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

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Revised, October 2012

Background paper for a keynote lecture on "the governance of innovative enterprise" at the Conference on the Governance of a Complex World, University of Nice Sophia Antipolis, November 2, 2012. An earlier version of this paper was presented at the Seattle University School of Law Berle IV Symposium, "The Future of Financial/Securities Markets," London June 14-15, 2012. Forthcoming in *Seattle University Law Review*. I am grateful to the editors of the *Seattle University Law Review* for comments. The research in this paper has been funded by the Ford Foundation project on Financial Institutions for Innovation and Development, the INET project on the Stock Market and Innovative Enterprise, the European Commission project on Finance, Innovation, and Growth, and the Connect Innovation Institute project on Innovation and Production: Reviving U.S. Prosperity. Mustafa Erdem Sakinç, has coordinated the development and maintenance of the stock-buyback database, and Dongxu Li, Qiaoling Ma, Xiahui Xia, and Yue Zhang have provided research assistance.

Abstract

The employment problems that the United States now faces are largely structural. The structural problem is not, however, as many economists have argued, a labor-market mismatch between the skills that prospective employers want and the skills that potential workers have. Rather the employment problem is rooted in changes in the ways that U.S. corporations employ workers as a result of "rationalization", "marketization", and "globalization". 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. Nevertheless, the disappearance of these 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 enough 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. The most obvious manifestation of financialization is the phenomenon of the stock buyback, with which major U.S. corporations seek to manipulate the market prices of their own shares. For the decade 2001-2010 the companies in the S&P 500 Index expended about $3 trillion on stock buybacks. The prime motivation for stock buybacks is the stock-based pay of the corporate executives who make these allocation decisions. The justification for stock buybacks is the erroneous ideology, inherited from the conventional theory of the market economy, that, for superior economic performance, companies should be run to "maximize shareholder value". In this essay I summarize the damage that this ideology is doing to the U.S. economy, and I lay out a policy agenda for restoring equitable and stable economic growth.

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 that can enable 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 remain at least 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 type of economy existed as recently as the 1990s, while for most high-school-educated people it disappeared a decade or two before that. More generally, the past 30 years or so have seen an unrelenting disappearance of middle-class jobs accompanied 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 has recognized, the prosperity of the top "1%" is the antithetical to a prosperous U.S. economy.

As the U.S. economy still 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 economy is beset by deep structural problems. My research on the evolution of the U.S. economy over the past half century shows that such is indeed the case (see Lazonick 2009a, 2009c; 2010a; 2012). 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. 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. In the early 1980s the plant closings that characterized rationalization 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. In the early 1990s the erosion of the one-company-career norm among white-collar workers that characterized marketization was a response to the dramatic technological shift from proprietary systems to open systems that was integral to the

microelectronics revolution. In the early 2000s the acceleration in the offshoring of the jobs of well-educated and highly experienced members of the U.S. labor force that characterized globalization was a response to the emergence of large supplies of highly capable labor in lower-wage developing nations such as China and India.

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 company's 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, major 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. Legitimizing this "financialized" mode of corporate resource allocation has been the ideology, itself a product of the 1980s and 1990s, that a business corporation should be run to "maximize shareholder value" (Lazonick and O'Sullivan 2000; Lazonick 2012a). Through their stock-based compensation, corporate executives who make these resource-allocation decisions are themselves prime beneficiaries of this focus on rising stock prices as the measure of corporate performance.

My argument is that the employment problems that the United States now faces are largely structural. The structural problem is not, however, as many economists have argued, a labor-market mismatch between the skills that prospective employers want and the skills that potential workers have. Rather the employment problem is rooted in changes in the ways that U.S. corporations employ workers as a result of rationalization, marketization, and globalization. Nevertheless, the disappearance of these 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 enough 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 the next section of this essay, I summarize the evidence that supports the proposition that there have been fundamental structural changes in employment in the United States that since the early 1980s have eroded middle-class employment opportunities for the U.S. labor force. Then I present the 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. In the following sections I show that stock buybacks have became 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. Then I point out how, in many different ways in many

different industries, this financialized mode of corporate resource allocation has undermined the prosperity of the U.S. economy. I conclude this essay 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.

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 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. The result was relatively equitable and stable economic growth from the late 1940s to the beginning of the 1970s (Lazonick 2009a, chs. 1 and 3).

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. 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. 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 (Lazonick 1998 and 2010a). 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" (Lazonick 1990).

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. 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 44th largest U.S. industrial company by revenues with employment of 119,000. By 1986 it had been taken over by General Electric and sold off in pieces (Chandler 2001, chs. 2 and 3). During the 1980s U.S. automobile manufacturers attempted to learn from 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 (Platzer and Harrison 2009). In the machine tool industry, the overwhelming success of the Japanese against the major U.S. companies was followed from the 1990s by the emergence of export-oriented small- and medium-sized enterprises producing for specialized niche markets (Kalafsky and MacPherson 2002). In the steel industry, the innovative response of the United States was the emergence of independent 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 from 1989 enabled the minimills to compete with integrated mills in flat products such as bars and sheets as well (Giarratani et al. 2007).

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 competition forced major U.S. semiconductor companies to retreat from this segment of the market, with Intel facing the possibility of bankruptcy in the process (Burgelman 1994; Okimoto and Nishi 1994). Led by Intel and its microprocessor for the IBM PC and its clones, however, U.S. companies became world leaders in chip design. Indeed, the IBM PC, with its open systems architecture, laid the basis for the rise of a "New Economy business model" with rationalization, marketization, and globalization of employment in its DNA (Lazonick 2009a and 2009c).

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 good blue-collar jobs disappeared from U.S. industry, as it turned out permanently (Bednarzik 1983). 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 were much more likely to shutter whole plants (Harris 1984; Hamermesh 1989). From 1980 to 1985 employment in the U.S. economy increased from 104.5 million to 107.2 million workers, or by 2.6 percent. But employment of operators, fabricators, and laborers fell from 20.0 million to 16.8 million, a decline of 15.9 percent (U.S. Department of Commerce 1983, 416; and 1986, 386).

As Daniel Hamermesh (1989, 53) summed it up: "Each year during the eighties, plant closings in the U.S. displaced roughly one-half million workers with three-plus years on the job." Over the course of the 1980s the stock market came to react favorably to permanent downsizings of the blue-collar labor force (Abowd et al. 1990; Palmon et al. 1997). 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 these displaced members of the U.S. 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 Old Economy manufacturing sectors such as steel, autos, and consumer electronics that were in decline and underrepresented in the New Economy sectors related to the microelectronics revolution that were on the rise. 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, they tended to have been the last hired and hence were the first fired (see Kletzer 1991; Sharpe 1993; Fairlie and Kletzer 1998). As William Julius Wilson (1996-1997) argued, 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.

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 73.0 percent, and employment of computer programmers increased from 318,000 to 534,000, or by 67.9 percent (U.S. Department of Commerce 1983, 416; and 1986, 385). In the expansion of 1983-1985, however, workers in traditional manufacturing industries, who typically held 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 (Borrus and Zysman 1997). In 1982 IBM's PC sales were $500 million. Just two years later IBM's PC sales had soared to 11 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 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 (Chandler 2001, 118–119, 142–143). Competition on the basis of open systems had become the norm (Chesbrough 2006).

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, even in the 1980s, still offered employees the realistic prospect of a career with one company. As young firms facing a highly uncertain future, it was impossible for New Economy companies to 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 did its initial public offering (IPO). A decade later, after it had come to dominate the Internet router market, it had over 34,000 employees, virtually all of whom received stock options (Lazonick 2009a, ch. 2).

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 percent 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 10 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 (Lazonick 2009a, chs. 2 and 4).

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, taken together, 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 of their existing productive capabilities and for which they could develop new products.

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 (Eberts and Groshen 1991; Gardner 1994). Hence the downturn of 1990-1991 is known as a "white-collar recession". 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 40s and 50s had come to expect under the Old Economy business model vanished as employers replaced more expensive older workers with less expensive younger workers (Lazonick 2009a, chs. 3 and 7).

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. From 1990 to 1994, however, IBM cut employment from 373,816

to 219,839, reducing its labor force to only 59 percent of its year-end 1990 level. 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 55. But in 1993 and 1994, after recruiting CEO Louis V. Gerstner, Jr. from RJR Nabisco to get the job done, many thousands of IBM employees were fired outright. In 1995 IBM rescinded the early-retirement offer that had helped downsize its labor force; the offer had accomplished its purpose, and in any case, IBM no longer wanted to encourage all employees to remain with the company even until the age of 55 (Lazonick 2009a, ch. 3).

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 percent 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 and parcel 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 million in 1992, and $148 million in 1993. Although IBM continued to downsize at a torrid pace in 1994, most of it 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 million. By that time, lifelong employment at IBM was a thing of the past.

In line with the IBM transition, for the period of 1992 to 1997, John Abowd and his co-authors (2007) found a general shift in U.S. employment from older experienced workers to younger skilled workers related to the adoption of computer technologies. Using Current Population Survey data, Charles Schultze (1999, 10–11) discovered that "[m]iddle-aged and older men, for whatever reason, are not staying as long with their employers as they once did." 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 percent in 1981–1982 and increasing to about 80 percent in the 1990s.

As Lori Kletzer (1998, 117) 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 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.

In a more recent analysis of changes in job security, Henry Farber (2010, 223) stated that "[t]here is ample evidence that long-term employment [with one company] is on the decline in the United States." Using Current Population Survey data for 1973–2006, Farber (2010, 230) 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.

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 (2010, 253) 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.

In the 2000s globalization joined rationalization and marketization as a source of structural change in the employment opportunities available to members of the U.S. labor force. 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 (Lazonick 2009a, ch. 5). Over time, a combination of work experience at home with both multinational and indigenous companies as well as the return of nationals who had acquired graduate education and/or work experience abroad enhanced the capabilities of the Asian labor force to engage in higher value-added activities. By the beginning of the 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 combined with the availability of high quality, low cost communications networks to enable a vast acceleration of the movement of jobs by U.S. companies to China and India (Bronfenbrenner and Luce 2004; Bednarzik 2005; Blinder 2007; Hira and Hira 2008; Houseman 2009).

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 in the United States found themselves vulnerable to displacement (Garner 2004; Jensen and Kletzer 2005). Given huge increases in the issuance of non-immigrant (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 (Hira 2010). In February 2003, after more than a year of jobless recovery, BusinessWeek (Engardio et al. 2003) gained considerable attention when its cover blared the rhetorical question: “Is Your Job Next?”. 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?"

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 decline (see Uchitelle 2007, ch. 7). In 2011 the U.S. rate of business-sector unionization was 6.9 percent, having declined steady from over 15 percent in 1983 (U.S. Department of Labor 2012). 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 the 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.

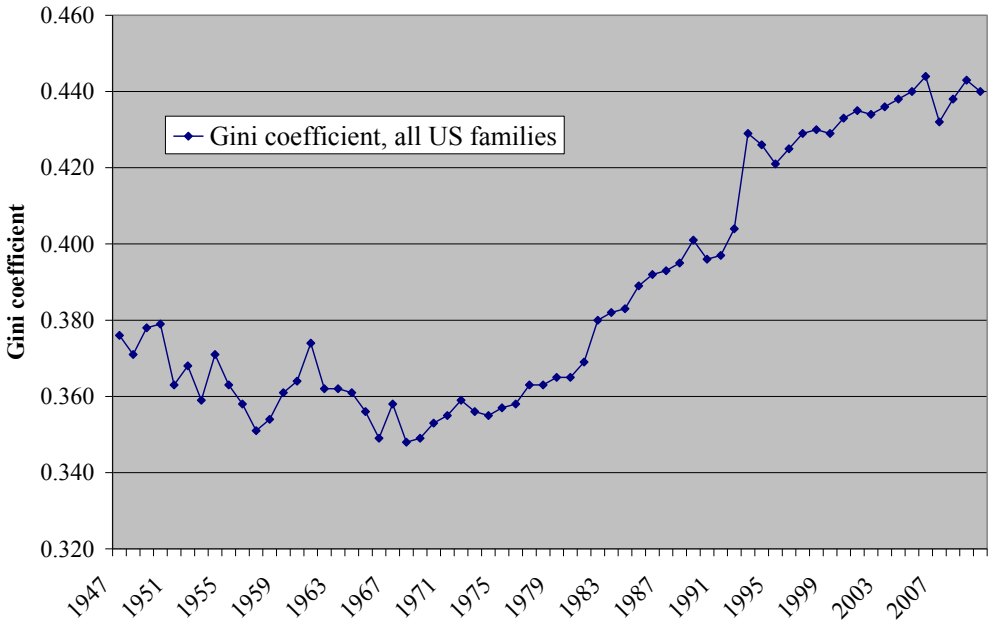
Unlike the recessions of 1980-1982, 1990-1991, and 2001, the Great Recession of 2008-2009 was a purely financial downturn caused by speculation in and manipulation of securities markets by the financial sector of the economy. That speculation and manipulation exploited the fragility of homeownership in an economy that since the 1980s had been the 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. As a general rule, as I shall show, 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.

Corporate Executives in the Top 0.1 Percent

In the generally prosperous U.S. economy of the immediate 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 OECD countries 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 (OECD 2011, 6).

Figure 1. Gini coefficient, income distribution among all U.S. families, 1947-2010

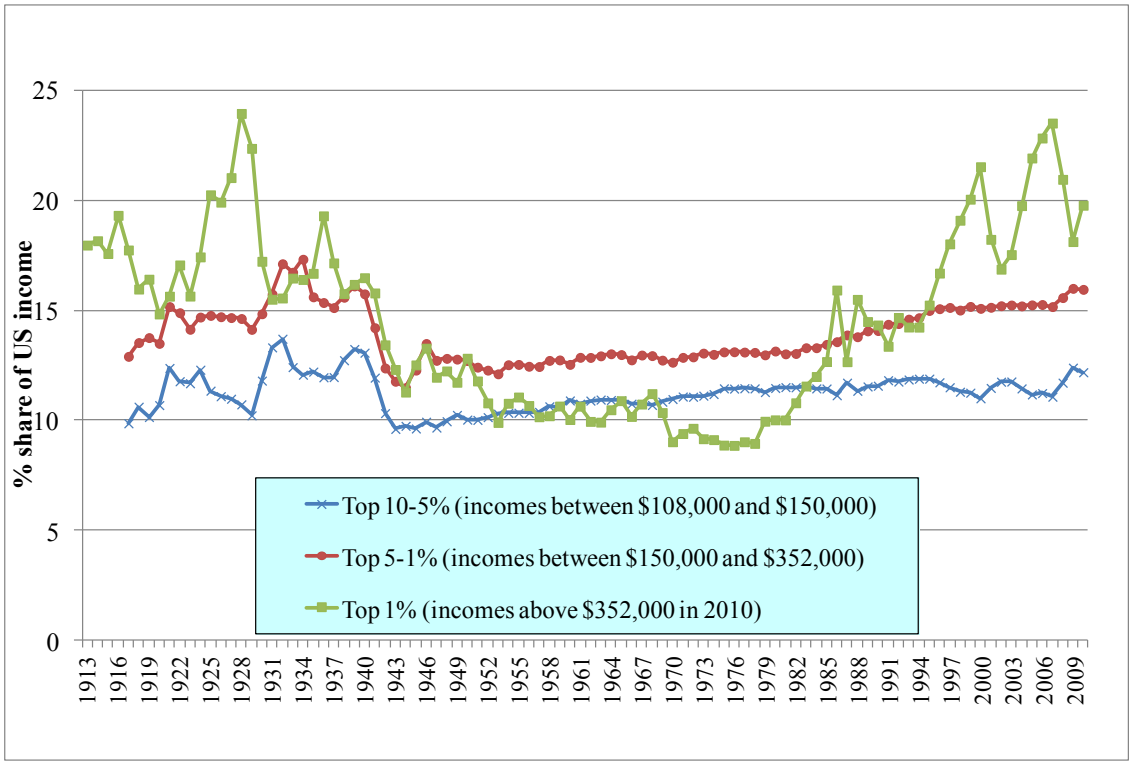


Note: For the Gini coefficient, 0 means perfect equality among families in the distribution of income, while 1 means that one family has all the income.
Source: Table F-4 in U.S. Census Bureau (2011)

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 percent in the United States. Over the same period, however, the real after-tax incomes of the bottom quintile (1st to 20th percentiles) of the income distribution grew by only 18.3 percent, the fourth quintile by 27.5 percent, the middle quintile by 35.2 percent, the second quintile by 43.3 percent, and the top quintile *excluding* the top one percent by 65.0 percent. Meanwhile the real after-tax incomes of the top percentile increased by 277.5 percent (Congressional Budget Office 2011)

This concentration of income at the top shows up clearly in data collected from Internal Revenue Service tax returns on the richest Americans from 1913-2010, displayed in Figure 2 (Piketty and Saez 2012). In 2007 the top one percent of the distribution received 23.5 percent 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 percent. 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.

Figure 2. Shares of total U.S. income among the top 10 percent of income recipients, 1913-2010, decomposed into selected percentile groupings

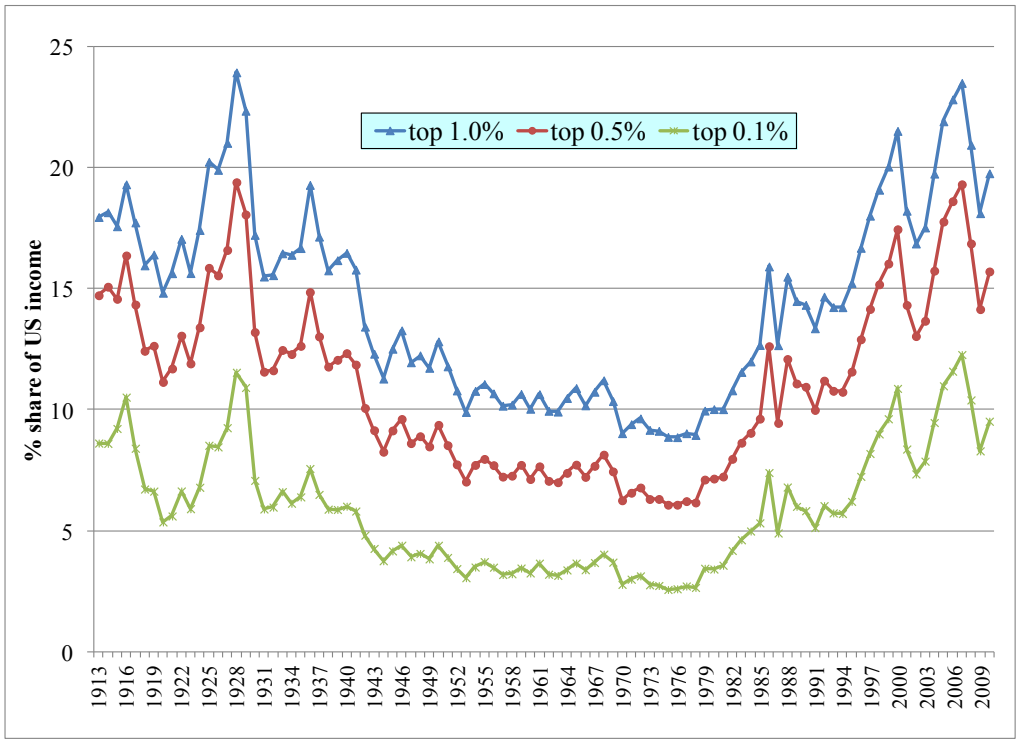


Source: Piketty and Saez 2012, data-Fig2.

Moreover, as shown in Figure 3, incomes are highly skewed even within the top one percent. At 12.3 percent, the share of the top 0.1 percent in 2007 was higher than the previous peak of 11.5 percent in 1928. Figure 3 also shows the extreme volatility of the income shares of the top 1.0 percent, 0.5 percent, and 0.1 percent, most markedly because of stock market booms and busts that centered on 1929, 2000, and 2007.

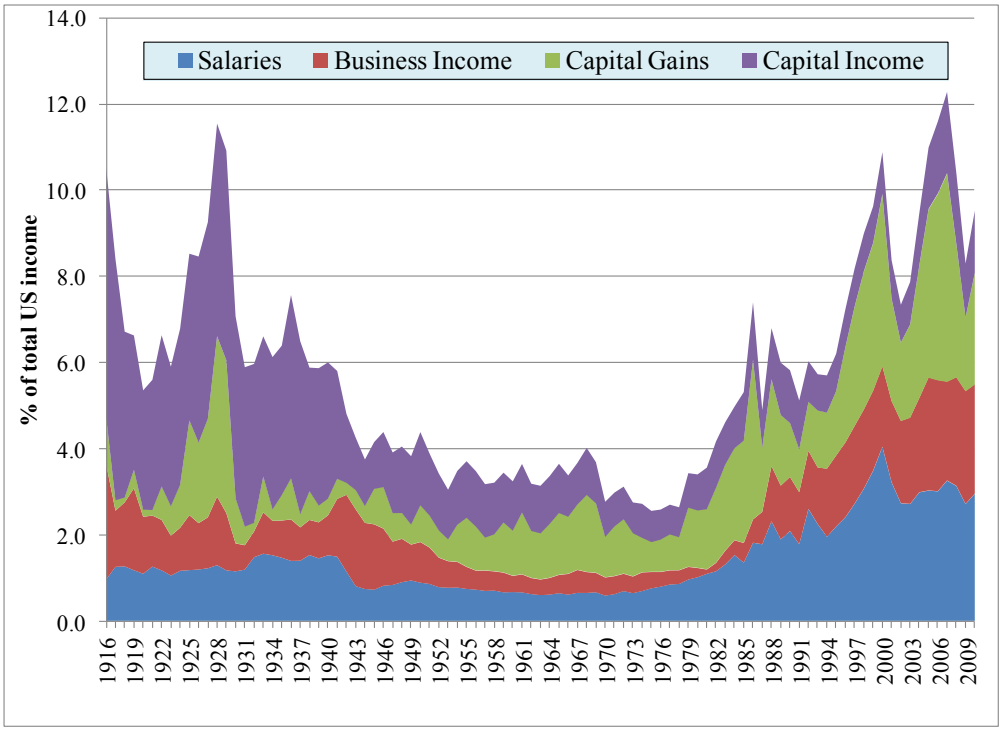
There were, however, differences in the *sources* of the incomes of the top 0.1 percent in the late 1920s and late 2000s, as shown in Figure 4. Particularly significant is the importance of the stock market as a source of income for the richest Americans in the 2000s. The gains from exercising stock 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 (2012) does not break down total "salaries" taxed at the personal-income tax rate into their component parts. 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 (Lazonick 2009b). The Economic Recovery Act of 1981, however, both lowered substantially the top personal-income tax rate and placed a $100,000 limit per annum on the exercisable options (number of options times the exercise price) eligible for capital-gains taxation (Ellig 2006, 57). 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.

Figure 3. U.S. income shares including capital gains, top 1.0%, 0.5%, and 0.1% of households, 1913-2010



Source: Piketty and Saez 2012, Table A3.

Figure 4. Components of the percent shares of the incomes of the top 0.1 percent of the U.S. income distribution, 1916-2010



Source: Piketty and Saez 2012, data-Fig4B

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

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 highest 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 percent 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 their 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.

For the top 100 group in the years 1992-2010, the proportion from stock-option gains ranged from a low of 49 percent in 2010 – when the mean pay of the group was also at its second lowest level in real terms since 1995 – to a high of 89 percent in 2000 – when the mean pay was at its highest level of $104.0 million in 2010 dollars. In 2000 the mean pay of the top 3000 was $10.8 million in 2010 dollars, only ten percent of the mean pay of the top 100. Nevertheless, as shown in Table 1, gains from exercising stock options accounted for 67 percent of the combined pay of executives in the top 3000 group, with mean stock-option gains of 43 percent.

It is important to note in Table 1 how 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 percent 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 (Lazonick 2009b). In the 1980s and 1990s high stock prices were driven primarily by a combination of New Economy innovation followed by speculation

(Lazonick 2009a and 2009c). 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.

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, 1992-2010

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**

S&P 500 Index and the NASDAQ Composite Index set to 100 in 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 (TDC2 in the Compustat database) is defined as "Total compensation for the individual year comprised of the following: Salary, Bonus, Other Annual, Total Value of Restricted Stock Granted, Net Value of Stock Options Exercised, Long-Term Incentive Payouts, and All Other Total".

%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.

Sources: Standard and Poor's Compustat database (Executive Compensation, Annual); Yahoo! Finance at http://finance.yahoo.com (Historical Prices, Monthly Data).

Among the prime beneficiaries of this market manipulation have been the very same corporate executives who have made the decisions to allocate corporate resources to stock repurchases. In 2010 the threshold income for inclusion in the top 0.1 percent of

the income distribution was $1,492,175 (Piketty and Saez 2012, Table 0). 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 percent of their combined compensation.

The number of corporate executives who in 2010 were members of the top 0.1 percent club was, however, far higher that 4,743, for two reasons. Firstly, total corporate compensation of the named executives does not include 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 percent from other sources, then the number of named executives in the top 0.1 percent 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 percent, then there would be even more of these named executives in the top 0.1 percent.

Secondly, included in the top 0.1 percent 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 top 0.1 percent threshold 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 total compensation of $6,637,910. There were presumably large numbers of other IBM executives whose total compensation was between this amount and $1.5 million. These "unnamed" executives would have been among the top 0.1 percent 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 percent of the U.S. income distribution, and much, and often most, of their compensation income comes from the gains from exercising stock options. Since the 1980s Wall Street has judged the performance of corporations by their quarterly stock-price performance. Given the importance of stock-based pay in their compensation, top executives of U.S. corporations have a powerful personal incentive to boost their companies' stock prices from quarter to quarter and to manage quarterly earnings per share. In stock buybacks, these executives have a found a potent weapon of stock-market manipulation. In the next section of this essay, I document how stock buybacks have became 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.

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 who 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 (Vermaelen 1981). Indeed, until November 1982 stock

repurchases by established companies on a scale that has now become the norm could be construed by the Securities and Exchange Commission (SEC) as an illegal attempt to manipulate the company's stock price. Specifically section 9(a)(2) of the Securities Exchange Act of 1934 prohibits a person "to effect…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" (Subcommittee on Annual Review 1983, 1247).

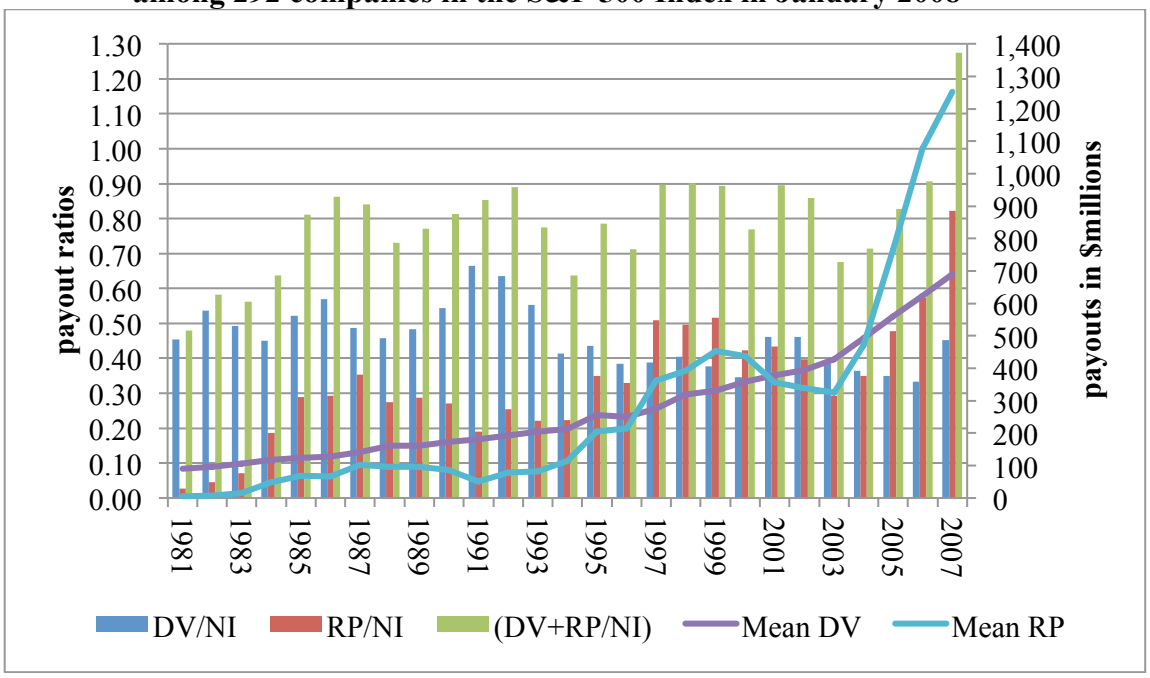
In 1970 the SEC had first discussed a rule change that would have permitted a publicly listed company to buy back as much as 15 percent of the average trading volume of its stock over the previous four weeks without exposing itself to manipulation charges, but this rule was not adopted (Subcommittee on Annual Review 1983, 1247). 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. Under the safe harbor, the SEC would not file manipulation charges if each day's open-market repurchases were not greater than 25 percent 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 at which the Rule 10b-18 was adopted, SEC Chairman John Shad said that buybacks would "confer a material benefit" on shareholders by fuelling stock-price increases (Hudson 1982).[1] Under Rule 10b-18, during the single trading day of, for example, July 13, 2011, a leading stock 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. And, 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. For example, on September 22, 2008 Microsoft (2008) 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." 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 time they are actually done*. Hence only insiders know the precise timing and extent of stock buybacks.

[1] In 2003 the SEC amended Rule 10b-18 "to simplify and update the safe harbor provisions in light of market developments since the Rule's adoption." The amendments also required that in their 10-Q filings with the SEC companies report the number and value of share repurchased in the previous quarter and the average price paid per share. See http://www.sec.gov/rules/final/33-8335.htm.

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. As shown n Figure 5. for 292 companies in the S&P 500 Index in January 2008 that were publicly listed back to 1980, average annual repurchases per company in 1981-1982 were only $6.7 million, or 3.6 percent of net income, compared with dividends of $93.0 million, or 49.3 percent of net income. 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 $103.0 million in 1987, 35.3 percent of net income, while dividends represented an additional 48.7 percent of net income. Over the next four years, however, repurchases declined to $51.7 million per company (19.0 percent of net income) in 1991, while dividends rose to $180.2 million per company (66.4 percent of net income).

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 2008



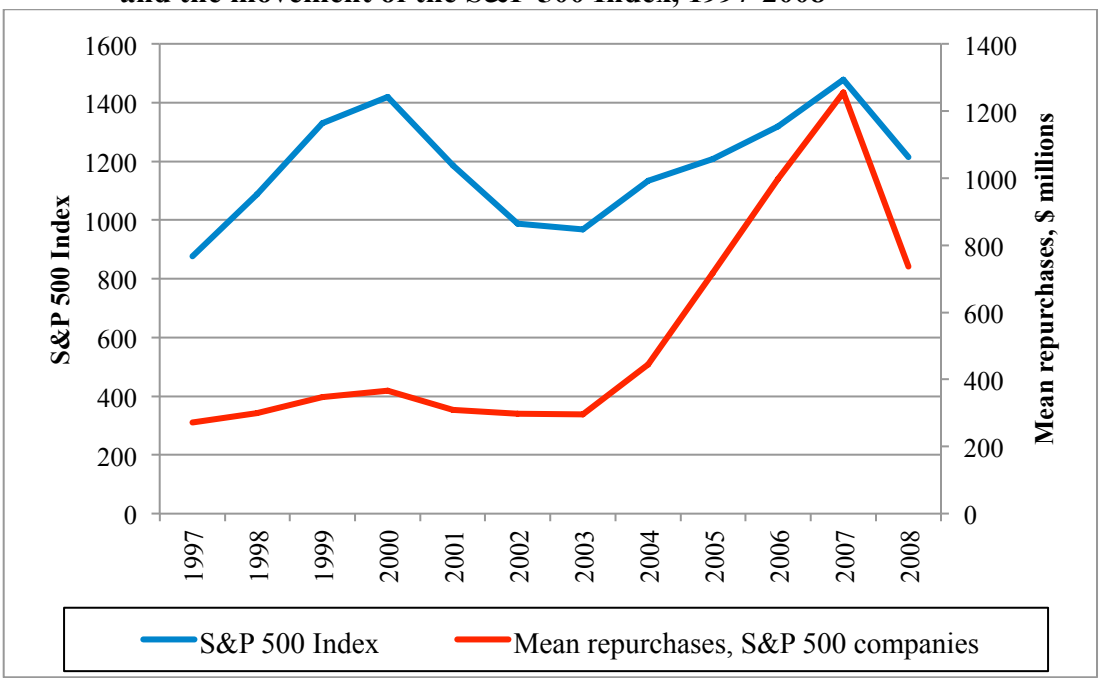
Sources: Standard &Poor's Compustat database (North America, Fundamentals Annual) and company 10-K filings.

There was then a sharp upswing in repurchases, as they increased almost nine-fold from 1991 to 1998. With dividends increasing more slowly, buybacks surpassed dividends in 1997 (see Dittmar and Dittmar 2004). In 1997-1999, buybacks per company averaged $402.3 million per annum (50.8 percent of net income), while dividends averaged $308.8 million per annum (39.0 percent 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. Combined, the 500 companies in the S&P 500 Index in January 2008 repurchased $489 billion of their own stock in 2006, representing 62 percent of their net income, and $595 billion in 2007,

representing 89 percent 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.

Figure 6. Stock repurchases by 437 companies in the S&P 500 in January 2009, and the movement of the S&P 500 Index, 1997-2008



Sources: Standard and Poor's Compustat database (North America, Fundamentals Annual); Yahoo! Finance at http://finance.yahoo.com (Historical Prices, Monthly Data).

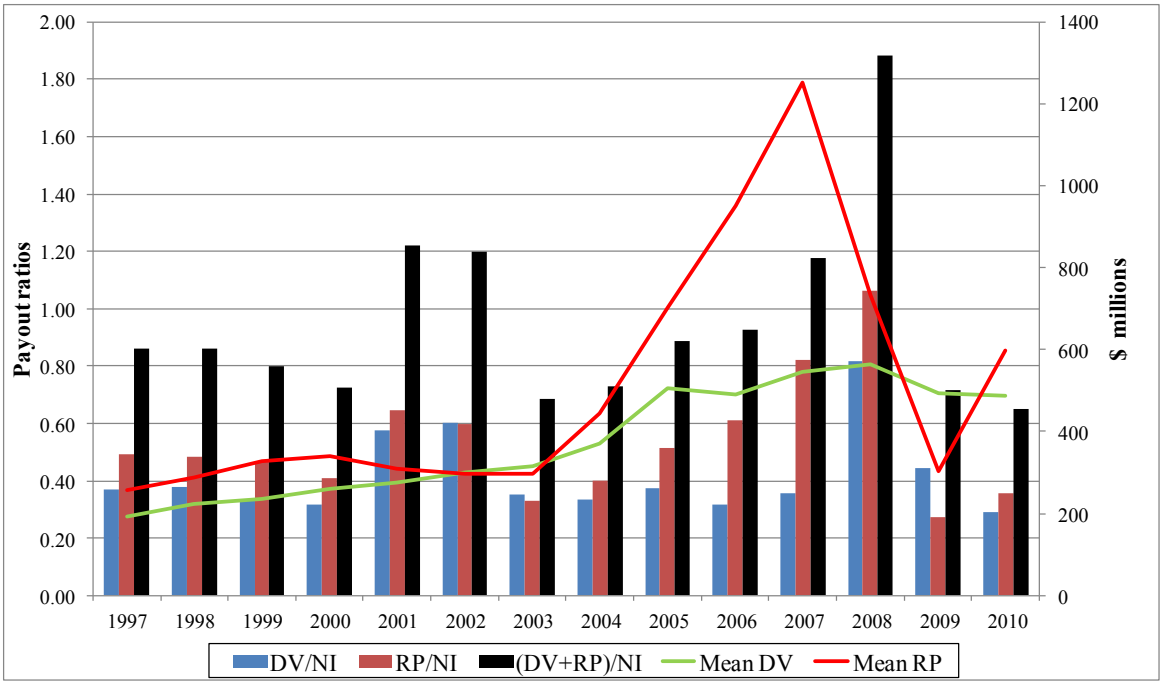
Figure 7 shows the payout ratios and mean payout levels for 419 companies included in the S&P 500 Index in January 2011 that were publicly listed from 1997 through 2010. From 1997 through 2010 these 419 companies expended $2.7 trillion on stock repurchases, an average of $6.5 billion per company, and distributed a total of $2.0 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 million in 2007.

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, for example, many banks that had been among the largest repurchasers in the previous years either went out of business or availed themselves of a government bail-out. 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.[2] The experience of 2003-2007 suggests that, short of another financial meltdown, repurchases will continue at these massive levels in 2012 and beyond.

[2] 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 (Louis and White 2007; Vermaelen 2005, ch. 3). 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 the stock market that their company's shares are undervalued, these same executives will never signal the market that the company's shares are overvalued by selling its stock.

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, 1997-2010



Data for 419 corporations in the S&P 500 Index in January 2011 that were publicly listed 1997-2010. 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).

Sources: S&P Compustat database (North America, Fundamentals Annual, 1997-2010); company 10-K filings for missing or erroneous data from the Compustat database.

According to the "signaling" argument, there should have been massive sales of corporate stock in the speculative boom of the late 1990s, as was in fact the case of U.S. industrial corporations in 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 (O'Sullivan 2004). Instead, in the late 1990s boom corporate executives as *personal investors sold their own stock* to reap speculative gains, often worth tens of millions of dollars (see Gimein et al. 2002). Many of these same corporate executives 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 the fact that in the United States companies are not required to announce the dates on which they actually counter 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 (see Fried 2000 and 2001).

Indeed, as a complement to the SEC's Rule 10b-18 of 1982 that, as we have seen, effectively legalized the use of buybacks to manipulate stock prices, in 1991 the SEC changed a rule that 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 percent of the corporation's shares are prohibited from making "short-swing" profits through the purchase and the subsequent sale of corporate securities within a six-month period. Under this rule, top executives who exercised stock options had to hold the acquired shares for at least six months before selling them. Treating a stock option as a derivative, however, in May 1991 the SEC deemed that the six-month holding period required under Section 16(b) was from the grant date, not the exercise date (Rosen 1991). 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 price boosts from buybacks.

Companies often explicitly state in their financial statements that they repurchase stock to offset dilution from their stock-option programs. 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. True, these additions to earnings per share may be expected to accrue in years to come; but then, according to conventional financial metrics, the issue is simply one of 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 earnings per share (EPS).

In any case, for many leading companies, such as those in ICT, that have broad-based stock option plans, the number of shares repurchased is generally well in excess of the number of stock options exercised, and hence 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 50 repurchasers (see Appendix), 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 in 2001-2010, 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).

If offsetting 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. Their stock-based pay, give executives personal incentives 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.

Stock Buybacks: 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 propounded by what became known among economists as "agency theory"[3] is that, of all participants in the business corporation, it is only shareholders who make productive contributions without a guarantee of a return.[4] 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, 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 (Lazonick 2009b and 2012; Lazonick and Mazzucato 2012). 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

[3] "Agency theory" as expounded by economists builds on the legal concept of the corporate manager as agent and the shareholder as principal, but uses it to analyze the implications of "hidden actions" (or moral hazard) and "hidden information" (or adverse selection) on economic decision-making and outcomes. For a critique of "shareholder primacy", see Stout 2012.

[4] See Lazonick 2012a 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 especially Jensen 1986 and Jensen and Murphy 1990. For a highly readable account of the evolution of agency theory as a branch of neoclassical economics, see Justin Fox's The Myth of the Rational Market (2009). In his discussion of the theories and impact of Jensen, however, Fox (2011, chs. 9 and 15) completely ignores Jensen's arguments in favor of disgorging the so-called "free cash flow" from corporations to shareholders, with stock buybacks as a prime mode of achieving this objective. For my initial critiques of MSV and agency theory, written when I was involved with the "business history group" at Harvard Business School in the late 1980s and early 1990s, see Lazonick 1988 and 1992.

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 returns out of profits in the forms of higher wages and benefits, more secure employment, and better work conditions. Indeed, within the discourse of economics, confronting agency theory with what I call "innovation theory" (see Lazonick 2010b; also Lazonick and Mazzucato 2012), I argue that this sharing of the gains to risk-bearing with taxpayers and workers is essential to not only an equitable income distribution but also the sustainable productivity gains that make higher standards of living possible.[5]

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 or 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 conditions 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 adversely affected the delivery of higher quality, lower cost products in a range of industries from oil refining to health insurance (Lazonick 2009c; 2012; Lazonick and Tulum 2011). Here are some examples of these adverse effects from energy, ICT, pharmaceuticals, and banks.

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 50 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 (see Appendix). Alternative energy needs the collaboration of both government and business to provide "patient" capital. If the big oil companies, with all their profits, will not provide it, then perhaps venture capitalists will. Yet, as illustrated by the highly publicized case of Solyndra, which went bankrupt in August 2011, leaving U.S. taxpayers responsible for $535 million in government-backed loans, private equity bailed out when it became evident that the company would be unable to do a quick IPO (Hopkins and Lazonick 2011).

[5] In other work, I have invoked innovation theory to critique Oliver Williamson's version of agency theory as an explanation of relation between markets and organizations. See Lazonick 1991, chs. 6 and 7 and Lazonick 2002.

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 Energy Future".[6] The plan called for the U.S. government to increase spending on clean energy innovation to $16 billion annually, up from an annual government investment of $5 billion (Broder 2010). In a press release, entitled "American Business Leaders Call for Revolution in Energy Technology Innovation",[7] 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."

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 research to "restock the cupboard" with U.S.-based innovations. Instead it went to boosting stock prices and, in the process, lining the pockets of these highly paid executives who lobby Congress to have taxpayers make investments in America's energy future.

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 $110.0 billion (#2 among all repurchasers), IBM $89.2 billion (#3), Cisco Systems $65.0 billion (#4), Hewlett-Packard $54.0 billion (#6), and Intel $48.3 billion (#11).

The world's leading semiconductor company, Intel, has lobbied the U.S. government to spend more on nanotechnology research. For example, at a press conference of the Semiconductor Industry Association in Washington DC in March 2005 to urge the federal government to increase funding of nanotechnology research, Craig Barrett, then CEO of Intel, warned: "U.S. leadership in the nanoelectronics era is not guaranteed. It will take a massive, coordinated U.S. research effort involving academia, industry, and

[6] http://www.americanenergyinnovation.org/the-plan
[7] http://www.americanenergyinnovation.org/business-leaders-call-for-revo

state and federal governments to ensure that America continues to be the world leader in information technology."[8] Yet in that same year, 2005, 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.[9]

Over the decade Intel spent $51.9 billion on R&D, equivalent to 15.0 percent 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.[10] But its buybacks were equal to 94 percent of the company's R&D expenditures, and 81 of its net income, while its dividend payouts were another 32 percent of net income. That is, 113 percent of Intel's net income in the 2000s was devoted to "maximizing shareholder value".

The ICT industry in general and Intel in particular have benefited from decades of government investment in the nation's high-tech knowledge base (see, e.g., National Research Council 1999). 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 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 percent, 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 put it, "America continues to be the world leader in information technology".

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 percent 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, moreover, 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 million stock repurchase (Bishop 2004). 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 $.08 quarterly, and a special one-time dividend that, at $3 per share (over 12 percent of the current share price), totaled $32.64 billion.

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[8] "U.S. could lose race for nanotech leadership, SIA panel says," Electronic News, March 16, 2005.
[9] http://nano.gov/about-nni/what/funding
[10] Intel 10-K filing, 2001, 10; Intel 10-K filing, 2010, 2.

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" (Microsoft 2004). 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." 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."

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 $1.57. Rick Sherland, the same Goldman Sachs analyst who had previously encouraged Microsoft to do a $100 million repurchase, was not pleased with the Microsoft 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" (quoted in Romano 2006). The next day Microsoft's stock price fell by more than 11 percent, reducing the company's market capitalization by some $30 billion. The 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 (Bass 2006a) 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."

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 (Bass 2006b). Wall Street remained critical of Microsoft's technology strategy.[11] Microsoft's stock price, which had trended downward during May but had moved upward in the days before the Bernstein conference, resumed its decline. The stock prices reached a low on June 13, almost 21 percent 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. Over the next four days, Microsoft's stock price rose by almost 7 percent.

If some of the richest and most influential corporative 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

[11] "Microsoft to use cash for development, not share buybacks," New York Times, June 1, 2006: C11.

first half of 2009, 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" (McDougall 2009). As described in an internal document, the purpose of Project Match was to "help you [employees]locate potential job opportunities in growth markets where your skills are in demand." The document went on to say, "Should 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." 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." 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 5,000-6,000 layoffs, 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. In May 2009 Microsoft said that it would lay off 5,000 employees – its first ever mass layoff – and also that it would be doing a $3.75 billion bond issue – its first ever financing of this type – in order to do buybacks. 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. In 2009 Microsoft generated $19.0 billion in cash from operations and at the end of the year (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. 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 have been subject to U.S. corporate taxes on repatriated profits if they had brought back that money to do buybacks.

Pharmaceuticals

Pharmaceutical drug prices are at least double in the United States compared with European countries (UK Department of Health 2009, 27) The healthcare industry, including biopharmaceuticals and medical devices, benefits immensely from U.S. federal government spending on life sciences through the National Institutes of Health, with total annual budgets averaging $30.9 billion from 2009 through 2012.[12] In opposing the regulation of drug prices by the U.S. Congress, the pharmaceutical companies argue that they need high prices to fund their R&D expenditures in the United States. Yet among major pharmaceutical companies, in 1997-2010 Pfizer did repurchases equal to 64 percent of R&D expenditures, Johnson & Johnson 56 percent, and Merck 53 percent. When the substantial dividends that these companies paid are added to their repurchases, shareholder distributions exceeded R&D expenditures over this period by 32 percent at Pfizer, 17 percent at Johnson & Johnson, and 31 percent at Merck. In 2011, along with $6.2 billion in dividends, Pfizer repurchased $9.0 billion in stock, equivalent to 90

[12] http://www.nih.gov/about/budget.htm.

percent of its net income and 99 percent of its R&D expenditures. While Americans pay inflated price for drugs, major pharmaceutical companies allocate billions to buybacks, and then find that they do not have new blockbusters 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 1992-2011 was equal to fully 115 percent of R&D outlays and 113 percent of net income.

In May 2007 Amgen even borrowed $3.2 billion ($2.0 billion due in 2008, $1.1 billion in 2017, and $0.9 billion due in 2037) to help finance a $5.0 billion stock repurchase, the largest annual purchase that the company had ever done. At the same time, as Amgen reported in its quarterly financial filing, sales of its blockbuster anemia drug, Aranesp, declined by 19 percent because of an Food and Drug Administration ruling that dosage levels had to be cut because of cases of heart attacks from high doses (Chase 2007).

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 reportedly 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."[13]

Two days later, Amgen announced that it would reduce its workforce by 14 percent, 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 percent from 2003 through 2006) to 20 percent of sales (Chase 2007). 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.

Finance

Among the biggest stock repurchasers in the years prior to the financial crisis were many of the banks that were responsible for the meltdown and were bailed out under the Troubled Asset Relief Program. They included Citigroup ($41.8 billion repurchased in 2000-2007), Goldman Sachs ($30.1 billion), Wells Fargo ($23.2 billion), JP Morgan Chase ($21.2 billion), Merrill Lynch ($21.0 billion), Morgan Stanley ($19.1 billion), American Express ($17.6 billion), and US Bancorp ($12.3 billion). In the eight years before it went bankrupt in 2008, Lehman Brothers repurchased $16.8 billion, including

[13] "Amgen moves up after analyst says company will restructure to increase earnings," Associated Press Financial Wire, August 13, 2007.

$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 (Trincal 2008). Washington Mutual, which also went bankrupt in 2008, expended $13.3 billion on buybacks in 2000-2007, including $6.5 billion in 2006-2007. Wachovia, ranked 38th among the Fortune 500 in 2007, did $15.7 billion in buybacks in 2000-2007, 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 in 2000-2007 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). 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.

What Has Been Lost, and How It Can Be Regained

All of this buyback activity is going on in a context in which, even without them, rationalization, marketization, and globalization have been eroding middle-class employment opportunities. With automation and new competition, good 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. And 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 continuing to employ more expensive personnel in the United States.

As stated earlier in this essay, the disappearance of middle-class jobs reflects structural changes in the ways in which U.S. business corporations 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 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 provide 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 "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 (Lazonick 2012b), Americans are paying these top executives *not* to do their jobs.[14] One can ask 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. Rather than dissipating the company's capital by doing stock buybacks and devaluing the company's labor by terminating experienced employees, corporate executives could be thinking about how to keep the money and the people together, possibly in corporate spinoffs, to deliver new sources of value to customers.

The function of the executive is to allocate corporate resources to investments that can generate higher quality products at lower unit costs. Instead, through buybacks and layoffs, corporations have thrown money and people onto capital and labor markets, For the sake of sustainable prosperity, 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, with its obsession 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 helps to destroy middle-class jobs in the United States 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 (see for example, Hirsch 2011), encouraged to do so by a 50-year-old tax loophole that permits them to defer the

[14] Relatedly, Harvard Business School professor Clayton Christensen argues that companies that focus on profits do not innovate (see Denning 2011). See also Christensen et al. 2008. 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 Harvard Business Review article by Robert Hayes and William Abernathy, "Managing Our Way to Economic Decline". See also the critique of MSV by Martin 2011.

payment of taxes on corporate profits, for which the rate is 35 percent, until they repatriate them to the United States (see Lazonick 2011b).

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. The preferred approach of the Bush Administration was the Homeland Investment Act as 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 in 2000-2004 and a subsequent decline to $102 billion in 2006 (Dharmapala et al. 2010).

But Dharmapala, Foley, and Forbes (2010, 4-5) found that corporations subverted the purpose of the government's repatriation initiative. As they put it:

> 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.

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."

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. In a speech in May 2009, President Obama (2009) 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." 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 people and moving them out of the U.S." (Donmoyer 2009). In September 2009 the Obama Administration met with U.S. high-tech executives, and agreed to shelf the plan to end the tax deferral (King and Williamson 2009). 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" (Obama 2010).

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 (Chambers and Catz 2010). 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. "But," they continued (with my emphasis), "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."

Having transformed an existing U.S. government tax concession to U.S. corporations into a tax penalty on U.S. corporations, Chambers and Catz noted that, among other things, 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." 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)." "Such a program," they crowed, "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?" Along with other business executives, Chambers presented his "good idea" directly to President Obama at the White House on December 15, 2010 (Drucker 2010).

Innovation and job creation require business-government collaboration (Lazonick 2008 and 2011a; Block 2009; Block and Keller 2011; see also Breznitz 2007; Gomory 2009). Government investment in physical infrastructures such as communication networks and transportation systems as well as human capital through 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.

But for 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. Yet, in the United States, it can be argued that a disproportionate share of the returns to a successful new venture accrues to those entrepreneurs and financiers who put an innovation on the market while neglecting to reward sufficiently the contributions of other stakeholders, including taxpayers, who made significant contributions to the innovation process (see Lazonick 2009a). In the name of "shareholder value", rewards are reaped at the expense of non-shareholding stakeholders who risked their labor and capital in the collective and cumulative innovation process (Lazonick and Mazzucato 2012).

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 of 1996-2000, 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 (Lazonick 2009a and 2009c).

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 2003-2007 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 still 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 (Lazonick 2012a).

The evolution of Wall Street into a gambling casino brought us the Great Recession. The subsequent recovery, which at the time of writing in October 2012 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:

1) *Banning of stock repurchases by established U.S. corporations so corporate financial resources that could be allocated 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.

2) *Indexing of employee stock options 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 for quarterly EPS targets. It is also generally the case that in their resource allocation, people will respond to financial incentives, especially when the society deems those financial incentives as not only legitimate but also 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 his or her 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. Indeed, it may make sense to get rid of stock-based compensation altogether.

3) *Regulation of the employment contract to ensure that workers who contribute to the innovation process share in the gains to 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 on these investments 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 to innovation if and when they occur. Since innovation 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 so it is based on norms of distribution of the gains from innovative enterprise that are consistent with equitable and stable economic growth.

4) 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 40s and 50s, will obsolesce unless they are quickly reemployed in jobs that can make use of it. Such a diminution in the stock of highly qualified human capital poses a high cost not only 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.

5) *Implementation of taxes on the gains from innovation 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 two organizations that ivest 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 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 (Lazonick 2011c).

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 with which the 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.

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APPENDIX: 50 biggest stock repurchasers, 2001-2010

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
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

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.
Sources: Compustat database, corrected from company 10-K filings.