreme concentration of income and wealth among a very small number of people at the top. As the Occupy Wall Street movement recognized, the prosperity of the top one percent is antithetical to a prosperous U.S. economy.

As the U.S. economy struggles to recover from the Great Recession, the erosion of middle-class jobs and the explosion of income inequality have endured long enough to raise serious questions about whether the U.S. economy is beset by deep structural problems. My research on the evolution of the U.S. economy over the past half-century shows that this is indeed the case.¹ Since the beginning of the 1980s, employment relations in U.S. industrial corporations have undergone three major structural changes—which I summarize as “rationalization,” “marketization,” and “globalization”—that have permanently eliminated middle-class jobs.² From the early 1980s, rationalization, characterized by plant closings, eliminated the jobs of unionized blue-collar workers. From the early 1990s, marketization, characterized by the end of a career with one company as an employment norm, placed the job security of middle-aged and older white-collar workers in jeopardy. From the early 2000s, globalization, characterized by the movement of employment offshore, left all members of the U.S. labor force, even those with advanced educational credentials and substantial work experience, vulnerable to displacement.

Initially, each of these structural changes in employment could be justified in terms of major changes in industrial conditions related to technologies, markets, and competition. During the onset of the rationalization phase in the early 1980s, the plant closings were a response to the superior productive capabilities of Japanese competitors in consumer durable and related capital goods industries that employed significant numbers of unionized blue-collar workers.³ During the onset of the marketization phase in the early 1990s, the erosion of the one-company-career norm among white-collar workers was a response to the dramatic technological shift from proprietary systems to open systems that was

1. WILLIAM LAZONICK, SUSTAINABLE PROSPERITY IN THE NEW ECONOMY? BUSINESS ORGANIZATION AND HIGH-TECH EMPLOYMENT IN THE UNITED STATES (2009) [hereinafter LAZONICK, SUSTAINABLE PROSPERITY]; William Lazonick, *Innovative Business Models and Varieties of Capitalism: Financialization of the U.S. Corporation*, 84 BUS. HIST. REV. 675 (2010) [hereinafter Lazonick, *Innovative Business*]; William Lazonick, *The New Economy Business Model and the Crisis of U.S. Capitalism*, 4 CAPITALISM & SOC'Y, no. 2, 2009 [hereinafter Lazonick, *New Economy*]; William Lazonick, *The Fragility of the US Economy: The Financialized Corporation and the Disappearing Middle Class*, in THE THIRD GLOBALIZATION: CAN WEALTHY COUNTRIES STAY RICH IN THE TWENTY-FIRST CENTURY? (Dan Breznitz & John Zysman eds., forthcoming) [hereinafter Lazonick, *Fragility*].

2. Lazonick, *Fragility*, *supra* note 1.

3. Lazonick, *Innovative Business*, *supra* note 1, at 675–76.

integral to the microelectronics revolution. Finally, during the onset of the globalization phase in the early 2000s, the acceleration in the off-shore movement of the jobs of well-educated and highly experienced members of the U.S. labor force was a response to the emergence of large supplies of highly capable labor in lower-wage developing nations such as China and India.⁴

Once U.S. corporations adopted these structural changes in employment, however, they often pursued these employment strategies purely for financial gain. Some companies closed manufacturing plants, terminated experienced (and generally more expensive) workers, and offshored production to low-wage areas of the world simply to increase profits, often at the expense of the companies' long-term competitive capabilities and without regard for displaced employees' long years of service. Moreover, as these changes became embedded in the structure of U.S. employment, business corporations failed to invest in new, higher value-added job creation on a sufficient scale to provide a foundation for equitable and stable growth in the U.S. economy.

On the contrary, with superior corporate performance defined as meeting Wall Street's expectations for quarterly earnings per share, companies turned to massive stock repurchases to "manage" their own corporations' stock prices. Trillions of dollars that could have been spent on innovation and job creation in the U.S. economy over the past three decades have instead been used to buy back stock for the purpose of manipulating the company's stock price. This financialized mode of corporate resource allocation has been legitimized by the ideology, itself a product of the 1980s and 1990s, that a business corporation should be run to "maximize shareholder value."⁵ Through their stock-based compensation, corporate executives who make these decisions are themselves prime beneficiaries of this focus on rising stock prices as the measure of corporate performance.

My argument is that the employment problem that the United States now faces is largely structural. But the structural problem is not a labor-market mismatch between the skills that prospective employers want and the skills that potential workers have, as many economists have argued.⁶ Nor is the problem automation.⁷ Rather, the employment problem stems

4. LAZONICK, SUSTAINABLE PROSPERITY, *supra* note 1, at 149–95.

5. William Lazonick & Mary O'Sullivan, *Maximizing Shareholder Value: A New Ideology for Corporate Governance*, 29 *ECON. & SOC'Y* 13, 14 (2000); Lazonick, *Fragility*, *supra* note 1.

6. *See, e.g.*, Marcello Estevão & Evridiki Tsounta, *Has the Great Recession Raised U.S. Structural Unemployment?* (IMF Working Paper No. 11/105, 2011), available at <http://www.imf.org/external/pubs/ft/wp/2011/wp11105.pdf>.

7. *See* ERIK BRYNJOLFSSON & ANDREW MCAFEE, *RACE AGAINST THE MACHINE: HOW THE DIGITAL REVOLUTION IS ACCELERATING INNOVATION, DRIVING PRODUCTIVITY AND IRREVERSIBLY*

from changes in the ways that U.S. corporations employ workers as a result of rationalization, marketization, and globalization. Nevertheless, the disappearance of previously existing middle-class jobs does not explain why, in a world of technological change, U.S. business corporations have failed to use their substantial profits to invest in new rounds of innovation that can create new high value-added jobs to replace those that have been lost. I attribute that organizational failure to the financialization of the U.S. corporation.

In Part II, I review evidence showing fundamental structural changes that, since the early 1980s, have eroded U.S. middle-class employment opportunities. Then, in Part III, I present evidence that, over the same period, the remuneration of top executives of both industrial and financial corporations has been a major reason for the increasing concentration of income at the top. Part IV discusses the emergence of stock buybacks as a massive and systemic way in which these corporate executives seek to boost their companies' stock prices, and hence, via stock-based compensation, their own incomes. This Part further identifies how, in many different ways and in many different industries, this financialized mode of corporate resource allocation has undermined the prosperity of the U.S. economy. Finally, I conclude in Part V by identifying the types of changes in the institutional and ideological environment of the United States that are needed to put the nation back on a path to sustainable prosperity.

II. THE DISAPPEARANCE OF MIDDLE-CLASS JOBS

During the post-World War II decades, for both blue-collar and white-collar workers, the norm in large, established U.S. business corporations was career employment with one company. When layoffs occurred, they tended to be temporary and, in unionized workplaces, on a last-hired, first-fired basis. Supported by a highly progressive income tax system, countercyclical government fiscal policy sought to reduce the severity of business fluctuations, while employment generated by ongoing government spending, particularly on higher education, healthcare, advanced technology, and physical infrastructure (for example, the interstate highway system), complemented the employment opportunities provided by the business sector.⁸ The result was relatively equitable and

TRANSFORMING EMPLOYMENT AND THE ECONOMY (2011). For a critique of this view, see William Lazonick, *Robots Don't Destroy Jobs, Rapacious Corporate Executives Do*, ALTERNET (Dec. 31, 2012), <http://www.alternet.org/economy/robots-dont-destroy-jobs-rapacious-corporate-executives-do>.

8. LAZONICK, SUSTAINABLE PROSPERITY, *supra* note 1, at 1–38.

stable economic growth from the late 1940s to the beginning of the 1970s.⁹

From the late 1970s, however, in industries that had been central to U.S. innovation, employment, and growth, U.S. corporations faced formidable Japanese competition.¹⁰ The Japanese challenge came in industries such as automobiles, consumer electronics, machine tools, steel, and microelectronics in which the United States had been a world leader.¹¹ The critical source of Japan's competitive advantage over the United States was "organizational integration": through the hierarchical integration of shop-floor workers and the functional integration of technical specialists into processes of organizational learning, the Japanese perfected, and outcompeted, the U.S. "Old Economy" business model.¹² Even though unionized blue-collar workers in the United States had a high degree of job security in the post-World War II decades, they had historically been excluded from the processes of organizational learning within the corporation, reflecting a uniquely American hierarchical segmentation between "management" and "labor."¹³

In sharp contrast, the hierarchical integration of shop-floor workers into the organizational learning processes that generated higher quality, lower cost products was the prime source of Japanese competitive advantage. Complementing this hierarchical integration, the collaboration of Japanese technical specialists in solving productivity problems in manufacturing encouraged the functional integration of their skills and efforts, again in contrast to the relatively high degree of functional segmentation of technical specialists in the United States.¹⁴ In sum, it was a more powerful system of organizational learning that enabled the Japanese to outcompete the Americans.

The particular impacts of Japanese competition varied markedly across U.S. industries. It virtually wiped out the U.S.-based consumer electronics industry. For example, in 1981, RCA was one of the leading consumer electronics companies in the world and the forty-fourth largest U.S. industrial company by revenues with 119,000 employees.¹⁵ By 1986, it had been taken over by General Electric and sold off in pieces.¹⁶ During the 1980s, U.S. automobile manufacturers attempted to learn from

9. *Id.* at 1–38, 81–113.

10. Lazonick, *Innovative Business*, *supra* note 1, at 677.

11. *Id.*

12. *Id.* at 684.

13. WILLIAM LAZONICK, *COMPETITIVE ADVANTAGE OF THE SHOP FLOOR* (1990).

14. Lazonick, *Innovative Business*, *supra* note 1, at 683.

15. ALFRED D. CHANDLER, JR., *INVENTING THE ELECTRONIC CENTURY: THE EPIC STORY OF THE CONSUMER ELECTRONICS AND COMPUTER INDUSTRIES* 13–49 (Free Press ed. 2001).

16. *Id.*

the Japanese, but three decades later, the U.S. companies were still producing lower quality, higher cost cars and, not surprisingly, had lost significant market share.¹⁷

In the machine-tool industry, the overwhelming success of the Japanese against the major U.S. companies was followed in the 1990s by the emergence of export-oriented, small- and medium-sized enterprises producing for specialized niche markets.¹⁸ In the steel industry, the innovative response of the United States was the emergence of minimills, using electric arc furnaces and scrap metal, as distinct from the traditional vertically integrated mills that converted iron ore into crude steel before making finished products. In the 1980s, the minimills only had the technological capability to manufacture long products such as bars and rails, but, led by Nucor, the introduction of compact strip-production technology in 1989 enabled the minimills to compete with integrated mills in flat products such as plates and sheets as well.¹⁹

The most perilous, but ultimately successful, U.S. response to Japanese competition was in the semiconductor industry. By the middle of the 1980s, the Japanese had used their integrated skill bases to lower defects and raise yields in the production of memory chips. This development forced major U.S. semiconductor companies to retreat from this segment of the market, with Intel facing the possibility of bankruptcy in the process.²⁰ Led by Intel with its microprocessor for the IBM PC and its clones, U.S. companies became world leaders in chip design. Indeed, the IBM PC, with its open-systems architecture, was the basis for the rise of a “New Economy business model” with rationalization, marketization, and globalization of employment in its DNA.²¹

The adverse impact of Japanese competition on U.S. employment became particularly harsh in the double-dip recession of 1980–1982 when large numbers of blue-collar jobs permanently disappeared from

17. MICHAELA D. PLATZER & GLENNON J. HARRISON, CONG. RESEARCH SERV., R40746, THE U.S. AUTOMOTIVE INDUSTRY: NATIONAL AND STATE TRENDS IN MANUFACTURING EMPLOYMENT (2009), available at http://digitalcommons.ilr.cornell.edu/key_workplace/666.

18. Ronald V. Kalafsky & Alan D. MacPherson, *The Competitive Characteristics of U.S. Manufacturers in the Machine Tool Industry*, 19 SMALL BUS. ECON. 355 (2002).

19. Frank Giarrantani et al., *Clusters, Agglomeration, and Economic Development Potential: Empirical Evidence Based on the Advent of Slab Casting by U.S. Steel Minimills*, 21 ECON. DEV. Q. 148 (2007).

20. Robert A. Burgelman, *Fading Memories: A Process Theory of Strategic Business Exit in Dynamic Environments*, 39 ADMIN. SCI. Q. 24 (1994); Daniel I. Okimoto & Yoshio Nishi, *R&D Organization in Japanese and American Semiconductor Firms*, in THE JAPANESE FIRM: THE SOURCES OF COMPETITIVE STRENGTH 178 (Masahiko Aoki & Ronald Dore eds., 1994).

21. LAZONICK, SUSTAINABLE PROSPERITY, *supra* note 1; Lazonick, *New Economy*, *supra* note 1.

U.S. industry.²² Previously, in a more stable competitive environment, U.S. manufacturing companies would lay off workers with the least seniority in a downturn and re-employ them when economic conditions improved. In the 1980s, it became commonplace for companies to shutter whole plants.²³ From 1980 to 1985, employment in the U.S. economy increased from 104.5 million to 107.2 million workers, or by 2.6%. But employment of operators, fabricators, and laborers fell from 20 million to 16.8 million, a decline of 15.9%.²⁴

As Daniel Hamermesh summarized, “[e]ach year during the eighties, plant closings in the U.S. displaced roughly one-half million workers with three-plus years on the job.”²⁵ Over the course of the 1980s, the stock market came to react favorably to permanent downsizings of the blue-collar labor force.²⁶ As secure middle-class jobs for high-school-educated blue-collar workers permanently disappeared, there was no commitment on the part of those who managed U.S. industrial corporations, or the Republican administrations that ruled in the 1980s, to invest in the new capabilities and opportunities required to upgrade the quality, and expand the quantity, of well-paid employment opportunities in the United States on a scale sufficient to reestablish conditions of prosperity for displaced members of the labor force.

Among blue-collar workers, African-Americans were extremely hard hit by the rationalization of employment in the 1980s. They were overrepresented in the manufacturing sectors of the Old Economy, such as steel, autos, and consumer electronics, and underrepresented in the rising sectors of the New Economy, sectors related to the microelectronics revolution. Besides losing jobs when plants were closed, many blacks had recently moved into unionized jobs, so that when some workers in an establishment were laid off, blacks were more likely to have been the last hired and hence were the first fired.²⁷ As William Julius Wilson argued,

22. Robert W. Bednarzik, *Layoffs and Permanent Job Losses: Workers' Traits and Cyclical Patterns*, 106 MONTHLY LAB. REV. 3 (1983).

23. Daniel S. Hamermesh, *What Do We Know About Worker Displacement in the U.S.?*, 28 INDUS. REL. 51 (1989); Candee S. Harris, *The Magnitude of Job Loss from Plant Closings and the Generation of Replacement Jobs: Some Recent Evidence*, 475 ANNALS AM. ACAD. POL. & SOC. SCI. 15 (1984).

24. U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES: 1984, at 416 (1984) [hereinafter 1984 STATISTICAL ABSTRACT]; U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES: 1987 (1987) [hereinafter 1987 STATISTICAL ABSTRACT].

25. Hamermesh, *supra* note 23.

26. John M. Abowd et al., *The Effects of Human Resource Management Decisions on Shareholder Value*, 43 INDUS. & LAB. REL. REV. 203S (1990); Palmon Oded et al., *Layoff Announcements: Stock Market Impact and Financial Performance*, 26 FIN. MGMT. 54 (1997).

27. See Robert W. Fairlie & Lori G. Kletzer, *Jobs Lost, Jobs Regained: An Analysis of Black/White Differences in Job Displacement in the 1980s*, 37 INDUS. REL. 460 (1998); Lori G. Kletzer, *Job Displacement, 1979–1986: How Blacks Fared Relative to Whites*, 114 MONTHLY LAB.

the disappearance of these middle-class jobs had devastating impacts on the abilities and incentives of blacks to accumulate the education and experience required to position themselves for the types of well-paid and stable employment opportunities that remained.²⁸

In historical retrospect, we now know that the recoveries that followed the recessions of 1990–1991, 2001, and 2007–2009 were “jobless.” Technically, the recovery from the recessionary conditions of 1980–1982 was not “jobless” because employment opportunities created by the microelectronics boom in the first half of the 1980s offset the joblessness that remained in the traditional manufacturing sector as the U.S. economy began to grow. For example, from 1980 to 1985, employment of mathematical and computer engineers increased from 330,000 to 571,000, or by 73%, and employment of computer programmers increased from 318,000 to 534,000, or by 67.9%.²⁹ In the expansion of 1983–1985, however, workers in traditional manufacturing industries, who typically held only high school diplomas, experienced the first of four jobless recoveries of the last three decades.

As for the New Economy, the recovery from the recession of 1980–1982 saw the emergence of the Wintel architecture around the IBM PC.³⁰ In 1982, IBM’s PC sales were \$500 million. Just two years later, sales had soared to eleven times that amount—more than triple the 1984 revenues of Apple, its nearest competitor, and about equal to the revenues of IBM’s top eight rivals. Subsequently, the very success of the IBM PC, combined with open access to the Microsoft operating system and the Intel microprocessor, meant that, in the last half of the 1980s and beyond, IBM lost market share to lower priced PC clones produced by New Economy companies such as Compaq, Gateway, and Dell.³¹ Competition based on open systems had become the norm.³²

With the microelectronics revolution of the 1980s, New Economy companies in the information and communication technology (ICT) industries found themselves in competition for professional, technical, and administrative labor with Old Economy ICT companies such as Hewlett-Packard, IBM, Motorola, Texas Instruments, and Xerox that, in the

REV. 17 (1991); Rochelle Sharpe, *Unequal Opportunity: Losing Ground on the Employment Front*, WALL ST. J., Sept. 14, 1991, at A1.

28. William Julius Wilson, *When Work Disappears*, 111 POL. SCI. Q. 567 (1996–97).

29. 1984 STATISTICAL ABSTRACT, *supra* note 24, at 416; 1987 STATISTICAL ABSTRACT, *supra* note 24, at 385.

30. Michael Borrus & John Zysman, *Wintelism and the Changing Terms of Global Competition: Prototype of the Future?* (Univ. of Cal. Berkeley, Berkeley Roundtable on the Int’l Econ., Working Paper No. 96B, 1997), available at <http://brie.berkeley.edu/publications/WP%2096B.pdf>.

31. CHANDLER, *supra* note 15, at 118–19, 142–43.

32. HENRY CHESBROUGH, *OPEN INNOVATION: THE NEW IMPERATIVE FOR CREATING AND PROFITING FROM TECHNOLOGY* (2006).

1980s, still offered employees the realistic prospect of a career with one company.³³ As young firms facing a highly uncertain future, New Economy companies could not attract labor away from Old Economy companies by promises of career employment. Instead, the New Economy startups used the inducement of employee stock options to attract and retain employees—very high proportions of whom were college-educated. As the successful New Economy companies grew large, most, if not all, employees were partially compensated in stock options. For example, Cisco Systems had 250 employees in 1990, the year in which it became publicly traded. After it had come to dominate the Internet router market a decade later, it had over 34,000 employees, virtually all of whom received stock options.³⁴

So that stock options would perform a retention function as well as an attraction function, the practice evolved in New Economy firms of making option grants annually, with the vesting period for any annual block of option grants being 25% of the grants at the end of each of the first four years after the grant date. Once the options are vested, they can typically be exercised for a period of ten years from the grant date, so long as one remains with the company. Without creating the Old Economy expectation among employees of lifelong careers with the company, the perpetual pipeline of unvested options functions as a tangible retention mechanism. Indeed, for most employees, the amount of options that an individual can expect to receive is tied to his or her position in the firm's hierarchical and functional division of labor, so that the retention function of stock options is integrally related to the employee's career progress within the particular company.³⁵

An Old Economy company valued career employees because they had experience in the development and utilization of the company's proprietary technologies. At many of the leading companies, the corporate R&D lab was the main source of this intellectual property. Investment in new products and processes was often done on military contracts, with the adaptation of the technologies to commercial production as process technologies improved and potential unit costs declined. As Old Economy companies passed on some of their productivity gains to their employees in the forms of higher wages, they supported the growth of domestic mass markets on which they could attain high capacity utilization

33. LAZONICK, SUSTAINABLE PROSPERITY, *supra* note 1, at 81–113.

34. *Id.* at 39–79.

35. *Id.* at 39–79, 115–47.

of their existing productive capabilities and for which they could develop new products.³⁶

The recession and recovery of the early 1990s witnessed the marketization of the employment relation and marked the beginning of the end of the career-with-one-company norm. Although in absolute terms, blue-collar workers suffered more unemployment than white-collar workers during this recession, the extent to which professional, technical, and administrative employees were terminated was unprecedented in the post-World War II decades; hence the downturn of 1990–1991 became known as the “white collar recession.”³⁷ Increasingly over the course of the 1990s, including during the Internet boom in the second half of the decade, the career-long employment security that people in their forties and fifties had come to expect under the Old Economy business model vanished as employers replaced more expensive older workers with less expensive younger workers.³⁸

Given its size, reputation, and central position in the ICT industries, the dramatic changes at IBM in the early 1990s marked a fundamental juncture in the transition from employment security to employment insecurity in the U.S. corporate economy. Through the 1980s, IBM touted its practice of “lifelong employment” as a source of its competitive success.³⁹ From 1990 to 1994, however, IBM cut employment from 373,816 to 219,839, reducing its labor force to only 59% of its year-end 1990 level.⁴⁰ During this period, much of IBM’s downsizing was accomplished by making it attractive for its employees to accept voluntary severance packages, including early retirement at age fifty-five.⁴¹ But in 1993 and 1994, after recruiting CEO Louis V. Gerstner, Jr. from RJR Nabisco, many thousands of IBM employees were fired outright.⁴² In 1995, IBM rescinded the early-retirement offer that had helped downsize its labor force.⁴³ The offer had accomplished its purpose, and in any case, IBM no

36. *Id.* at 81–113; William Lazonick, *Alfred Chandler’s Managerial Revolution: Developing and Utilizing Productive Resources*, in *MANAGEMENT INNOVATION: ESSAYS IN THE SPIRIT OF ALFRED D. CHANDLER, JR.* 3 (William Lazonick & David J. Teece eds., 2012).

37. Randall W. Eberts & Erica L. Groshen, *Is This Really a ‘White-Collar Recession’?*, *ECON. COMMENT.*, Mar. 15, 1991; Jennifer M. Gardner, *The 1990–91 Recession: How Bad Was the Labor Market?*, 117 *MONTHLY LAB. REV.* 3 (1994).

38. LAZONICK, *SUSTAINABLE PROSPERITY*, *supra* note 1, at 81–113, 249–79.

39. See Joel Kotkin, *Is IBM Good for America?*, *WASH. POST*, Oct. 6, 1985; see also THOMAS J. WATSON, JR., & PETER PETRE, *FATHER, SON, AND COMPANY: MY LIFE AT IBM AND BEYOND* 288–89 (1990).

40. LAZONICK, *SUSTAINABLE PROSPERITY*, *supra* note 1, at 85.

41. *Id.*

42. *Id.* at 85–87.

43. *Id.* at 89

longer wanted to encourage all employees to remain with the company even until the age of fifty-five.⁴⁴

Of IBM's losses of \$15.9 billion in 1991–1993 (including an \$8.1 billion deficit in 1993, the largest annual loss in U.S. corporate history at the time), 86% came from workforce-related restructuring charges, including the cost of employee separations and relocations. This loss was, in effect, the cost to the company of ridding itself of its once-hallowed tradition of lifelong employment. Other restructuring charges, mainly for the consolidation of manufacturing capacity and elimination of excess space—both part of the massive downsizing process—amounted to \$10.6 billion over the three years. Ignoring restructuring charges, IBM recorded positive net incomes before taxes of \$939 million in 1991, \$2.619 billion in 1992, and \$148 million in 1993. Although IBM continued to downsize at a torrid pace in 1994, most of the downsizing was done outside the United States and without voluntary severance provisions. During 1994, the company booked no restructuring charges and had after-tax profits of \$3.021 billion. By that time, lifelong employment at IBM was a thing of the past.⁴⁵

In line with the IBM transition, John Abowd and his co-authors found a general shift in U.S. employment from older experienced workers to younger skilled workers from 1992 to 1997 as companies adopted computer technologies.⁴⁶ Using Current Population Survey data, Charles Schultze discovered that “[m]iddle-aged and older men, for whatever reason, are not staying as long with their employers as they once did.”⁴⁷ He went on to show, moreover, that the job displacement rate for white-collar workers relative to blue-collar workers had risen substantially in the 1980s and 1990s, starting at 33% in 1981–1982 and increasing to about 80% in the 1990s. Lori Kletzer wrote in a 1998 survey article on “job displacement,”

Job loss rates fell steadily from the 1981–83 rate, which encompassed the recession of 1981–82, through the expansion period of 1983–89. Job loss rates then rose again in 1989–91 as the economy weakened. The latest job loss figures are surprising. In the midst of a sustained (if uneven) expansion, 1993–95 job loss rates are the highest of the 14-year period: about 15 percent of U.S. workers

44. *Id.*; Ellen E. Schultz, *Pension Cuts 101: Companies Find Subtle Ways to Pare Retirement Benefits*, WALL ST. J., July 27, 2000, at A1.

45. LAZONICK, SUSTAINABLE PROSPERITY, *supra* note 1, at 85–89.

46. John Abowd et al., *Technology and the Demand for Skill: An Analysis of Within and Between Firm Differences* (Nat'l Bureau of Econ. Research, Working Paper No. 13043, 2007), available at <http://www.nber.org/papers/w13043>.

47. Charles L. Schultze, *Downsized & Out: Job Security and American Workers*, 17 BROOKINGS REV. 9, 10 (1999).

were displaced from a job at some time during this three-year period. These high rates of job loss are consistent with public perceptions of rising job insecurity.⁴⁸

In a more recent survey of changes in job security, Henry Farber stated that “[t]here is ample evidence that long-term employment [with one company] is on the decline in the United States.”⁴⁹ Using Current Population Survey data for 1973–2006, Farber found that

mean tenure for males employed in the private sector has declined substantially, particularly for older workers. For example, mean tenure for private sector males at age fifty declined from 13.5 years in the 1973 to 1983 period to 11.3 years in the 1996 to 2008 period. The pattern in the public sector is the opposite. For example, mean tenure for public sector males at age fifty increased from 13.6 years in the 1973 to 1983 period to 15.8 years in the 1996 to 2008 period.⁵⁰

Moreover, it appears that education as a guarantor of employment security weakened significantly from the 1980s to the 2000s. Using Displaced Worker Survey data to analyze rates of job loss, Farber found that

[i]n 1981 to 1983, the private-sector three-year job loss rate was 16 percent for high school graduates and 9.4 percent for college graduates. By 2001 to 2003 (also a period of weak labor markets), the gap had fallen to virtually zero, with a private-sector three-year job loss rate of 10.7 percent for high school graduates and 11 percent for college graduates. Interestingly, the education gap in job loss rates increased in the 2005 to 2007 period with 8.3 and 10.0 percent job loss rates for high school and college graduates, respectively.⁵¹

In the 2000s, globalization joined rationalization and marketization as a source of structural change. In the ICT industries that were central to the growth of the U.S. economy in the 1980s and 1990s, the globalization of employment dated back to the 1960s, when U.S. semiconductor manufacturers had set up assembly and testing facilities in East Asia, making use of low-paid but literate female labor.⁵² Over time, a combination of work experience with multinational and indigenous companies, as well as the return of nationals who had acquired graduate education and work experience abroad, enhanced the capabilities of the Asian labor force to engage in higher value-added activities. By the beginning of the

48. Lori Kletzer, *Job Displacement*, 12 J. ECON. PERSP. 115, 117 (1998).

49. Henry Farber, *Job Loss and the Decline of Job Security in the United States*, in *LABOR IN THE NEW ECONOMY* 223 (Katharine G. Abraham, James R. Spletzer & Michael Harper eds., 2010).

50. *Id.* at 230.

51. *Id.* at 253.

52. LAZONICK, *SUSTAINABLE PROSPERITY*, *supra* note 1, at 149–96.

2000s, Indians had become world leaders in the offshore provision of IT services, while the Chinese had become adept in a wide range of manufacturing industries, especially in ICT. In the 2000s, the availability of capable, college-educated labor supplies in developing economies and high quality, low cost communications networks enabled a vast acceleration of the movement of jobs by U.S. companies to China and India.⁵³

Offshoring depressed U.S. employment in the recession of 2001 and in the subsequent jobless recovery that stretched into 2003. As U.S.-based companies hired workers abroad, well-educated, high-tech workers found themselves vulnerable to displacement.⁵⁴ Given huge increases in the issuance of nonimmigrant (H-1B and L-1) work visas in the United States in the late 1990s and beginning of the 2000s, there were hundreds of thousands of high-tech workers, especially Indians, who had accumulated U.S. work experience that they could now take back home.⁵⁵ In February 2003, after more than a year of jobless recovery, *BusinessWeek* gained considerable attention when its cover blared the rhetorical question: “Is Your Job Next?”⁵⁶ The subtitle read: “A new round of globalization is sending upscale jobs offshore. They include chip design, engineering, basic research—even financial analysis. Can America lose these jobs and still prosper?”⁵⁷

For three decades now, the U.S. economy has been losing unionized blue-collar jobs. As it has turned out, Democratic administrations have been no better than Republican administrations in stanching the

53. RON HIRA & ANIL HIRA, *OUTSOURCING AMERICA: THE TRUE COST OF SHIPPING JOBS OVERSEAS AND WHAT CAN BE DONE ABOUT IT* (rev. ed. 2008); Robert W. Bednarzik, *Restructuring Information Technology: Is Offshoring a Concern?*, MONTHLY LAB. REV., Aug. 2005, at 11, available at <http://www.bls.gov/opub/mlr/2005/08/art2full.pdf>; Susan M. Houseman, *Measuring Offshore Outsourcing and Offshoring: Problems for Economic Statistics*, 16 EMP. RES. NEWSL., Jan. 2009, at 1, available at http://www.upjohninstitute.org/publications/newsletter/snh_109.pdf; Alan S. Blinder, *How Many U.S. Jobs May be Offshorable?* (Ctr. for Econ. Policy Studies, Working Paper No. 142, Mar. 2007), available at <http://www.princeton.edu/~blinder/papers/07ceps142.pdf>; Kate Bronfenbrenner & Stephanie Luce, *The Changing Nature of Corporate Global Restructuring: The Impact of Production Shifts on Jobs In the US, China, and Around the Globe* (Oct. 14, 2004) (unpublished submission to the US-China Economic and Security Review Commission), available at http://www.goiam.org/publications/pdfs/cornell_u_mass_report.pdf.

54. C. Alan Garner, *Offshoring in the Service Sector: Economic Impact and Policy Issues*, ECON. REV., Third Quarter 2004, at 5–37, available at <http://www.kc.frb.org/Publicat/ECONREV/PDF/3Q04garn.pdf>; Bradford J. Jensen & Lori B. Kletzer, *Tradable Services: Understanding the Scope and Impact of Services Outsourcing* (Inst. for Int’l Econ., Working Paper No. 05-9, 2005), available at <http://www.aquapi.iie.com/publications/wp/wp05-9.pdf>.

55. RON HIRA, *BRIDGE TO IMMIGRATION OR CHEAP TEMPORARY LABOR? THE H-1B & L-1 VISA PROGRAMS ARE A SOURCE OF BOTH* (2010), available at <http://www.epi.org/publication/bp257/>.

56. Pete Engardio et al., *The Great Global Job Shift*, BUS. WK. (Feb. 3, 2003), <http://www.businessweek.com/stories/2003-02-02/the-new-global-job-shift>.

57. *Id.*

decline.⁵⁸ In 2012, the U.S. rate of business-sector unionization was 6.6%, having declined steadily from over 15% in 1983.⁵⁹ Since the early 1990s, nonunionized white-collar workers, including professional, technical, and administrative employees who are deemed to be members of “management,” have found that they can no longer expect that they will have a career with one company. The shift to open-systems technologies and the globalization of high-tech jobs have rendered well-educated and highly experienced members of the U.S. labor force vulnerable to loss of employment.

It should be emphasized once again that the displacement of workers from middle-class jobs often has a productive rationale: manufacturing plants may become uncompetitive; recently educated workers may possess more relevant skills than experienced (older) workers; and the productive capabilities of workers in low-wage areas of the world may be on a par with, if not superior to, those of workers in the United States. Nevertheless, once changes in the structure of employment have become widespread for productive reasons, corporations have been known to terminate employees in order to increase short-term profits for the sake of inciting speculative increases in their companies’ stock prices. As documented below, under a regime of financialized corporate resource allocation, the tendency has then been to allocate those extra profits to stock buybacks for the purpose of giving a company’s stock price a manipulative boost.

Unlike the recessions of 1980–1982, 1990–1991, and 2001, the Great Recession of 2008–2009 was a purely financial downturn caused by speculation in, and manipulation of, securities markets by the financial sector of the economy. This speculation and manipulation exploited the fragility of home ownership in an economy that, since the 1980s, had been eliminating the stable and remunerative middle-class jobs that had made home ownership affordable. The jobless recovery that has followed the Great Recession has been far more prolonged than earlier ones. While Wall Street has become, and remains, a gambling casino, the more fundamental fragility of the U.S. economy emanates from the industrial sector. I shall show that, as a general rule, the executives who run U.S. industrial corporations have become focused on creating profits for the sake of higher stock prices rather than creating the high value-added jobs that are the essence of a prosperous economy.

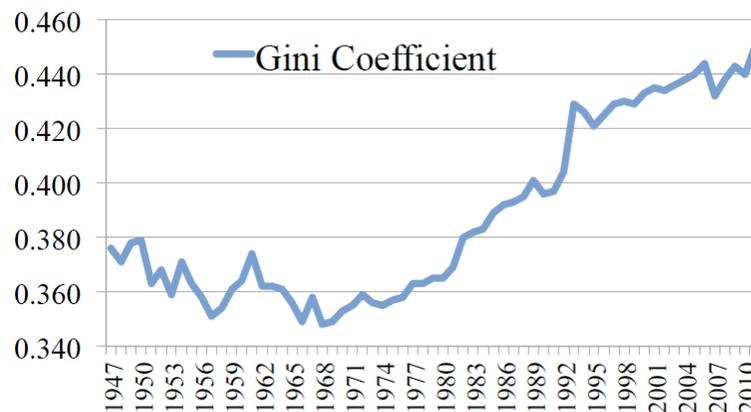
58. LOUIS UCHITELLE, *THE DISPOSABLE AMERICAN: LAYOFFS AND THEIR CONSEQUENCES* 151–77 (2006).

59. Press Release, Bureau of Labor Statistics, Union Members—2012 (Jan. 23, 2013), available at <http://www.bls.gov/news.release/union2.nr0.htm>.

III. CORPORATE EXECUTIVES IN THE TOP 0.1%

In the generally prosperous U.S. economy of the post-World War II decades, there was a movement toward more equality in the distribution of income. As illustrated by the time series for the Gini coefficient in Figure 1, there was then a reversal of this trend in the late 1970s followed by an acceleration in inequality in the early 1980s. Since then, the distribution of income in the United States has become increasingly skewed. As measured by the Gini coefficient, income inequality increased in almost all of the countries in the Organisation for Economic Co-operation and Development (OECD) from the mid-1980s to the late 2000s. In both periods, however, the United States has had the most unequal distribution in the OECD except for Turkey and Mexico.⁶⁰

Figure 1: Gini Coefficient, Income Distribution Among All U.S. Families, 1947–2011⁶¹



The prime drivers of the increase in income inequality in the United States have been the erosion of middle-class employment opportunities and the explosion of income at the very top of the distribution. From 1979 to 2007, real GDP per capita grew by 68.4% in the United States.

60. ORG. FOR ECON. COOPERATION & DEV., GROWING INCOME INEQUALITY IN OECD COUNTRIES: WHAT DRIVES IT AND HOW CAN POLICY TACKLE IT? 6 (2006), available at <http://www.oecd.org/social/socialpoliciesanddata/47723414.pdf>.

61. *Historical Income Tables Families*, U.S. CENSUS BUREAU, at tbl. F-4, <http://www.census.gov/hhes/www/income/data/historical/families/> (last visited Jan. 15, 2013). The Gini coefficient is a widely used measure of income inequality. A Gini coefficient of 0 would mean perfect equality in the distribution of income among all families in the economy, while a coefficient of 1 would mean that one family has all the income and all of the remaining families in the economy have none. The higher the Gini coefficient, therefore, the greater the income inequality among families in the economy concerned.

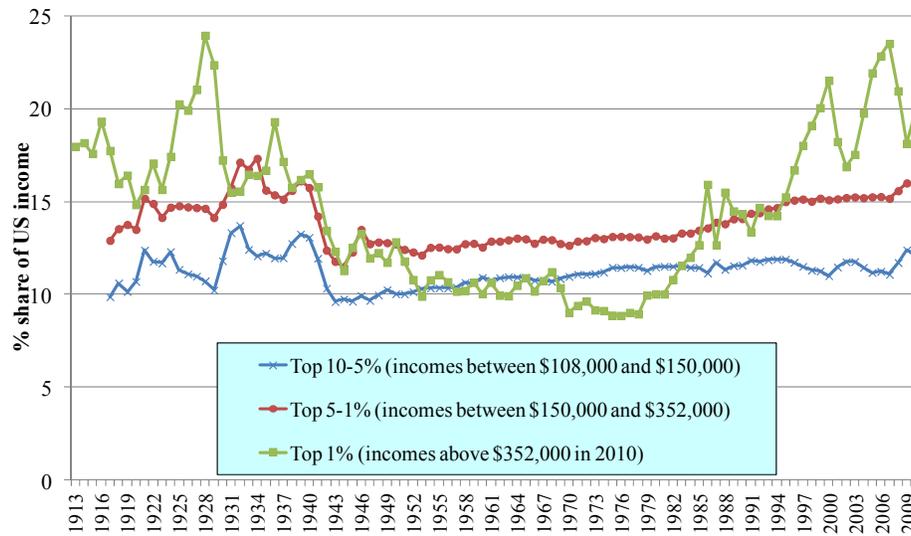
Over the same period, however, the real after-tax incomes of the bottom quintile (first through twentieth percentiles) of the income distribution grew by only 18.3%, the fourth quintile by 27.5%, the middle quintile by 35.2%, the second quintile by 43.3%, and the top quintile *excluding* the top one percent by 65%. Meanwhile, the real after-tax incomes of the top one percent increased by 277.5%.⁶²

This concentration of income at the top shows up clearly in data collected on the richest Americans from 1913–2010 from Internal Revenue Service tax returns, as illustrated in Figure 2.⁶³ In 2007, the top one percent of the distribution received 23.5% of pre-tax income, the highest level since 1928, when, during the stock market boom that would culminate in the Great Crash, the share of the top one percent reached 23.9%. Figure 2 also shows the extreme volatility of the income shares of the top one percent that has accompanied stock market booms and busts, such as those that centered on the peak years 1929, 2000, and 2007.

62. CONG. BUDGET OFFICE, TRENDS IN THE DISTRIBUTION OF HOUSEHOLD INCOME BETWEEN 1979 AND 2007 (2011), available at <http://www.cbo.gov/sites/default/files/cbofiles/attachments/10-25-HouseholdIncome.pdf>.

63. Thomas Piketty & Emmanuel Saez, *IRS Tax Return Table and Figures Updated to 2010*, ECONOMETRICS LABORATORY SOFTWARE ARCHIVE (Mar. 2012), <http://elsa.berkeley.edu/~saez/TabFig2010.xls>.

Figure 2: Shares of Total U.S. Income Among the Top Ten Percent of Income Recipients, 1913–2010, Decomposed into Selected Percentile Groupings⁶⁴

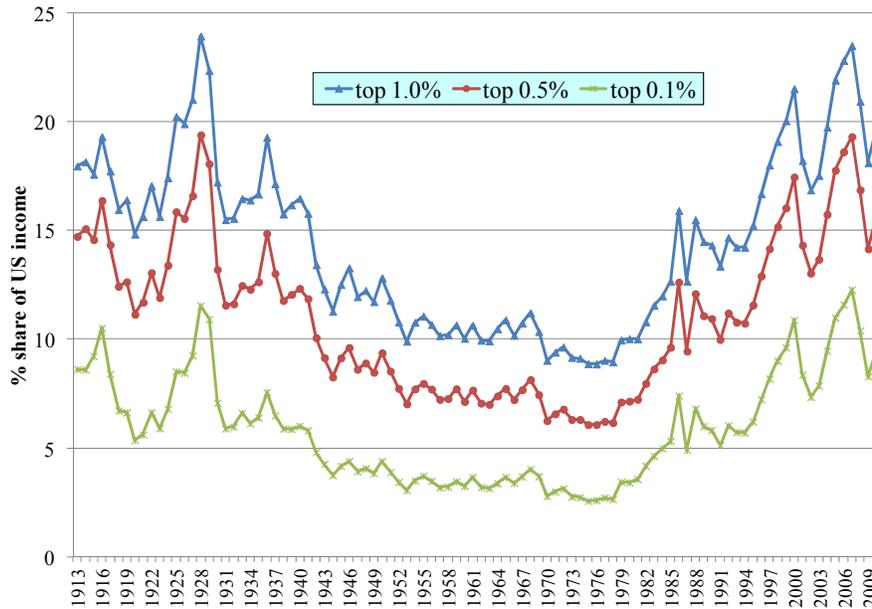


Moreover, incomes are highly skewed even within the top one percent.⁶⁵ At 12.3%, the share of the top 0.1% in 2007 was higher than the previous peak of 11.5% in 1928. Figure 3 also shows the extreme volatility of the income shares of the top 1%, 0.5%, and 0.1%, most markedly because of stock market booms and busts that centered on 1929, 2000, and 2007.

64. *Id.* data-Fig2. For a PDF showing Figure 2 in color, see *Archive*, SEATTLE U. L. REV., <http://seattleuniversitylawreview.com/archive/> (last visited Feb. 22, 2013).

65. *Id.*

Figure 3: U.S. Income Shares Including Capital Gains, Top 1%, 0.5%, and 0.1% of Households, 1913–2010⁶⁶



There were, however, differences in the *sources* of the incomes of the top 0.1% in the late 1920s and late 2000s, as shown in Figure 4. Particularly significant is the importance of the stock market as a source of income for the richest Americans in the 2000s. The gains from exercising stock options can appear in not only the “capital gains” component but also the “salaries” component of total incomes. The IRS data collected by Piketty and Saez do not break down total salaries taxed at the personal-income tax rate into their component parts.⁶⁷ From the 1950s into the 1970s, executive stock options enabled top executives to have a portion of their remuneration taxed at the relatively low capital-gains tax rate rather than at the high personal-income tax rate.⁶⁸ The Economic Recovery Act of 1981, however, both substantially lowered the top personal-income tax rate and placed a \$100,000 per annum limit on the exercisable options (number of options times the exercise price) eligible for capi-

66. *Id.* tbl. A3. For a PDF showing Figure 3 in color, see *Archive*, SEATTLE U. L. REV., <http://seattleuniversitylawreview.com/archive/> (last visited Feb. 22, 2013).

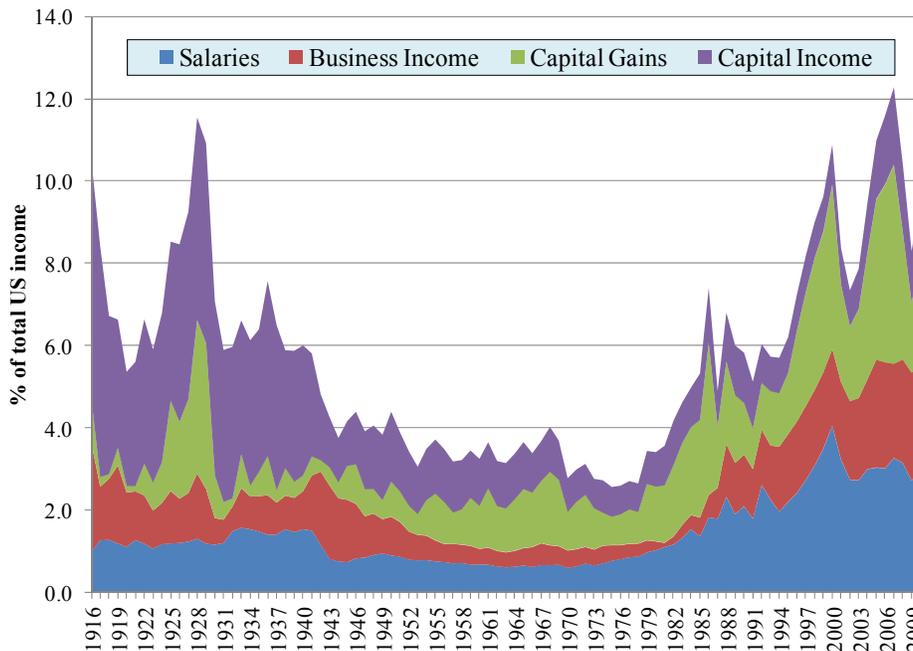
67. *Id.*

68. William Lazonick, *The Explosion of Executive Pay and the Erosion of American Prosperity*, 57 ENTREPRISES ET HISTOIRE 141 (2009).

tal-gains taxation.⁶⁹ Thus, for top executives of major corporations, whose stock-option income often amounts to millions of dollars in a given year, capital-gains income from stock options are only a small part of the total gains from exercising options.

As illustrated by the peaks in the “salaries” component in Figure 4, for the top 0.1% of the income distribution, it was gains from exercising stock options that pushed up their salaries to an historic high of 4.02% of total U.S. income in 2000. This peak was a dramatic rise from 0.59% of total U.S. income in 1970, 1.01% in 1980, and 2.09% in 1990. This income share hit a local peak of 3.26% in 2007, and was 2.95% in 2010.

Figure 4: Components of the Percent Shares of the Incomes of the Top 0.1% of the U.S. Income Distribution, 1916–2010⁷⁰



Indeed, for the highest paid executives, stock-option income is the largest component of their total income. Table 1, based on data from company proxy statements, shows the average compensation of the high-

69. Bruce R. Ellic, *The Evolution of Executive Pay in the United States*, 38 COMPENSATION & BENEFITS REV. 55, 57 (2006).

70. Piketty & Saez, *supra* note 63, data-Fig4B. For a PDF showing Figure 4 in color, see *Archive*, SEATTLE U. L. REV., <http://seattleuniversitylawreview.com/archive/> (last visited Feb. 22, 2013).

est paid corporate executives in the United States, and the percent of that compensation derived from exercising stock options (the difference between the stock-option exercise price and the market price of the stock on the exercise date) for 1992–2010. Also included in Table 1 are the S&P 500 Index (with over 80% of its component stocks being listed on the New York Stock Exchange) and the NASDAQ Composite Index, to illustrate the positive correlation of stock-price performance with both the level of executive pay and the proportion of that pay derived from stock-option exercises.

Large proportions of these enormous incomes of top executives have come from gains from cashing in on the ample stock option awards that top executives' boards of directors have bestowed on them. The higher the "top pay" group, the greater the average proportion of the pay of the executives in that group that was derived from gains from exercising stock options.

Table 1: Average Total Compensation of “Named” Executives of U.S. Corporations and the Proportion of Total Compensation from Stock-Option Gains for the 100, 500, 1500, and 3000 Highest Paid, 1992–2010⁷¹

Mean compensation in millions of 2010 U.S. dollars

| | Top 100 | | Top 500 | | Top 1500 | | Top 3000 | | S&P 500 Index | NAS- DAQ Index | NAS- DAQ/ S&P |
|-------------|--------------|---------|--------------|---------|--------------|---------|--------------|---------|---------------------|----------------------|---------------------|
| | Mean \$m. | % SO | Mean \$m. | % SO | Mean \$m. | % SO | Mean \$m. | % SO | | | |
| 1992 | 23.1 | 71 | 9.3 | 59 | 4.7 | 48 | 2.9 | 42 | 100 | 100 | 1.00 |
| 1993 | 21.1 | 63 | 9.1 | 51 | 4.8 | 42 | 3.1 | 36 | 109 | 119 | 1.10 |
| 1994 | 18.5 | 57 | 8.1 | 45 | 4.4 | 35 | 2.9 | 29 | 111 | 125 | 1.13 |
| 1995 | 21.0 | 59 | 9.7 | 48 | 5.3 | 40 | 3.5 | 34 | 131 | 155 | 1.18 |
| 1996 | 32.4 | 64 | 13.9 | 54 | 7.2 | 47 | 4.6 | 41 | 162 | 195 | 1.20 |
| 1997 | 44.2 | 72 | 18.6 | 61 | 9.5 | 55 | 5.9 | 49 | 210 | 243 | 1.16 |
| 1998 | 76.0 | 66 | 26.7 | 64 | 12.5 | 58 | 7.5 | 53 | 261 | 300 | 1.15 |
| 1999 | 68.9 | 82 | 27.4 | 71 | 13.2 | 63 | 7.8 | 57 | 319 | 462 | 1.45 |
| 2000 | 104.0 | 87 | 40.5 | 80 | 18.7 | 72 | 10.8 | 67 | 341 | 614 | 1.80 |
| 2001 | 62.9 | 77 | 23.9 | 66 | 11.5 | 58 | 6.9 | 53 | 284 | 332 | 1.17 |
| 2002 | 38.1 | 57 | 17.1 | 49 | 8.8 | 43 | 5.5 | 38 | 237 | 252 | 1.06 |
| 2003 | 48.7 | 64 | 21.2 | 55 | 10.8 | 48 | 6.7 | 44 | 232 | 275 | 1.18 |
| 2004 | 55.4 | 75 | 25.0 | 62 | 12.9 | 55 | 8.1 | 50 | 272 | 330 | 1.21 |
| 2005 | 67.5 | 78 | 28.7 | 63 | 14.5 | 56 | 9.0 | 51 | 290 | 348 | 1.20 |
| 2006 | 68.9 | 69 | 29.6 | 59 | 15.4 | 52 | 9.7 | 47 | 316 | 463 | 1.47 |
| 2007 | 69.3 | 73 | 30.2 | 60 | 15.8 | 52 | 10.0 | 47 | 354 | 428 | 1.21 |
| 2008 | 47.5 | 58 | 20.7 | 55 | 10.9 | 45 | 7.0 | 39 | 291 | 356 | 1.22 |
| 2009 | 30.4 | 52 | 14.8 | 37 | 8.3 | 28 | 5.5 | 23 | 227 | 307 | 1.35 |
| 2010 | 35.9 | 49 | 18.3 | 40 | 10.4 | 32 | 6.8 | 28 | 271 | 386 | 1.43 |

71. The data in this table are compiled from Standard and Poor’s Compustat Database, accessed from WHARTON RESEARCH DATA SERVS., <http://wrds-web.wharton.upenn.edu/> (last visited Nov. 1, 2012). The S&P 500 Index and the NASDAQ Composite Index are set to 100 for 1992 for purposes of comparison. “Named” executives are the CEO and other four highest paid executives in a given year reported by listed companies in their annual proxy statements to shareholders. Total compensation, which includes the actual value of stock options exercised (market prices minus exercise price), is labeled TDC2 in the Compustat database, which is defined for 1992 through 2005 as Salary + Bonus + Other Annual + Total Value of Restricted Stock Granted + Value of Stock Options Exercised + Long-Term Incentive Payouts, and All Other Total, and for 2006 on as Salary + Bonus + Non-equity Incentive + Other Compensation + Value of Options Exercised + Stock Awards + Deferred Compensation. The term “%SO” means the percent of total compensation that the whole set (100, 500, 1,500, or 3,000) of highest paid executives derived from gains from exercising stock options. Note that company proxy statements (DEF 14A SEC filings) report the compensation of the company’s CEO and four other highest paid executives. It is therefore possible that some of the highest paid executives who should be included in each of the “top” categories are excluded. The mean compensation calculations are therefore lower bounds of actual average compensation of the highest paid corporate executives in the United States.

For the top 100 group in the years 1992–2010, the proportion from stock-option gains ranged from a low of 49% in 2010—when the mean pay of the group was also at its second lowest level in real terms since 1996—to a high of 87% in 2000—when the mean pay was at its highest level of \$104 million in 2010 dollars. In 2000, the mean pay of the top 3,000 was \$10.8 million in 2010 dollars, only 10% of the mean pay of the top 100. Nevertheless, as shown in Table 1, gains from exercising stock options accounted for 67% of the combined pay of executives in the top 3,000 group.

It is important to note how, in Table 1, the average pay of the highest paid corporate executives has risen and fallen with the fluctuations of major stock market indices. In the 1980s and 1990s, high real stock yields characterized the U.S. corporate economy. These high yields came mainly from stock-price appreciation as distinct from dividends yields, which, with stock prices climbing rapidly, were low in the 1990s despite high dividend payout ratios. With the S&P 500 Index rising almost 1,400% from March 1982 to August 2000, the availability of gains from exercising stock options became almost automatic. In the 2000s, in contrast, with the stock market less speculative, corporate executives turned to another means of boosting stock prices: large-scale stock repurchases. As I have argued elsewhere, there are three drivers of stock prices: innovation, speculation, and manipulation.⁷² In the 1980s and 1990s, high stock prices were driven primarily by a combination of New Economy innovation followed by speculation.⁷³ In the 2000s, rising stock prices of S&P 500 companies were driven by manipulation, with large-scale stock repurchases as the prime weapons of market manipulation.

Among the prime beneficiaries of this market manipulation were the very same corporate executives who made the decisions to allocate corporate resources to stock repurchases. In 2010, the threshold income for inclusion in the top 0.1% of the income distribution was \$1,492,175.⁷⁴ From the proxy statement data on “named” top executives, in 2010, 4,743 executives had total compensation greater than this threshold amount, with a mean income of \$5,034,000 and gains from exercising stock options representing 26% of their combined compensation.

The number of corporate executives who, in 2010, were members of the top 0.1% club was, however, far higher than 4,743, for two reasons. First, total corporate compensation of the named executives does not in-

72. Lazonick, *supra* note 68.

73. *Id.*; Lazonick, *New Economy*, *supra* note 1.

74. Piketty & Saez, *supra* note 63, tbl. 0.

clude other non-compensation taxpayer income (from securities, property, fees for sitting on the boards of other corporations, etc.) that would be included in their IRS tax returns. If we assume that named executives whose corporate compensation was below the \$1.5 million threshold were able to augment that income by 25% from other sources, then the number of named executives in the top 0.1% in 2010 would have been 5,555. If, as may well have been the case, they were able to augment that income by more than 25%, then there would be even more of these named executives in the top 0.1%.

Second, included in the top 0.1% of the U.S. income distribution were a potentially large, but unknown, number of U.S. corporate executives whose pay was above the \$1.5 million threshold for the top 0.1%, but who were not named in proxy statements because they were neither the CEO nor the four other highest paid in their particular companies. For example, of the five named IBM executives in 2010, the lowest paid had a total compensation of \$6,637,910.⁷⁵ There were presumably large numbers of other IBM executives whose total compensation was between this amount and the \$1.5 million threshold for the top 0.1%. These “unnamed” executives would have been among the top 0.1% in the income distribution.

The bottom line is that top executives of U.S. business corporations—industrial as well as financial—are well represented among the top 0.1% of the U.S. income distribution, and much, often most, of their compensation income comes from the gains from exercising stock options. When the compensation of top executives is combined with the fact that Wall Street has, since the 1980s, judged the performance of corporations by their quarterly stock-price performance, the importance of stock-based pay in executive compensation gives top executives a powerful personal incentive to boost their companies’ stock prices from quarter to quarter and to manage quarterly earnings per share (EPS). In stock buybacks, these executives have found a potent weapon of stock-market manipulation. In the next section of this paper, I document how stock buybacks have become systemic and massive in the U.S. economy since the 1980s. Then I provide evidence on the damage that stock buybacks are doing to the performance of the U.S. economy as measured by equitable and stable economic growth.

75. See *supra* Table 1.

IV. STOCK BUYBACKS: WEAPONS OF MARKET MANIPULATION AND VALUE EXTRACTION

Until the 1980s, stock repurchases were relatively unimportant as a mode of distributing profits to shareholders. Buybacks were often done by owner-entrepreneurs of small- to medium-size companies that had issued shares on the over-the-counter markets to raise funds for expansion but then wanted to have those shares back under their ownership as the company progressed.⁷⁶ Indeed, until November 1982, the Securities and Exchange Commission (SEC) could construe stock repurchases by established companies on a scale that has now become the norm as illegal attempts to manipulate the companies' stock prices. Section 9(a)(2) of the Securities Exchange Act of 1934 specifically prohibits a person from effecting "a series of transactions in any security registered on a national securities exchange creating actual or apparent active trading in such security or raising or depressing the price of such security, for the purpose of inducing the purchase or sale of such security by others."⁷⁷

In 1970, the SEC first proposed a rule change that would have permitted a publicly listed company to buy back as much as 15% of the average trading volume of its stock over the previous four weeks without exposing itself to manipulation charges, but this rule was not adopted.⁷⁸ In November 1982, however, with the promulgation of Rule 10b-18, the SEC provided companies with a "safe harbor" against charges of stock-price manipulation. This safe harbor stated that the SEC would not file manipulation charges if each day's open-market repurchases were not greater than 25% of the stock's average daily trading volume over the previous four weeks and if the company refrained from doing buybacks at the beginning and end of the trading day. *The Wall Street Journal* reported that at the SEC meeting creating the safe harbor, SEC Chairman John Shad said that buybacks would "confer a material benefit" on shareholders by fuelling stock-price increases.⁷⁹ Under Rule 10b-18, during the single trading day of, for example, July 13, 2011, a leading stock

76. Theo Vermaelen, *Stock Repurchases and Market Signaling*, 9 J. FIN. ECON. 139, 139-83 (1981).

77. Am. Bar Ass'n, *Annual Review of Federal Securities Regulation*, 83 BUS. LAW. 1233, 1247 (1983).

78. *Id.*

79. Richard L. Hudson, *SEC Eases Way for Repurchase of Firms' Stock: Agency Assures It Won't File Charges of Manipulation if Certain Rules Are Met*, WALL ST. J., Nov. 10, 1982. In 2003, the SEC amended 17 C.F.R. § 240.10b-18 "to simplify and update the safe harbor provisions in light of market developments since the Rule's adoption." *Purchases of Certain Equity Securities by the Issuer and Others*, 68 Fed. Reg. 64952-01 (Nov. 17, 2003). The amendments also required that, in their 10-Q filings with the SEC, companies report the number and value of shares repurchased in the previous quarter and the average price paid per share. *Id.*

repurchaser such as Exxon Mobil could have done as much as \$416 million in buybacks, Bank of America \$402 million, Microsoft \$390 million, Intel \$285 million, Cisco \$269 million, GE \$230 million, and IBM \$220 million.⁸⁰ According to the SEC's rules, buybacks of these magnitudes can be repeated trading day after trading day.

A stock repurchase occurs when a company buys back its own shares. In the United States, the SEC requires stock repurchase programs to be approved by the company's board of directors and to be announced publicly. These programs authorize a company's top executives to do a certain amount of buybacks over a certain period of time, but with the timing and amount of actual repurchases left to the discretion of the executives.⁸¹ For example, on September 22, 2008, Microsoft announced that "its board of directors approved a new share repurchase program authorizing up to an additional \$40 billion in share repurchases with an expiration of September 30, 2013."⁸² It is then up to the top executives to decide whether the company should actually do repurchases, when they should be done, and how many shares should be repurchased at any given time. Repurchases are almost always done as open-market transactions through the company's broker. Significantly, the SEC does not require the company to announce the buybacks at the times they are actually done. Hence, only insiders know the precise timing and extent of stock buybacks.⁸³

Stock repurchases among large U.S. corporations were of minor importance in the early 1980s, especially before the passage of Rule 10b-18 by the SEC. Figure 5 shows stock repurchase and dividend data for 292 companies in the S&P 500 Index in January 2008 that were publicly listed back to 1980. For these companies, the average annual repurchases per company in 1981–1982 were only \$6.7 million, or 3.6% of net income, compared with dividends of \$93 million, or 49.3% of net income.⁸⁴ After the safe harbor created by Rule 10b-18, repurchases increased rapidly through 1987. With many companies turning to buybacks to boost their stock prices after the market crash of October 1987, repurchases per company reached \$103 million in 1987, 35.3% of net income, while dividends represented an additional 48.7% of net income. Over the

80. These figures were calculated from company data on historical prices at YAHOO! FINANCE, <http://finance.yahoo.com/> (last visited Jan. 16, 2013).

81. James D. Westphal & Edward J. Zajac, *Decoupling Policy from Practice: The Case of Stock Repurchase Programs*, 46 ADMIN. SCI. Q., no. 2, 2011, at 202-228.

82. Press Release, Microsoft Corp., Microsoft Announces Share Repurchase Program and Increases Quarterly Dividend Payment (Sept. 22, 2008), available at <http://www.microsoft.com/en-us/news/press/2008/sep08/09-22dividend.aspx>.

83. Douglas O. Cook, Laurie Krigman & J. Chris Leach, *An Analysis of SEC Guidelines for Executing Open Market Repurchases*, 76 J. BUS., no. 2, 2003, at 292–94.

84. See *infra* Figure 5.

next four years, however, repurchases declined to \$51.7 million per company (19% of net income) in 1991, while dividends rose to \$180.2 million per company (66.4% of net income).

A. Weapons of Market Manipulation

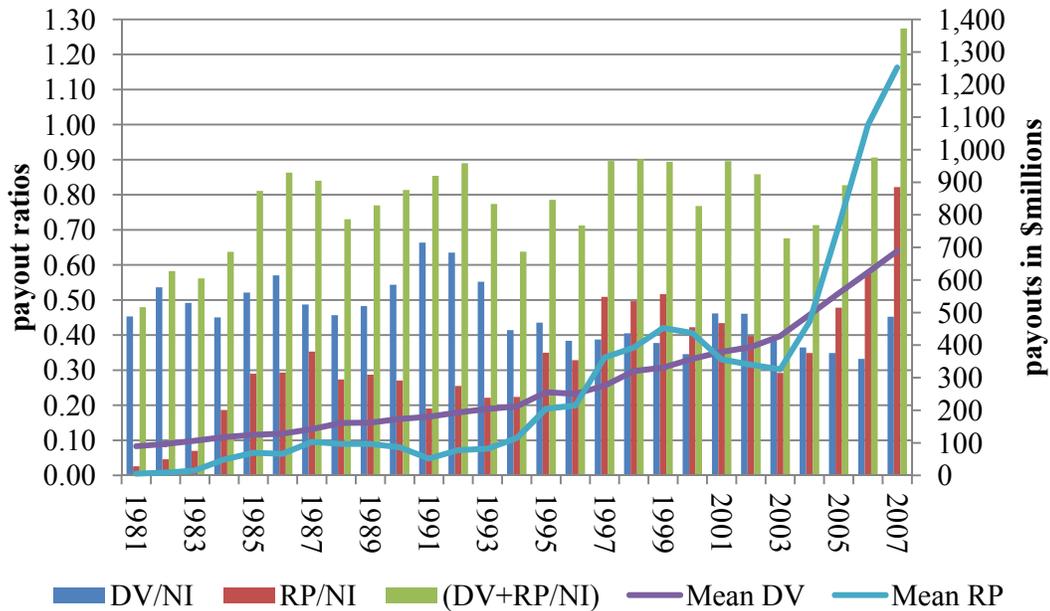
Then, during the 1990s, repurchases shot up. They increased almost nine-fold from 1991 to 1998.⁸⁵ With dividends increasing more slowly, buybacks surpassed dividends in 1997.⁸⁶ In 1997–1999, buybacks per company averaged \$402.3 million per annum, or 50.8% of net income, while dividends averaged \$308.8 million per annum, or 39% of net income.

Yet in the late 1990s, the stage was being set for an even more massive manipulation of the market through stock repurchases, especially from 2003. The 500 companies in the S&P 500 Index in January 2008 repurchased a combined total of \$489 billion of their own stock in 2006, representing 62% of their net income, and \$595 billion in 2007, representing 89% of their net income. Figure 6 shows how the escalating stock repurchases by S&P 500 companies from 2003 through 2007 helped to boost the stock market, driving the S&P 500 Index even higher in 2007 than its previous peak in 2000.

85. *See infra* Figure 5.

86. Amy K. Dittmar & Robert F. Dittmar, *Stock Repurchase Waves: An Explanation of the Trends in Aggregate Corporate Payout Policy* (Feb. 2004) (unpublished manuscript), available at http://webuser.bus.umich.edu/rdittmar/Research_files/Papers/Dittmar_Dittmar2004.pdf.

Figure 5: Ratios of Cash Dividends (DV) and Stock Repurchases (RP) to Net Income (NI), and Mean Dividend Payments and Stock Repurchases, 1981–2007, Among 292 Companies in the S&P 500 Index in January 2008⁸⁷



87. Standard & Poor's Compustat Database (North America, Fundamentals Annual) and company 10-K filings. For a PDF showing Figure 5 in color, see *Archive*, SEATTLE U. L. REV., <http://seattleuniversitylawreview.com/archive/> (last visited Feb. 22, 2013).

Figure 6: Stock Repurchases by 437 Companies in the S&P 500 in January 2009, and the Movement of the S&P 500 Index, 1997–2008⁸⁸

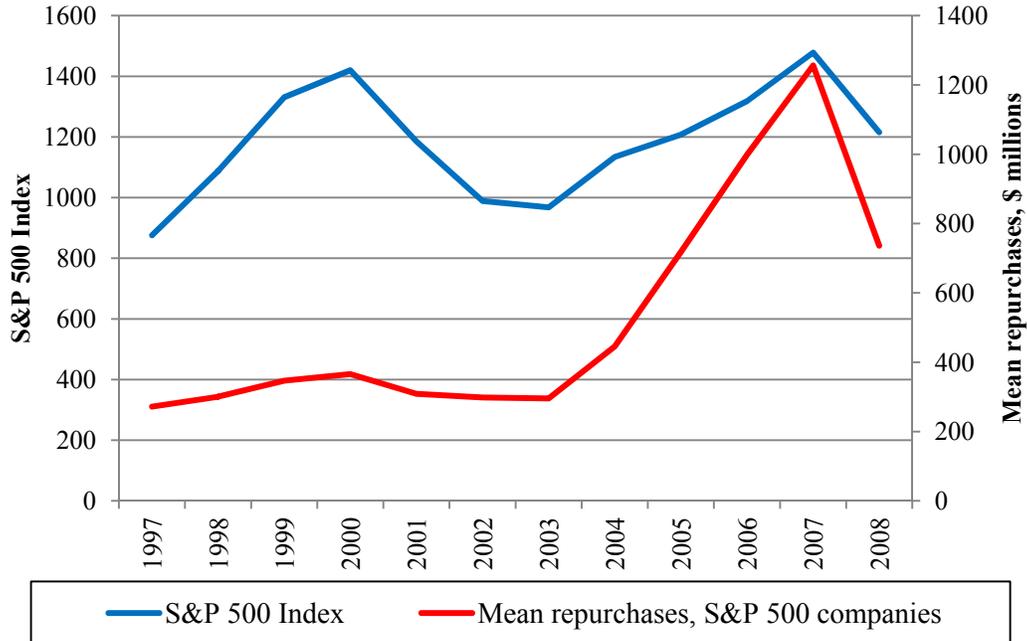
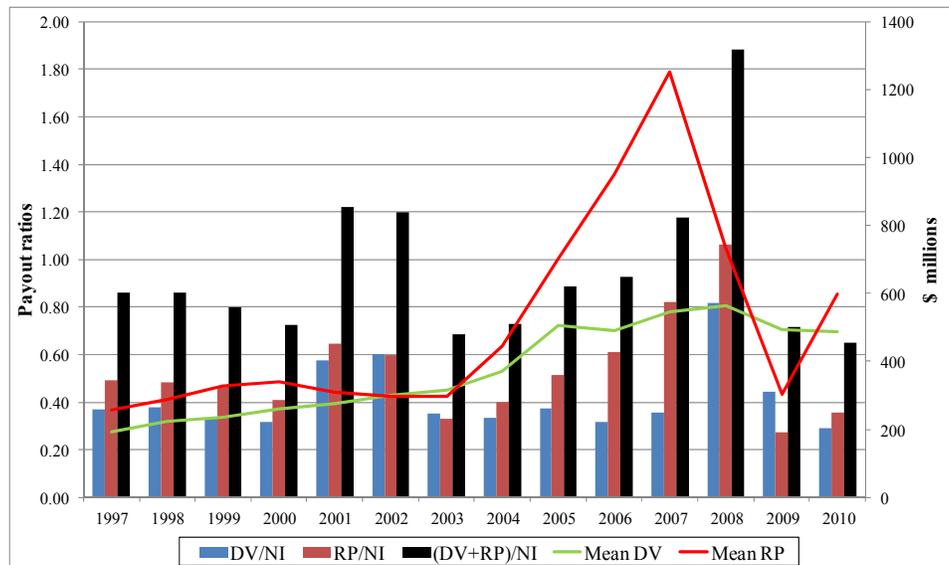


Figure 7, below, shows the payout ratios and mean payout levels for 419 companies included in the S&P 500 Index in January 2011 that were publicly listed from 1997 through 2010. From 1997 through 2010, these 419 companies expended \$2.7 trillion on stock repurchases, an average of \$6.5 billion per company, and distributed a total of \$2 trillion in cash dividends, an average of \$4.8 billion per company. Stock repurchases by these 419 companies averaged \$296 million in 2003, rising to an average of \$1.251 billion in 2007.

88. The data comprising this chart were obtained from Standard and Poor's Compustat Database (North America, Fundamentals Annual) and YAHOO! FINANCE, *supra* note 80 (Historical Prices, Monthly Data). For a PDF showing Figure 6 in color, see *Archive*, SEATTLE U. L. REV., <http://seattleuniversitylawreview.com/archive/> (last visited Feb. 22, 2013).

Figure 7: Ratios of Cash Dividends (DV) and Stock Repurchases (RP) to Net Income (NI), and Mean Dividend Payments and Stock Repurchases Among 419 Companies in the S&P 500 Index in January 2011, 1997–2010⁸⁹



The financial crisis led to a significant, but temporary, contraction in repurchase activity. Repurchases by S&P 500 companies declined dramatically in 2008 and 2009, as many banks that had been among the largest repurchasers either went out of business or availed themselves of a government bailout. After dropping to about \$300 million per company during the financial crisis of 2008–2009, repurchases doubled to around \$600 million in 2010, and reached an average of over \$800 million—or in excess of \$400 billion for the entire S&P 500—in 2011.⁹⁰ The experience of 2003–2007 suggests that, short of another financial meltdown, repurchases will continue at these massive levels.

89. Standard & Poor Compustat Database (North America, Fundamentals Annual, 1997–2010); company 10-K filings for missing or erroneous data from the Compustat database. The figure includes data for 419 corporations in the S&P 500 Index in January 2011 that were publicly listed between 1997 and 2010. Data for companies that end their fiscal years during the first six months of the calendar year are attributed to the previous year. RP=stock repurchases; DV=total dividends (common and preferred); NI=net income (after tax with inventory evaluation and capital consumption adjustments). For a PDF showing Figure 7 in color, see *Archive*, SEATTLE U. L. REV., <http://seattleuniversitylawreview.com/archive/> (last visited Feb. 22, 2013).

90. *S&P 500 Buybacks Decline for Second Consecutive Quarter*, FACT INSIGHT (June 29, 2012), http://www.factset.com/insider/2012/6/buyback_6.28.12.

Why do corporations repurchase stock? Executives often claim that buybacks are financial investments that signal confidence in the company's future as measured by its stock-price performance.⁹¹ But companies that do buybacks never sell the shares at higher prices to cash in on these investments. To do so would be to signal to the market that the company's stock price had peaked, which no CFO would want to do. If, by repurchasing stock, corporate executives signal to the stock market that their company's shares are undervalued, these same executives will never, by selling its stock, signal to the market that the company's shares are overvalued.

According to the signaling argument, there should have been a massive selloff of corporate stock during the speculative boom of the late 1990s. This selloff did occur during the speculative boom of the late 1920s when corporations took advantage of the speculative stock market to pay off corporate debt or bolster their corporate treasuries.⁹² But during the late 1990s boom, corporate executives, acting as personal investors, sold their own stock to reap speculative gains often worth tens of millions of dollars.⁹³ Many of these same corporate executives, acting as corporate decision makers, used corporate funds to repurchase their companies' shares in the attempt to bolster their stock prices—to their own personal gain. Given that U.S. companies are not required to announce the dates on which they actually conduct open-market repurchases, there is an opportunity for top executives who have this information to engage in insider trading by using this information to time option exercises and stock sales.⁹⁴

Indeed, as a complement to the SEC's Rule 10b-18 of 1982 that effectively legalized the use of buybacks to manipulate stock prices, a 1991 SEC rule change enabled top executives to make quick gains by exercising their stock options and immediately selling their shares. Under Section 16(b) of the 1934 Securities Exchange Act, corporate directors, officers, or shareholders with more than 10% of the corporation's shares are prohibited from making "short-swing" profits through the purchase

91. Louis Henock & Hal White, *Do Managers Intentionally Use Repurchase Tender Offers to Signal Private Information? Evidence from Firm Financial Reporting Behavior*, 85 J. FIN. ECON. 205, 205–33 (2007); Theo Vermaelen, *Share Repurchases*, in 1 FOUNDATIONS AND TRENDS IN FINANCE 13–48 (2005).

92. Mary O'Sullivan, *What Drove the U.S. Stock Market in the Last Century?* (2004) (unpublished manuscript) (on file with author).

93. Mark Gimein et al., *You Bought. They Sold.*, FORTUNE (Sept. 2, 2002), http://money.cnn.com/magazines/fortune/fortune_archive/2002/09/02/327903/index.htm.

94. Jesse M. Fried, *Open Market Repurchases: Signaling or Market Opportunism?*, 2 THEORETICAL INQUIRIES L. 865, 865–94 (2001) [hereinafter Fried, *Open Market Repurchases*]; Jesse M. Fried, *Insider Signaling and Insider Trading with Repurchase Tender Offers*, 67 U. CHI. L. REV. 421, 421–77 (2000) [hereinafter Fried, *Insider Signaling*].

and the subsequent sale of corporate securities within a six-month period.⁹⁵ Under this rule, top executives who exercised stock options had to hold the acquired shares for at least six months before selling them. In May 1991, however, the SEC, treating a stock option as a derivative, deemed that the six-month holding period required under Section 16(b) was from the grant date, not the exercise date.⁹⁶ Since the grant date for an employee stock option is always at least one year before the option vests (and hence can be exercised), the new rule eliminated the risk of loss between the exercise date and the sale date. It gave top executives flexibility in their timing of option exercises with a view to immediate stock sales so that they could personally benefit from, among other things, price boosts from buybacks.

Companies often explicitly state in their financial statements that they repurchase stock to offset dilution from their stock-option programs.⁹⁷ The economic rationale for this argument is not clear. If a company deems it worthwhile to remunerate employees with stock options, it should see that remuneration as adding to rather than subtracting from earnings per share. While it is true that these additions to earnings per share may be expected to accrue in years to come, the issue, according to conventional financial metrics, is simply whether remuneration in the form of stock options (or any other mode of compensation) is expected to yield positive net present value of future earnings at the appropriate discount rate. Buying back stock in order to offset the dilution from stock-option exercises is just another form of stock-price manipulation through adjustments to EPS.

In any case, for many leading companies that have broad-based stock option plans, the number of shares repurchased is generally well in excess of the number of stock options exercised, namely, the number needed to offset dilution. For example, for the decade 2001–2010, at ICT companies with broad-based option plans that were among the top fifty repurchasers,⁹⁸ the ratio of shares repurchased to options exercised was 2.75 at Microsoft (the #2 repurchaser in 2001–2010), 3.76 at IBM (#3), 2.60 at Cisco Systems (#4), 2.96 at Hewlett-Packard (#6), 3.83 at Intel (#11), 4.24 at Dell (#16), 2.06 at Oracle (#24), and 4.31 at Texas Instruments (#28). At other non-ICT companies among the top ten repurchasers between 2001 and 2010, the buyback-to-exercises ratio was 10.25 at Exxon Mobil (#1), 4.47 at Procter & Gamble (#5), 13.67 at Walmart (#7), 1.96 at Bank of America (#8), and 5.61 at Pfizer (#9).

95. See 15 U.S.C. § 78p(b).

96. Jan M. Rosen, *New Regulations on Stock Options*, N.Y. TIMES, Apr. 27, 1991.

97. LAZONICK, SUSTAINABLE PROSPERITY, *supra* note 1, at 243, 247–48 n.11.

98. See *infra* Appendix.

If dilution fails to justify repurchases, then why, to repeat the question asked earlier, do corporations repurchase stock? The only plausible answer to this question is that the executives who make these corporate allocation decisions use stock buybacks to boost their companies' stock prices and manage quarterly EPS because, through their stock-based pay, they are personally incentivized to make these allocation decisions. The corporation buys stock to boost its stock price; corporate executives exercise options and sell stock to boost their incomes. Stock buybacks and stock options have become the yin and yang of U.S. corporate resource allocation. Unfortunately, it is a system of corporate resource allocation that is very damaging to the U.S. economy.

B. Weapons of Value Destruction

Since the 1980s, corporate resource allocation in the United States has been governed by the ideology that business corporations should be run to "maximize shareholder value" (MSV). The argument, referred to by economists as "agency theory,"⁹⁹ is that, of all participants in the business corporation, it is only shareholders who make productive contributions without a guarantee of a return.¹⁰⁰ As risk-bearers, so the argument goes, shareholders, and only shareholders, have a claim on corporate profits if and when they appear.

Among other things, MSV ideology legitimizes the practice of making distributions to shareholders in the form of not only dividends,

99. "Agency theory," as expounded by economists, builds on the legal concept of the corporate manager as agent and the shareholder as principal, but uses this concept to analyze the implications of "hidden actions" (or moral hazard) and "hidden information" (or adverse selection) on economic decision making and outcomes.

100. See Lazonick, *Fragility*, *supra* note 1, for an elaboration of this argument. In the 1980s and 1990s, the foremost proponent of agency theory as applied to corporate resource allocation was Michael C. Jensen, who was at the University of Rochester before coming to Harvard Business School in the mid-1980s. See generally Michael C. Jensen & Kevin J. Murphy, *Performance Pay and Top Management Incentives*, 98 J. POL. ECON. 225 (1990); Michael C. Jensen, *Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers*, 76 AM. ECON. REV. 323 (1986). For a highly readable account of the evolution of agency theory as a branch of neoclassical economics, see JUSTIN FOX, *THE MYTH OF THE RATIONAL MARKET: A HISTORY OF RISK, REWARD, AND DELUSION ON WALL STREET* (2009). In his discussion of the theories and impact of Jensen, however, Fox overlooks Jensen's arguments for disgorging the so-called "free cash flow" from corporations to shareholders, with stock buybacks as a prime mode of achieving this objective. *Id.* at 153–74, 265–86. For my initial critiques of MSV and agency theory, see William Lazonick, *Financial Commitment and Economic Performance: Ownership and Control in the American Industrial Corporation*, 17 BUS. & ECON. HIST. 115, 115–28 (1988); William Lazonick, *Controlling the Market for Corporate Control: The Historical Significance of Managerial Capitalism*, 1 INDUS. & CORP. CHANGE 445, 445–88 (1992). For a legal critique of "shareholder primacy", see Lynn A. Stout, *New Thinking on "Shareholder Primacy"*, 2 ACCT. ECON. & L., no. 2, 2012, available at <http://www.degruyter.com/view/j/ael.2012.2.issue-2/2152-2820.1037/2152-2820.1037.xml>.

which reward shareholders for holding the company's stock, but also repurchases, which reward shareholders for selling the company's stock. MSV ideology also legitimizes the stock-based pay of corporate executives on the grounds that this mode of compensation aligns their self-interests with those of shareholders, upon whom, according to the ideology, we ultimately rely to allocate the economy's resources to its most efficient uses.

Elsewhere, I have critiqued this ideology on the grounds that there are other stakeholders besides shareholders who, through the provision of capital or labor, make contributions to the business enterprise that help to generate future returns but without a guaranteed share of these returns.¹⁰¹ Through government investments and subsidies, taxpayers regularly provide finance to companies without a guaranteed return. As risk bearers, therefore, taxpayers have a claim on corporate profits if and when they are generated. In addition, through the exercise of skill and effort beyond those levels required to lay claim to their current pay, workers regularly make productive contributions to the companies for which they work without a guaranteed return, but with an expectation of future profits in the forms of higher wages and benefits, more secure employment, and better work conditions. Confronting agency theory with what I call "innovation theory," I argue that sharing corporate profits with these other risk-bearers (taxpayers and workers) is essential not only for equitable distribution, but also for sustainable productivity gains that make higher standards of living possible.¹⁰²

From the perspective of innovation theory, stock buybacks are a mode of extracting value that can undermine the processes of creating value in companies and in the economy. It is very difficult to argue that stock buybacks by large established companies are good for the economy, unless one wants to argue that massive manipulation of the stock market is good and that the further concentration of income among the top 0.1 percent of the distribution is good. At the same time, there are many reasons why buybacks might be bad for both companies and the economy. The negative impacts of buybacks vary across different sectors in the economy, depending on the technological, market, and competitive con-

101. Lazonick, *supra* note 68; Lazonick, *Fragility*, *supra* note 1; William Lazonick & Mariana Mazzucato, *The Risk-Reward Nexus in the Innovation-Inequality Relationship: Who Takes the Risks? Who Gets the Rewards?*, INDUS. & CORP. CHANGE (forthcoming 2013).

102. See William Lazonick, *Innovative Business Models and Varieties of Capitalism*, 84 BUS. HIST. REV. 675 (2010); see also Lazonick & Mazzucato, *supra* note 101. In other work, I have invoked innovation theory to critique Oliver Williamson's version of agency theory as an explanation of the relationship between markets and organizations. See WILLIAM LAZONICK, BUSINESS ORGANIZATION AND THE MYTH OF THE MARKET ECONOMY 191-264 (1991); William Lazonick, *Innovative Enterprise and Historical Transformation*, 3 ENTERPRISE & SOC'Y 35, 35-54 (2002).

ditions that characterize these sectors, and hence the types of investments in innovation that must be made to generate future growth. Given that most companies conduct buybacks when they are profitable and that the implications of the failure to invest in innovation today will only become apparent in the future, the negative impacts of buybacks on the productive performance of the economy may take many years to reveal themselves.

As part of an ongoing research agenda, I have been examining how buybacks have caused adverse effects in the delivery of higher quality, lower cost products in a range of industries from oil refining to health insurance.¹⁰³ Here are some examples of these adverse effects in energy, ICT, pharmaceuticals, and banking.

1. Energy

Exxon Mobil, the world's largest petroleum refiner, did \$174.5 billion in buybacks during 2001–2010—the most of any company—despite society's need for large-scale investments in energy alternatives. Among the top fifty stock repurchasers in 2001–2010 were two other petroleum refiners: Chevron at #21 with \$26.0 billion and ConocoPhillips at #25 with \$22.0 billion.¹⁰⁴ Progress in alternative energy requires the collaboration of both government and business to provide “patient” capital.¹⁰⁵ If the big oil companies, with all their profits, will not provide it, then perhaps venture capitalists will. As illustrated by the highly publicized case of Solyndra, private equity bailed out when it became evident that the company would be unable to do a quick IPO; the company went bankrupt in August 2011, leaving U.S. taxpayers responsible for \$535 million in government-backed loans.¹⁰⁶

In June 2010, the self-styled American Energy Innovation Council (AEIC), made up of current and former heads of Bank of America, Cummins Engine, Du Pont, General Electric, Lockheed Martin, Microsoft, and Xerox as well as John Doerr, partner in the venture capital firm Kleiner Perkins Caufield & Byers, put out a plan for “America's

103. Lazonick, *Fragility*, *supra* note 1; Lazonick, *New Economy*, *supra* note 1; William Lazonick & Öner Tulum, *U.S. Biopharmaceutical Finance and the Sustainability of the U.S. Biotech Business Model*, 40 RES. POL'Y. 1170 (2011).

104. *See infra* Appendix.

105. Matt Hopkins & William Lazonick, Soaking Up the Sun and Blowing in the Wind: Clean Tech Needs Patient Capital (Dec. 2012) (paper presented at the conference on Finance, Business Models, and Sustainable Prosperity, Ford Foundation, New York, December 6, 2012), available at <http://fid.org/wp-content/uploads/2012/11/Hopkins-Lazonick-Clean-Tech-20121129.pdf>

106. Matt Hopkins & William Lazonick, *There Went the Sun: Renewable Energy Needs Patient Capital*, HUFFINGTON POST (Sept. 23, 2011), http://www.huffingtonpost.com/william-lazonick/there-went-the-sun-renewa_b_978572.html.

Energy Future.”¹⁰⁷ The plan called for the U.S. government to increase annual spending on clean energy innovation from \$5 billion to \$16 billion.¹⁰⁸ In a press release, Doerr stated,

When our company [Kleiner Perkins] shifted our attention to clean energy, we found the innovation cupboard was close to bare. America has simply neglected to support serious energy innovation. My partners and I found the best fuel cells, the best energy storage, and the best wind technologies were all born outside the United States. Other countries are investing huge amounts in these fields. Without innovation, we cannot build great energy companies. We need to restock the cupboard or be left behind.¹⁰⁹

The corporate executives who constitute AEIC are looking for the U.S. taxpayer to foot the bill for stocking the alternative energy cupboard. What about contributions to a national clean energy effort by business corporations that ultimately stand to profit from these new technologies? Over the decade 2001–2010, the seven corporations whose current or former leaders were represented on AEIC wasted a total of \$237 billion—an average of \$23.7 billion per year—buying back their companies’ stock, including \$110.0 billion by Microsoft, \$52.1 billion by Bank of America, and \$48.5 billion by General Electric. This money, even a small portion of it, could have been spent on the research to “restock the cupboard” with U.S.-based innovations, but instead it went to boosting stock prices and, in the process, lining the pockets of these highly paid executives who now lobby for taxpayers to make investments in America’s energy future.

2. ICT

Leading ICT companies do massive buybacks even as they shift high-tech jobs from the United States to low-wage countries and pressure the U.S. government to make larger investments in the high-tech knowledge base. In the decade 2001–2010, the top repurchasers among ICT companies were Microsoft with \$110.0 billion in buybacks (#2 among all repurchasers), IBM with \$89.2 billion (#3), Cisco Systems with \$65.0 billion (#4), Hewlett-Packard with \$54 billion (#6), and Intel with \$48.3 billion (#11).

107. AM. ENERGY INNOVATION COUNCIL, *THE BUSINESS PLAN* (2010), available at <http://americanenergyinnovation.org/the-business-plan-2010/>.

108. John Broder, *A Call to Triple U.S. Spending on Energy Research*, N.Y. TIMES (June 9, 2010), <http://www.nytimes.com/2010/06/10/business/energy-environment/10gates.html>.

109. Press Release, Am. Energy Innovation Council, American Business Leaders Call for Revolution in Energy Technology Innovation (June 10, 2010), available at <http://americanenergyinnovation.org/press-release-call-for-revolution-in-energy-tech-innovation/>.

The world's leading semiconductor company, Intel, has lobbied the U.S. government to spend more on nanotechnology research. For example, at a March 2005 press conference of the Semiconductor Industry Association in Washington, D.C. to urge the federal government to increase funding of nanotechnology research, Craig Barrett, then CEO of Intel, warned that "U.S. leadership in the nanoelectronics era is not guaranteed. It will take a massive, coordinated U.S. research effort involving academia, industry, and state and federal governments to ensure that America continues to be the world leader in information technology."¹¹⁰ Yet in that same year, Intel expended \$10.6 billion on stock buybacks, 2.6 times the amount that the U.S. government spent on the National Nanotechnology Initiative (NNI) from its inception in 2001 through 2005. Indeed, the \$48.3 billion that Intel spent on buybacks in 2001–2010 was more than four times the total of \$12.0 billion that, over the same period, the U.S. government allocated to the NNI.¹¹¹

Over the decade, Intel spent \$51.9 billion on R&D, equivalent to 15% of sales. And over this period, the manufacture of its microprocessors progressed from 130 nanometer to 32 nanometer technology, thus continuing its "Moore's Law" trajectory of placing ever greater computing power on a silicon chip.¹¹² But its buybacks were equal to 94% of the company's R&D expenditures, and 81% of its net income, while its dividend payouts were another 32% of net income. That is, 113% of Intel's net income in the 2000s was devoted to maximizing shareholder value. The key question is whether, while it seeks to maximize shareholder value, a leading technology company like Intel is failing to invest in the development of critical future technologies.¹¹³

The ICT industry, and Intel in particular, has benefited from decades of government investment in the nation's high-tech knowledge base.¹¹⁴ Instead of doing buybacks, Intel and other major U.S. ICT companies should consider allocating a portion of their substantial resources to support national technology programs. For example, if, over the 2001–

110. *U.S. Could Lose Race for Nanotech Leadership, SIA Panel Says*, EDN NETWORK, Mar. 16, 2005, <http://www.edn.com/electronics-news/4326508/U-S-Could-Lose-Race-for-Nanotech-Leadership-SIA-Panel-Says> [hereinafter *U.S. Could Lose*].

111. *NNI Budget*, NAT'L NANOTECHNOLOGY INITIATIVE, <http://nano.gov/about-nni/what/funding> (last visited Oct. 30, 2012).

112. Intel Corp., Annual Report (Form 10-K), at 10 (Mar. 13, 2002); Intel Corp., Annual Report (Form 10-K), at 2 (Feb. 18, 2011).

113. For a suggestive example, see Erica Fuchs & Randolph Kirchain, *Design for Location? The Impact of Manufacturing Offshore on Technology Competitiveness in the Optoelectronics Industry*, 56 MGMT. SCI., no. 12, 2010, 2323–49, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1545027.

114. See, e.g., NAT'L RESEARCH COUNCIL, *FUNDING A REVOLUTION: GOVERNMENT SUPPORT FOR COMPUTING RESEARCH* (1999).

2010 decade, Intel alone had allocated to the NNI just one-tenth of the amount that it spent on buybacks, it would have increased the program's budget by 40% while setting an example for other high-tech companies to follow. By giving the government a return on its past investments in high technology for the sake of reinvestment in the knowledge base, the business sector could help to ensure that, as Barrett said, "America continues to be the world leader in information technology."¹¹⁵

To be sure, Wall Street is pressuring the executives of these highly profitable high-tech companies to "create value" for shareholders. It is illuminating to focus on a particular example on how one of the richest and most powerful corporations in the world has acquiesced to this pressure. In June 2004, with a dividend yield of just 0.6% on its stock, Microsoft's corporate treasury was bursting with \$56 billion in cash and short-term investments, and its balance sheet showed no debt. The highly profitable company had generated almost \$16 billion in cash flow in the previous year. Given these conditions, in mid-2004, demands emanated from Wall Street for Microsoft to increase its distributions to shareholders and increase its stock price. A Goldman Sachs report by its software analyst suggested that, by borrowing \$30 billion and using \$70 billion in cash balances, Microsoft could do a \$100 billion stock repurchase.¹¹⁶ A month later, in July 2004, the Microsoft board approved a \$30 billion repurchase plan to take place over four years, a doubling of the dividend from \$0.16 per annum to \$0.08 quarterly, and a special one-time dividend that, at \$3 per share (over 12% of the current share price), totaled \$32.64 billion.

The company press release that announced these distributions assured the public that "[t]his payout will not affect Microsoft's commitment to research and development to fuel growth in the years ahead."¹¹⁷ In support of this commitment, it quoted Chairman Bill Gates:

We see incredible potential for our innovation to help businesses, individuals and governments around the world accomplish their goals, and we will continue to be one of the top innovators in our industry—as evidenced by the fact that we will file for more than 3,000 patents this fiscal year.¹¹⁸

115. *U.S. Could Lose*, *supra* note 110.

116. Todd Bishop, *Microsoft Wants to Reduce its Cash Balance and Improve its Share Price, Analyst Says; Stock Buyback May Be in the Works*, SEATTLE POST-INTELLIGENCER, June 16, 2004.

117. Press Release, Microsoft Corp., Microsoft Outlines Quarterly Dividend, Four-year Stock Buyback Plan, and Special Dividend to Shareholders (July 20, 2004), available at <http://www.microsoft.com/presspass/press/2004/jul04/07-20boardPR.msp>.

118. *Id.*

The press release also quoted CEO Steve Ballmer: “We will continue to make major investments across all our businesses and maintain our position as a leading innovator in the industry, but we can now also provide up to \$75 billion in total value to shareholders over the next four years.”¹¹⁹

Just over a year and a half later, on April 27, 2006, Microsoft announced that it would be making major new technology investments, including a large-scale commitment of resources to its online business to confront Yahoo! and Google. The company predicted earnings per share of \$1.36 to \$1.41 for fiscal 2007, well below the expectation of Wall Street analysts of \$1.53.¹²⁰ The next day Microsoft’s stock price fell by more than 11%, reducing the company’s market capitalization by some \$32 billion.¹²¹ Rick Sherland, the same Goldman Sachs analyst who had previously encouraged Microsoft to do a \$100 million repurchase, was not pleased with Microsoft’s announcement: “It’s bad to surprise the Street. It’s harmful to the stock because investors are looking for the rewards of this big product cycle next year flowing through to earnings.”¹²² Microsoft’s stock price continued to decline during most of May, amid criticism from Wall Street’s top-rated software analysts that Microsoft was a mature firm that had attracted “value investors” who wanted returns from dividends and buybacks. An article from *Bloomberg News* quoted the head of an investment company that held 14.3 million Microsoft shares, as saying, “They are not managing the business with an acknowledgment the shareholders have changed. People expecting 25 percent annual growth don’t own the stock anymore.”¹²³

On May 31, Ballmer defended the company’s “big, bold bets” on Internet technology at a conference at Sanford C. Bernstein & Company, the Wall Street investment research firm.¹²⁴ Wall Street remained critical of Microsoft’s technology strategy.¹²⁵ Microsoft’s stock price, which had trended downward during May but had moved upward in the days before

119. *Id.*

120. Michele Gershberg & Daisuke Wakabayashi, *Microsoft Shares Slide on Spending Plans*, WASH. POST (Apr. 28, 2006), http://www.washingtonpost.com/wp-dyn/content/article/2006/04/28/AR2006042800759_pf.html.

121. *Id.*

122. Benjamin J. Romano, *Ballmer Defends Microsoft’s Spending Increase*, SEATTLE TIMES (May 2, 2006), http://seattletimes.com/html/microsoft/2002965801_microsoft02.html.

123. Dina Bass, *Ballmer Pressured to Buy Back Shares of Microsoft Stock*, SEATTLE TIMES (May 13, 2006), <http://community.seattletimes.nwsources.com/archive/?date=20060513&slug=microsoftbuyback13>.

124. Dina Bass, *Sagging Stock Sends Ballmer to Wall Street to Quell Critics*, SEATTLE TIMES, (May 30, 2006), http://seattletimes.com/html/business/technology/2003027177_ballmer30.html.

125. *Microsoft to Use Cash for Development, Not Share Buybacks*, N.Y. TIMES, June 1, 2006, at C11.

the Bernstein conference, resumed its decline. The stock price reached a low on June 13, almost 21% down from its level on April 27, when Microsoft had revealed its new investment plans. Finally, on July 20, Microsoft announced that it was accelerating by two years the completion of its \$30 billion buyback program. At the same time, Microsoft also announced a plan to repurchase another \$20 billion in stock from 2007 to 2011.¹²⁶ Over the next four days, Microsoft's stock price rose by almost 7%.

If, as illustrated by the Microsoft case, some of the richest and most influential corporate executives in the world feel compelled to kowtow to Wall Street, they feel far less obliged to keep their workers employed, especially when they want to do buybacks and boost their stock prices. In the first half of 2009, for example, IBM laid off almost 10,000 people in the United States and Canada even as it "created value" for shareholders by expending \$7.4 billion in buybacks (along with \$2.9 billion in dividends) out of an income of \$13.4 billion. At the beginning of February 2009, IBM offered the first round of displaced workers "Project Match."¹²⁷ The purpose of Project Match was to "help you [employees] locate potential job opportunities in growth markets where your skills are in demand." An internal document stated, "[s]hould you accept a position in one of these countries, IBM offers financial assistance to offset moving costs, provides immigration support, such as visa assistance, and other support to help ease the transition of an international move."¹²⁸ Eligible for Project Match were "satisfactory performers who have been notified of separation from IBM U.S. or Canada and are willing to work on local terms and conditions."¹²⁹ That is, an eligible American worker laid off by IBM could apply to IBM for a job in, for example, India, and if rehired by IBM, would be paid the wages prevailing there.

Along with mass terminations, some cash-rich companies have even taken on debt to buy back their stock. In early 2009, Intel announced that it would be doing 5,000 to 6,000 layoffs,¹³⁰ and then in July 2009, announced that it was floating a convertible debt issue for \$1.75 billion, of which \$1.5 billion would be used for buybacks.¹³¹ In January

126. Maxwell Murphy, *Pay Date: Microsoft's Unstoppable Buyback Spree*, DOW JONES NEWS SERV., July 21, 2006.

127. Paul McDougall, *IBM Offers to Move Laid Off Workers to India*, INFO. WK. (Feb. 2, 2009), <http://www.informationweek.com/global-cio/outsourcing/ibm-offers-to-move-laid-off-workers-to-i/213000389>.

128. *Id.*

129. *Id.*

130. Jon Swartz, Byron Acohido & Matt Krantz, *Even Tech Stalwarts Hit Hard*, USA TODAY, January 23, 2009.

131. *Intel Sells \$1.75 Billion of 3.25 Percent Notes, Plans Stock Buyback*, ASSOCIATED PRESS NEWSWIRES, July 22, 2009.

2009, Microsoft said that it would lay off 5,000 employees—its first ever mass layoff¹³²—and then in May did a \$3.75 billion bond issue—its first ever long-term bond issue—in order to do buybacks.¹³³ In 2009, Intel generated \$11.2 billion in cash from operations and, at the end of the year (after paying out \$1.8 billion in repurchases and \$3.1 billion in dividends), had \$4.0 billion in cash and cash equivalents on hand.¹³⁴ In fiscal 2009, Microsoft generated \$19.0 billion in cash from operations and (after paying out \$9.4 billion in repurchases and \$4.5 billion in dividends) had \$6.1 billion in cash and cash equivalents on hand at the end of the year.¹³⁵ Why, then, were these cash-rich companies borrowing money to do buybacks? They held much of the cash abroad, and as I discuss further below, would be subject to U.S. corporate taxes on repatriated profits if they had brought back that money to do buybacks.

3. Pharmaceuticals

Pharmaceutical drug prices in the United States are at least twice as high as drug prices in European countries.¹³⁶ The healthcare technology industry, including biopharmaceuticals and medical devices, benefits immensely from U.S. federal government spending on life sciences through the National Institutes of Health, which had total annual budgets averaging \$30.9 billion from 2009 through 2012.¹³⁷ In opposing the regulation of drug prices by Congress, the pharmaceutical companies argue that they need high prices to fund their R&D expenditures in the United States.¹³⁸ Yet among big pharmaceutical companies from 1997 to 2010, Pfizer did repurchases equal to 64% of R&D expenditures, Johnson & Johnson 56%, and Merck 53%. When the substantial dividends that these companies paid are added to their repurchases, shareholder distributions exceeded R&D expenditures over this period by 32% at Pfizer, 17% at Johnson & Johnson, and 31% at Merck. In 2011, along with \$6.2 billion in dividends, Pfizer repurchased \$9 billion in stock, equivalent to 90% of its net income and 99% of its R&D expenditures. While Americans pay

132. Swartz, Acohido & Krantz, *supra* note 130.

133. Nick Wingfield & Romy Varhese, *Cash-Rich Microsoft Sells Its First Bonds*, WALL ST. J., May 12, 2009.

134. Intel Corp., Annual Report (Form 10-K) 52 (Feb. 22, 2010).

135. Microsoft Corp., Annual Report (Form 10-K) 44 (July 29, 2009).

136. DEP'T OF HEALTH, THE PHARMACEUTICAL PRICE REGULATION SCHEME, ELEVENTH REPORT TO PARLIAMENT, Feb. 2012, at 30 (U.K.), available at http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_132793.pdf

137. *NIH Budget*, NAT'L INST. HEALTH (Sept. 18, 2012), <http://www.nih.gov/about/budget.htm>.

138. U.S. DEP'T OF COMMERCE, PHARMACEUTICAL PRICE CONTROLS IN OECD COUNTRIES: IMPLICATIONS FOR U.S. CONSUMERS, PRICING, RESEARCH AND DEVELOPMENT, AND INNOVATION, at ch. 4 (2004); James P. Love, *The Other Drug War: How Industry Exploits Pharma Subsidies*, AM. PROSPECT, Summer 1993.

inflated prices for drugs, big pharmaceutical companies allocate billions to buybacks, and then find that they do not have new blockbuster drugs in the pipeline to replace those whose patents are now expiring.

Amgen, the largest dedicated biopharmaceutical company, has repurchased stock in every year since 1992, for a total of \$42.2 billion through 2011, including \$8.3 billion in 2011. Since 2002, the cost of Amgen's stock repurchases has surpassed the company's R&D expenditures in every year except 2004, and for the period from 1992 to 2011, was equal to 115% of R&D outlays and 113% of net income.

In May 2007, Amgen even borrowed \$3.2 billion (\$2 billion due in 2008, \$1.1 billion due in 2017, and \$0.9 billion due in 2037) to help finance a \$5 billion stock repurchase, the largest annual purchase that the company had ever done. Meanwhile, sales of its blockbuster anemia drug, Aranesp, declined by 19% because of a Food and Drug Administration ruling that dosage levels had to be cut due to cases of heart attacks from high doses.¹³⁹ On August 13, 2007, just after Amgen issued its second quarter 10-Q filing, an analyst at Bernstein Research wrote: "Amgen will likely lose at least 40 percent of their [U.S.] Aranesp revenue by 2008 with even greater downside possible for both Aranesp and Epogen if upcoming [Medicare and Medicaid] reimbursement and regulatory decisions go against them." But the analyst added, "If Amgen cuts costs, continues to buy back stock and improves its tax rate . . . it could increase its earnings per share by 10–12% each year from 2008 to 2011, even if it does not develop any significant drug candidates."¹⁴⁰

Two days later, Amgen announced that it would reduce its workforce by 14%, or 2,600 jobs, cut capital expenditures by \$1.9 billion, close some of its production facilities, and reduce R&D expenses (which had been at 27% from 2003 through 2006) to 20% of sales.¹⁴¹ It appears that Amgen borrowed money to do the \$5 billion stock repurchase because it wanted to offset the adverse impact of the Aranesp news on its stock price. In any case, the priorities of Amgen's top executives in their allocation of corporate resources seem clear: keep the company's stock price up before all else.

4. Finance

Among the biggest stock repurchasers in the years prior to the financial crisis were many of the banks that were responsible for the melt-

139. Marilyn Chase, *Amgen Cuts Mark Biotech Squeeze*, WALL ST. J., Aug. 16, 2007, <http://online.wsj.com/article/SB118720529438898746.html>.

140. *Amgen Moves Up After Analyst Says Company Will Restructure to Increase Earnings*, ASSOCIATED PRESS FIN. WIRE, Aug. 13, 2007.

141. Chase, *supra* note 139.

down and bailed out under the Troubled Asset Relief Program. They included Citigroup (\$41.8 billion repurchased between 2000 and 2007), Goldman Sachs (\$30.1 billion), Wells Fargo (\$23.2 billion), J.P. Morgan Chase (\$21.2 billion), Merrill Lynch (\$21 billion), Morgan Stanley (\$19.1 billion), American Express (\$17.6 billion), and U.S. Bancorp (\$12.3 billion). In the eight years before it went bankrupt in 2008, Lehman Brothers repurchased \$16.8 billion, including \$5.3 billion in 2006–2007, when it was apparently doing buybacks to combat the efforts of short-sellers to push down its stock price.¹⁴² Washington Mutual, which also went bankrupt in 2008, expended \$13.3 billion in buybacks between 2000 and 2007, including \$6.5 billion in 2006–2007. Wachovia, ranked 38th among the Fortune 500 in 2007, did \$15.7 billion in buybacks between 2000 and 2007, including \$5.7 billion in 2006–2007, before its fire sale to Wells Fargo at the end of 2008. Other financial institutions that did substantial repurchases between 2000 and 2007 before running into financial distress in 2008 were AIG (\$10.2 billion), Fannie Mae (\$8.4 billion), Bear Stearns (\$7.2 billion), and Freddie Mac (\$4.7 billion).¹⁴³ By spending money on buybacks during boom years, these financial corporations reduced their ability to withstand the crash of the derivatives market in 2008, thus exacerbating the jeopardy that they created for the economy as a whole.

V. WHAT HAS BEEN LOST, AND HOW IT CAN BE REGAINED

Even without all of this buyback activity, rationalization, marketization, and globalization have been eroding middle-class employment opportunities. With automation and new competition, stable blue-collar jobs for people with only high-school educations disappear. The ongoing evolution of open systems tends to devalue the capabilities of experienced employees, even those with college educations. Meanwhile, the capabilities of labor in lower-wage areas of the world continue to advance, thus making it possible for U.S.-based companies to offshore even higher-value-added work rather than continue to employ more expensive personnel in the United States.

As stated earlier in this paper, the disappearance of middle-class jobs reflects structural changes in the ways in which U.S. business corpo-

142. William Lazonick, *Everyone Is Paying the Price for Share Buy-Backs*, FIN. TIMES (Sept. 25, 2008), available at <http://www.ft.com/intl/cms/s/0/e75440f6-8b0e-11dd-b634-0000779fd18c.html#axzz2IAGV9rPT> [hereinafter Lazonick, *Everyone is Paying*]; William Lazonick, *The Buyback Boondoggle*, BUS. WK. (Aug. 13, 2009), available at http://www.businessweek.com/magazine/content/09_34/b4144096907029.htm; Emma Trincal, *Lehman Not an Easy Short Story*, HEDGEWORLD NEWS (June 5, 2008), http://www.hedgeworld.com/news/read_news.cgi?section=dail&story=dail15033.html.

143. Lazonick, *Everyone is Paying*, *supra* note 142.

rations employ the U.S. labor force. Quite apart from the financialization of the corporation, the evolution of technology, markets, and competition on a global scale means that the same types of jobs that once provided U.S. households with middle-class living standards will not come back. Especially in a high-wage economy, which the United States still remains, sustainable prosperity requires investments in innovation that can deliver high-value-added employment opportunities. Governments have to invest for the future by spending on physical infrastructures and the knowledge base. Households have to invest for the future by developing the next generation's labor force. But the combination of government and household investment will come to naught if businesses do not invest in generating higher quality products at lower unit costs. It is the failure of U.S. businesses to invest sufficiently in innovation that is undermining the achievement of equitable and stable economic growth in the United States.

At the root of the problem is the financialization of corporate resource allocation. Stock buybacks greatly exacerbate the problem of the eroding middle class as U.S. business corporations neglect the need to invest for the future. While doing buybacks, these corporations have tended to ignore the myriad technological and market opportunities in areas such as communications, medicine, transportation, and energy that would create new high-value-added employment in the United States.

Why are U.S. corporate executives so intent on making these financialized allocation decisions? Certainly they have become captive to the false ideology of maximizing shareholder value. But they have also become very rich as a result. In a society that probably more than any other on earth extols the virtues of the "economic man," it should be no surprise that the most powerful economic men—the corporate executives who control the future of innovation and job creation—view their ability to extract value from the economy as the best possible way to create value for the economy.

From the perspective of the theory of innovative enterprise, Americans are paying these top executives not to do their jobs.¹⁴⁴ One can ask

144. See William Lazonick, *The Theory of Innovative Enterprise: Methodology, Ideology, Institutions*, in *ALTERNATIVE THEORIES OF COMPETITION: CHALLENGES TO THE ORTHODOXY* 127–59 (Jamee K. Moudud et al. eds., 2012). Relatedly, Harvard Business School professor Clayton Christensen argues that companies that focus on profits do not innovate. See Steve Denning, *Clayton Christensen: How the Pursuit of Profits Kills Innovation*, *FORBES* (Nov. 18, 2011), <http://www.forbes.com/sites/stevedenning/2011/11/18/clayton-christensen-how-pursuit-of-profits-kills-innovation-and-the-us-economy>; see also Clayton M. Christensen et al., *Innovation Killers: How Financial Tools Destroy Your Capacity to Do New Things*, *HARV. BUS. REV.*, Jan. 2008, at 98–105. There is a tradition of this type of skepticism of the financialized corporation at Harvard Business School going back at least to the widely read 1980 article by Robert Hayes & William Abernathy, *Managing Our Way to Economic Decline*, *HARV. BUS. REV.*, July–Aug. 1980, at 67, 138–49;

whether the types of top executives who spend their time thinking about how to boost stock prices are thinking about the new, and inherently uncertain, opportunities for making innovative use of their companies' productive capabilities. The function of the executive is to allocate corporate resources to investments that can generate higher quality products at lower unit costs. Rather than using buybacks and layoffs to throw money and people onto capital and labor markets, corporate executives should be looking for new ways to combine patient capital and experienced workers to create the new goods and services that an advanced economy needs and can afford.

Sustainable prosperity depends on these corporate investments in innovation and job creation. When there is job displacement because of rationalization, marketization, and globalization, business and government must collaborate to ensure the availability of the education and training needed to reposition displaced workers to perform new, productive roles in the economy. The financialized corporation, obsessed with stock-price performance, tends to opt out of this collaborative effort because it operates according to an ideology that argues that it has no responsibility for the displaced workers. In doing so, the financialized corporation not only avoids a share of the cost of retraining its workers but also fails to participate in making the investments that can generate new and potentially sustainable middle-class jobs for the U.S. labor force.

Meanwhile, U.S. tax law destroys middle-class jobs by encouraging companies to offshore employment. In the jobless recovery that has followed the Great Recession, U.S. business corporations have been highly profitable. Indeed, even as stock buybacks escalated once again in 2011, U.S. business corporations were sitting on an estimated \$1.4 trillion in offshore accounts,¹⁴⁵ encouraged to do so by a fifty-year-old tax loophole that permits them to defer the payment of taxes on corporate profits, for which the rate is 35%, until they repatriate those profits to the United States.¹⁴⁶ In the 2004 presidential campaign, John Kerry proposed amendments to the tax code that would reward U.S. companies for creating jobs in the United States rather than moving jobs offshore.¹⁴⁷ The

see also ROGER L. MARTIN, *FIXING THE GAME: BUBBLES, CRASHES AND WHAT CAPITALISM CAN LEARN FROM THE NFL* (2011) (critiquing MSV).

145. *See, e.g.*, Michelle Hirsch, *\$1.4 Trillion Cash Stash Could Stoke Job Market*, FISCAL TIMES (Oct. 14, 2011), <http://www.thefiscaltimes.com/Articles/2011/10/14/1-Point-4-Trillion-Cash-Stash-Could-Stoke-Job-Market.aspx#page1>.

146. *See* William Lazonick, *The Global Tax Dodgers: Why President Obama and Congress Lack Job Creation Plans*, HUFFINGTON POST (Aug. 18, 2011), http://www.huffingtonpost.com/william-lazonick/offshore-job-profits_b_930531.html.

147. Martin Crutsinger, *Kerry's Plan Targets 'Benedict Arnolds'*, ASSOCIATED PRESS NEWSWIREs, March 27, 2004.

preferred approach of the Bush Administration was the Homeland Investment Act, part of the American Job Creation Act of 2004, that provided a one-year corporate income tax holiday on profits repatriated, with the stipulation that these profits had to be used for investments that create jobs. The Act expressly prohibited the use of these funds to pay dividends or do stock buybacks. U.S. corporations responded by repatriating \$299 billion in profits in 2005 compared with an average of \$62 billion from 2000 to 2004 and a subsequent decline to \$102 billion in 2006.¹⁴⁸

But Dharmapala, Foley, and Forbes found that the repatriation failed to achieve its intended purpose:

Rather than being associated with increased expenditures on domestic investment or employment, repatriations were associated with significantly higher levels of payouts to shareholders, mainly taking the form of share repurchases. Estimates imply that a \$1 increase in repatriations was associated with an increase in payouts to shareholders of between \$0.60 and \$0.92, depending on the specification.¹⁴⁹

They suggest that companies were able to make these distributions to shareholders without violating the terms of the repatriation legislation by using the repatriated funds “to pay for investment, hiring, or R&D that was already planned, thereby releasing cash that had previously been allocated for these purposes to be used for payouts to shareholders.”¹⁵⁰

A persistent promise in Barack Obama’s campaigns for the Senate in 2004 and the Presidency in 2008 was that he would end tax breaks for corporations that ship jobs overseas.¹⁵¹ In a speech in May 2009, President Obama declared, “It’s a tax code that says you should pay lower taxes if you create a job in Bangalore, India, than if you create one in Buffalo, New York.”¹⁵² In June 2009, Microsoft CEO Steve Ballmer responded that an end to the overseas tax deferral would make “U.S. jobs more expensive,” and that if the Obama Administration insisted on changing the tax law, Microsoft would be “better off taking lots of peo-

148. Dhammika Dharmapala, C. Fritz Foley & Kristin J. Forbes, *Watch What I Do, Not What I Say: The Unintended Consequences of the Homeland Investment Act*, 66 J. FIN. 753, 753–87 (2011).

149. *Id.* at 756.

150. *Id.*

151. See e.g., Dennis Conrad, *Democrat: Economy Squeezing Middle Class*, ASSOCIATED PRESS NEWSWIREs, June 24, 2004; ; Sridhar Krishnaswami, *Obama to End Benefits to Firms That Send Jobs Overseas*, ORG. OF ASIA-PACIFIC NEWS AGENCIES, Sept. 1, 2008.

152. Press Release, The White House, Remarks by the President on International Tax Policy Reform (May 4, 2009), available at http://www.whitehouse.gov/the_press_office/Remarks-By-The-President-On-International-Tax-Policy-Reform.

ple and moving them out of the U.S.”¹⁵³ In September 2009, the Obama Administration met with U.S. high-tech executives, and agreed to shelve the plan to end the tax deferral.¹⁵⁴ Nevertheless, in his State of the Union address on January 27, 2010, President Obama insisted that “it is time to finally slash the tax breaks for companies that ship our jobs overseas and give those tax breaks to companies that create jobs right here in the United States of America.”¹⁵⁵

This tax loophole has not yet been closed. Indeed, in October 2010, John Chambers, chairman and CEO of Cisco Systems, and Safra Catz, president of Oracle, published a *Wall Street Journal* opinion piece in which they sought to counter criticism in the press that U.S. corporations were sitting on one trillion dollars in cash instead of investing in jobs in the United States.¹⁵⁶ The two high-tech executives claimed that U.S. corporations were holding the cash in question overseas, and contended that these funds “could be invested in U.S. jobs, capital assets, research and development, and more” if U.S. corporations had an incentive to do so.¹⁵⁷ “But,” they continued, “for U.S. companies such repatriation of earnings carries a significant penalty: a federal tax of up to 35%. This means that U.S. companies can, without significant consequence, use their foreign earnings to invest in any country in the world—except here.”¹⁵⁸

Having transformed an existing U.S. government tax concession to U.S. corporations into a tax penalty on U.S. corporations, Chambers and Catz then noted that repatriated profits could “provide needed stability for the equity markets because companies would expand their activity in mergers and acquisitions, and would pay dividends or buy back stock.”¹⁵⁹ To lure the \$1 trillion back to the United States, they proposed a 5% tax on repatriated profits that would yield the U.S. government a quick \$50 billion, which could then “be used to help put America back to work . . . [by giving] employers—large or small—a refundable tax credit for hiring previously unemployed workers (including recent graduates).”¹⁶⁰ “Such a

153. Ryan J. Donmoyer, *Ballmer Says Tax Would Move Microsoft Jobs Offshore (Update 3)*, BLOOMBERG, (June 3, 2009), <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aAKluP7yIwJY>.

154. Neil King, Jr. & Elizabeth Williamson, *Business Fends Off Tax Hit*, WALL ST. J., Oct. 14, 2009, at A14.

155. Barack Obama, President of the United States, Address Before a Joint Session of Congress on the State of the Union (Jan. 27, 2010), in 156 CONG. REC. H418 (daily ed. Jan. 27, 2010), available at <http://www.whitehouse.gov/the-press-office/remarks-president-state-union-address>.

156. John Chambers & Safra Catz, *The Overseas Profits Elephant in the Room*, WALL ST. J., Oct. 20, 2010, at A19.

157. *Id.*

158. *Id.* (emphasis added).

159. *Id.*

160. *Id.*

program,” they said, “could help put more than two million Americans back to work at no cost to the government or American taxpayers. How’s that for a good idea?”¹⁶¹ Along with other business executives, Chambers presented his “good idea” directly to President Obama at the White House on December 15, 2010.¹⁶²

Innovation and job creation require business–government collaboration.¹⁶³ Government investment in physical infrastructures, such as communication networks and transportation systems, as well as human infrastructures such as higher education and research facilities, provides an essential foundation for business investment, especially in high-tech fields. Government subsidies to business, often implemented through tax legislation, can serve as further inducements to business investment. As already mentioned, in the United States, government funding has been critical to the emergence and development of high-tech sectors such as computers, the Internet, biotechnology, and alternative energy.¹⁶⁴

Without these government investments and subsidies, the United States would not lead the world in venture capital—an industry devoted to new-firm formation and growth.¹⁶⁵ Yet, in the United States, it can be argued that a disproportionate share of the returns to a successful new venture accrue to those entrepreneurs and financiers who put an innovation on the market. At the same time, the success neglects to reward the contributions of other stakeholders, especially taxpayers, who made significant contributions to the innovation process.¹⁶⁶ In the name of “shareholder value,” rewards are reaped at the expense of non-shareholding

161. *Id.*

162. Jesse Drucker, *Dodging Repatriation Tax Lets U.S. Companies Bring Profits Back Home*, BLOOMBERG BUSINESSWEEK (Dec. 29, 2010), <http://www.businessweek.com/news/2011-01-05/dodging-repatriation-tax-lets-u-s-companies-bring-home-cash.html>.

163. STATE OF INNOVATION: THE U.S. GOVERNMENT’S ROLE IN TECHNOLOGY DEVELOPMENT (Fred Block & Matthew Keller eds., 2011); Fred Block, *Swimming Against the Current: The Rise of a Hidden Developmental State in the United States*, 36 POL. & SOC’Y 169, 169–206 (2009); William Lazonick, *Entrepreneurial Ventures and the Developmental State: Lessons from the Advanced Economies* (World Inst. of Dev. Econ. Research, Discussion Paper No. 2008-01, 2008), available at http://www.wider.unu.edu/publications/working-papers/discussion-papers/2008/en_GB/dp2008-01/_files/78805634425684379/default/dp2008-01.pdf; William Lazonick, *Nine Government Investments that Made Us an Industrial Economic Leader*, HUFFINGTON POST (Sept. 8, 2011), http://www.huffingtonpost.com/william-lazonick/nine-government-investmen_b_954185.html; see also DAN BREZNITZ, INNOVATION AND THE STATE: POLITICAL CHOICE AND STRATEGIES FOR GROWTH IN ISRAEL, TAIWAN, AND IRELAND (2007); Ralph Gomory, *Country and Company: Part I—Divergent Goals*, HUFFINGTON POST (Mar. 16, 2009), http://www.huffingtonpost.com/ralph-gomory/country-and-company-part_b_174875.html.

164. NAT’L RESEARCH COUNCIL, *supra* note 114; Lazonick & Tulum, *supra* note 103; Hopkins & Lazonick, *supra* note 105.

165. See WILLIAM H. JANEWAY, *DOING CAPITALISM IN THE INNOVATION ECONOMY* (2012).

166. LAZONICK, *SUSTAINABLE PROSPERITY*, *supra* note 1.

stakeholders who risked their labor and capital in the collective and cumulative innovation process.¹⁶⁷

Once a new venture has become a going concern, MSV ideology continues to hold sway. Innovation may drive stock prices for a while, and thousands of employees can share in the gains through broad-based stock-option plans. But the use of stock options as a mode of compensation means that the realization of gains depends on selling, not holding, ownership stakes. Moreover, in an exploding stock market, as occurred in the Internet boom from 1996 to 2000, the returns to option holders reflect gains from speculation much more than gains from innovation. Furthermore, even in the tight labor markets of the Internet boom, high-tech employees who could potentially reap large gains from the exercise of stock options were also vulnerable to being thrown out of work through marketization and globalization.¹⁶⁸

As we have seen, in the 2000s up to the financial crisis of 2008, it was manipulation much more than innovation or speculation that drove stock prices. Through the escalation of stock buybacks from 2003 to 2007, the S&P 500 Index peaked in 2007 at a higher level than that achieved through the often wildly speculative stock valuations of 2000. During 2003 through 2007, major U.S. companies used escalating stock buybacks to compete with one another to boost their stock prices and manage quarterly EPS. In the Great Recession of 2008–2009, stock prices tumbled as did stock buybacks. By 2010, U.S. companies were profitable again, but they both increased buybacks and sat on huge cash reserves. In some cases, companies even augmented these reserves by borrowing money at very low interest rates while they kept cash offshore to avoid taxation, preparing themselves for a renewed competitive escalation of buyback activity.¹⁶⁹

The evolution of Wall Street into a gambling casino brought us the Great Recession. The subsequent recovery, which at the time of writing in January 2013 remains essentially “jobless,” has been the result of the continued domination of MSV ideology and practice in the U.S. industrial corporation. Until U.S. policy makers address the problem of the financialization of corporate resource allocation, the achievement of equitable and stable economic growth will elude the United States.

The policy agenda for sustainable prosperity must include five major reforms. First, stock repurchases by established U.S. corporations should be banned so that corporate financial resources that could be allo-

167. Lazonick & Mazzucato, *supra* note 101.

168. LAZONICK, SUSTAINABLE PROSPERITY, *supra* note 1; Lazonick, *New Economy*, *supra* note 1.

169. Lazonick, *Fragility*, *supra* note 1.

cated to innovation and job creation are not wasted for the purpose of manipulating companies' stock prices. Once one rejects the flawed ideology that, for the sake of superior economic performance, corporations should be run to maximize shareholder value, it follows that stock repurchases by established corporations serve no legitimate economic purpose. Moreover, executives who can think of no better way to allocate corporate resources should not be running the nation's corporations. Instead of being used to prop up stock prices, these funds can be (a) invested in innovation in areas in which the company has competence, (b) invested in new ventures and spinoffs that draw upon the knowledge and experience of corporate employees, (c) returned to employees in the form of higher wages and benefits, (d) returned to local, state, and national governments that have supported the growth of the company, and/or (e) returned to shareholders in the form of dividends, if such distributions are consistent with equitable and stable economic growth.

Second, employee stock options should be indexed to an indicator of innovative performance so that executives cannot gain from speculation in and manipulation of their companies' stock prices. It is generally accepted, by both proponents and opponents of shareholder-value ideology, that corporate executives in the United States have developed an obsession with meeting Wall Street's expectations of quarterly EPS targets. It is also generally the case that people respond to financial incentives in their resource allocation decisions (be it the allocation of their own human capital or the resources in a corporation), especially when the society deems those financial incentives as legitimate and consistent with the common good. Remuneration in the form of unindexed stock options that can be sold as soon as they are exercised gives the U.S. corporate executive a strong incentive to make allocative decisions that result in speculation in and manipulation of the company's stock price. Shareholder-value ideology legitimizes both stock buybacks and stock-based remuneration. Regulations that tie stock-based compensation to gains from innovation and exclude gains from speculation and manipulation are required to remove this perverse incentive. It may make sense to get rid of stock-based compensation altogether.

Third, the employment contract should be regulated to ensure that workers who contribute to the innovation process share in the gains from innovation. It is inherent in the innovation process that investments of productive resources, including the application of the skills and efforts of workers, are made today with the expectation of financial returns in the future. Workers, financiers, and taxpayers who contribute their labor and capital to the innovation process have a legitimate claim to an equitable share in the gains from innovation if and when they occur. Because in-

novation is a collective, cumulative, and uncertain process, it follows that the incentives of workers to contribute their skills and efforts to innovation depend on their expectations that these future returns will be forthcoming. At the same time, however, for these returns to be in fact equitable, they cannot be treated as an entitlement of employment. A “theory of innovative enterprise” is an essential intellectual foundation for the intelligent regulation of the employment contract, a foundation establishing norms of distribution of the gains from innovative enterprise that are consistent with equitable and stable economic growth.¹⁷⁰

Fourth, there should be creation of work programs that make productive use of and enhance the productive capabilities of educated and experienced workers whose human capital would otherwise deteriorate through lack of other relevant employment. Although there is little in the way of systematic evidence on the subject, there is no doubt that the combination of marketization and globalization has resulted in the displacement of large numbers of well-educated and highly experienced workers. The accumulated human capital of these workers, many of them in their forties and fifties, will obsolesce unless they are quickly re-employed in jobs that can make use of it. Such a diminution in the stock of highly qualified human capital poses a high cost to the individuals concerned. Society also loses because, to some extent, it has subsidized the investment in this human capital with the expectation of benefiting from its productive use. New employment opportunities may be created in the business sector or the government sector. Either way, effective programs will require business–government collaboration to maintain and enhance the capabilities of workers so that they can make productive contributions to the economy and earn decent incomes for themselves.

Finally, taxes on the gains from innovation should be implemented to fund those government agencies that need to invest in the public knowledge base required for the next round of innovation. The prevailing ideology that the free operation of markets tends to result in superior economic performance ignores the roles of two fundamental investors in economic growth. First, it ignores the role of the innovative enterprise in generating higher quality, lower cost products. Second, it ignores the role of the developmental state in investing in knowledge bases and physical infrastructures that support the innovation process. MSV ideology appropriates for shareholders the returns to innovation that should go not only to employees but also to taxpayers. Notwithstanding the dominance of an ideology that says that the government should play little if any role

170. Lazonick, *supra* note 144; Lazonick & Mazzucato, *supra* note 101; William Lazonick, Who Needs a Theory of Innovative Enterprise? (July 4, 2012) (unpublished manuscript presented at the Conference of the International Schumpeter Society) (on file with author).

in the allocation of productive resources, over the course of the twentieth century the U.S. government was the most formidable “developmental state” in history. In every high-tech field in which the United States has been a leader, it has been the result of a combination of resource allocation by the innovative enterprise and the developmental state.¹⁷¹

It will be impossible to justify these reforms if Americans do not question the ideology that companies should be run to “maximize shareholder value.” It is an ideology that results in inequity and instability and that ultimately undermines the productive foundations of economic growth. While MSV has currency throughout the world, its pervasive and unquestioned acceptance has become an almost uniquely American phenomenon. Even in the United States, it was an ideology that economy could do without until the 1980s—which is when the trends to permanent job displacement and income inequality set in. The United States is engaged in global competition with highly innovative national economies in which MSV ideology does not hold sway. As long as this destructive ideology governs U.S. corporate resource allocation, the U.S. economy will remain incapable of generating middle-class jobs on the scale that is needed to restore sustainable prosperity.

171. William Lazonick, *The Innovative Enterprise and the Developmental State: Toward an Economics of “Organizational Success”* (Apr. 8, 2011) (unpublished manuscript presented at the Institute for New Economic Thinking Annual Conference, revised for presentation at the Ford Foundation Conference on Finance, Business Models, and Sustainable Prosperity, Dec. 6, 2012), *available at* <http://fiid.org/wp-content/uploads/2012/11/Lazonick-Innovative-Enterprise-and-Developmental-State-20121117.pdf>.

Appendix: Fifty Biggest Stock Repurchasers, 2001–2010¹⁷²

Industry color codes:

| | | | | | | | | |
|-----------|-----|----------|--------|-----------|------------|-----------|---------------|-------|
| Petroleum | ICT | Consumer | Retail | Financial | Healthcare | Aerospace | Entertainment | Misc. |
|-----------|-----|----------|--------|-----------|------------|-----------|---------------|-------|

| RP rank | Company Name | Fortune rank 2010 | Repurchases 2001-2010, \$b. | RP/NI% | DV/NI% | R&D% SALES | RP/R&D |
|---------|--------------------|-------------------|-----------------------------|--------|--------|------------|--------|
| 1 | EXXON MOBIL | 2 | 174.5 | 62 | 26 | 0.3 | 22.8 |
| 2 | MICROSOFT | 38 | 110.0 | 89 | 49 | 15.2 | 1.6 |
| 3 | IBM | 18 | 89.2 | 91 | 18 | 5.7 | 1.7 |
| 4 | CISCO SYSTEMS | 62 | 65.0 | 130 | 0 | 14.8 | 1.5 |
| 5 | PROCTER & GAMBLE | 26 | 57.0 | 72 | 44 | 3.1 | 3.0 |
| 6 | HEWLETT-PACKARD | 11 | 54.0 | 116 | 18 | 3.8 | 1.6 |
| 7 | WAL-MART STORES | 1 | 52.6 | 46 | 24 | 0.0 | nm |
| 8 | BANK OF AMERICA | 9 | 52.1 | 51 | 63 | 0.0 | nm |
| 9 | PFIZER | 31 | 50.6 | 62 | 68 | 17.1 | 0.6 |
| 10 | GENERAL ELECTRIC | 6 | 48.5 | 29 | 52 | 1.9 | 1.7 |
| 11 | INTEL | 56 | 48.3 | 81 | 32 | 15.0 | 0.9 |
| 12 | JOHNSON & JOHNSON | 40 | 37.3 | 38 | 40 | 12.4 | 0.6 |
| 13 | GOLDMAN SACHS | 54 | 35.8 | 57 | 13 | 0.0 | nm |
| 14 | CITIGROUP | 14 | 32.2 | 38 | 72 | 0.0 | nm |
| 15 | HOME DEPOT | 30 | 30.9 | 75 | 27 | 0.0 | nm |
| 16 | DELL | 41 | 29.5 | 119 | 0 | 1.0 | 5.8 |
| 17 | PEPSICO | 43 | 28.8 | 62 | 39 | 0.7 | 11.3 |
| 18 | AMGEN | 163 | 28.8 | 105 | 0 | 25.1 | 1.0 |
| 19 | TIME WARNER | 95 | 28.7 | -73 | -13 | 0.3 | 28.2 |
| 20 | UNITEDHEALTH GROUP | 22 | 26.5 | 88 | 2 | 0.0 | nm |
| 21 | CHEVRON | 3 | 26.0 | 20 | 32 | 0.3 | 6.2 |
| 22 | AT&T | 12 | 25.5 | 27 | 68 | 0.6 | 5.2 |
| 23 | DISNEY | 55 | 24.9 | 90 | 19 | 0.0 | nm |
| 24 | ORACLE | 96 | 22.4 | 52 | 5 | 12.4 | 1.0 |
| 25 | CONOCOPHILLIPS | 4 | 22.0 | 40 | 34 | 0.1 | 13.0 |

172. The data comprising this appendix were obtained from Standard & Poor's Compustat Database and corrected with data directly from company 10-K filings. RP=repurchases of common stock; DV=cash dividends; NI=net income; R&D=research and development expenditures; nm=not meaningful because of zero R&D expenditures. For a PDF showing this appendix in color, see *Archive*, SEATTLE U. L. REV., <http://seattleuniversitylawreview.com/archive/> (last visited Feb. 22, 2013).

| | | | | | | | |
|----|----------------------|-----|------|-----|-----|------|------|
| 26 | WELLS FARGO | 23 | 21.9 | 29 | 41 | 0.0 | nm |
| 27 | WELLPOINT | 42 | 21.9 | 101 | 0 | 0.0 | 0.0 |
| 28 | TEXAS INSTRUMENTS | 175 | 21.7 | 129 | 18 | 15.6 | 1.2 |
| 29 | MCDONALD'S | 111 | 20.3 | 72 | 43 | 0.0 | nm |
| 30 | JPMORGAN CHASE | 13 | 20.1 | 24 | 45 | 0.0 | nm |
| 31 | AMERICAN EXPRESS | 91 | 17.1 | 56 | 21 | 0.0 | nm |
| 32 | UPS | 48 | 16.9 | 58 | 51 | 0.0 | nm |
| 33 | MERCK | 53 | 16.8 | 27 | 56 | 15.3 | 0.4 |
| 34 | COCA-COLA | 70 | 16.0 | 28 | 49 | 0.0 | nm |
| 35 | MORGAN STANLEY | 63 | 16.0 | 41 | 31 | 0.0 | nm |
| 36 | ALTRIA GROUP | 154 | 15.8 | 19 | 62 | 1.2 | 2.6 |
| 37 | 3M | 97 | 15.2 | 49 | 41 | 5.9 | 1.2 |
| 38 | DIRECTV GROUP | 110 | 15.0 | 258 | 2 | 0.2 | 53.5 |
| 39 | TRAVELERS COS | 106 | 14.8 | 60 | 44 | 0.0 | nm |
| 40 | CBS | 174 | 14.7 | -52 | -12 | 0.0 | nm |
| 41 | UNITED TECHNOLOGIES | 44 | 14.4 | 42 | 26 | 3.3 | 1.0 |
| 42 | LOCKHEED MARTIN | 52 | 14.0 | 73 | 28 | 2.6 | 1.9 |
| 43 | COMCAST | 66 | 13.9 | 83 | 14 | 0.0 | nm |
| 44 | BOEING | 36 | 13.5 | 57 | 37 | 5.2 | 0.4 |
| 45 | PRUDENTIAL FINANCIAL | 65 | 13.1 | 73 | 19 | 0.0 | nm |
| 46 | AETNA | 77 | 12.0 | 102 | 1 | 0.0 | nm |
| 47 | ALLSTATE | 89 | 12.0 | 60 | 35 | 0.0 | nm |
| 48 | TARGET | 33 | 11.6 | 52 | 16 | 0.0 | nm |
| 49 | U S BANCORP | 126 | 11.2 | 32 | 54 | 0.0 | nm |
| 50 | MEDTRONIC | 160 | 10.9 | 49 | 25 | 11.2 | 0.8 |