

**The Explosion of Executive Pay
and
the Erosion of American Prosperity**

William Lazonick
University of Massachusetts Lowell
and
Université Montesquieu-Bordeaux IV

william_lazonick@uml.edu

REVISED
February 24 2010

Forthcoming in Entreprises et Histoire, No. 57, 2010

This paper builds on research in William Lazonick, *Sustainable Prosperity in the New Economy? Business Organization and High-Tech Employment in the United States*, Upjohn Institute for Employment Research, 2009, and “The New Economy Business Model and the Crisis of US Capitalism,” *Capitalism and Society*, 4, 2, 2009. The research was funded by the FINNOV project through Theme 8 of the Seventh Framework Programme of the European Commission (Socio-Economic Sciences and Humanities), under the topic “The role of finance for growth, employment and competitiveness in Europe” (SSH-2007-1.2-03)

1. Inequitable and unstable economic growth

The United States is the richest economy in the world. Yet in the 2000s the United States has been unable to deliver equitable and stable economic growth to its own population (Lazonick 2009a, ch. 1). The national unemployment rate, which was over 6% in the “jobless recovery” of 2003, exceeded 10% in the “jobless recovery” of 2009. Even the jobs of well-educated and experienced members of the labor force have been vulnerable to downsizing and offshoring. The distribution of income has become increasingly unequal over the past three decades, with a disappearance of middle income jobs. In the last half of the 2000s, the share of total income going to the top 1% of households rose to well over 20% (Saez 2009). Given that the financial meltdown of 2008 has not resulted in significant government regulation, there is reason to believe that financial chaos will return in the not-too-distant future.

In this paper I argue that a prime cause of the growing inequity and instability in the US economic system is the stock-based compensation of the executives who run the nation’s leading industrial and financial corporations. In allocating corporate resources, top executives have a personal interest in maximizing their own stock-based pay. A prime way in which they have been able to do so is by allocating corporate resources to large-scale repurchases of the stock of the corporations for which they work and over which they exercise allocative control. The result has been not only the extraction of massive rents by these executives but also a misallocation of resources compared to the types of resource allocation that could generate innovation at the company level and contribute to equitable and stable growth in the economy as a whole.

In the next section of the paper, I analyze the role of executive stock options in the explosion of executive pay. In the following section, I offer a critique of the ideology of maximizing shareholder value that has provided legitimacy to the gains from executive stock options. Then I show how US-style stock-based compensation leads executives to allocate corporate resources in ways that increase their own remuneration at the expense of equitable and stable economic growth. In the conclusion, I emphasize the failure of the US Congress to control executive pay in the United States, despite a longstanding consensus that it is outrageously excessive. The problem, I argue, is not only the inequity involved. It is also the instability that the concentration of income at the top imparts to the economy by undermining investments in industrial innovation and, relatedly, the creation of high-quality jobs in the United States.

2. The explosion, and re-explosion, of executive pay

Since the 1970s there has been an ongoing explosion of executive pay in the US corporate economy. According to Forbes annual surveys, the average remuneration in 1991 dollars of the top 100 highest paid CEOs of US-based companies rose from \$0.4 million in 1970 to \$1.8 million in 1979 to \$5.9 million in 1987 to \$8.1 million in 1991 (Saez 2009). In response to this explosion of executive pay, a compensation consultant, Graef S. Crystal (1991), published a book, *In Search of Excess: The Overcompensation of American Executives*. Crystal calculated that over the course of the 1970s and 1980s the

real after-tax earnings of the average manufacturing worker had declined by about 13% while that of the average CEO of a major US corporation had quadrupled (Crystal 1991, 27). Crystal's study of the compensation of CEOs of 200 major US corporations showed that in 1991 they averaged \$2.4 million in total pay, even with grossly overpaid executives removed from the database. Crystal (1991, 29) asked:

[D]oes a pay package of \$2.4 million make any sense? Consider first that the CEO receiving \$2.4 million per year is earning some 130 times the pay of the average American worker....[T]his ratio has been widening at an accelerating rate during the last twenty years or so. Consider also that the direction of that pay ratio has been even more steep when the decrease in income tax rates for highly paid executives is taken into account. And most important, consider what our key trading partners – a better word is fierce competitors – are paying their CEOs and other senior executives....[T]he \$2.4 million pay figure is...more than seven times higher than a major Japanese company pays its CEO.

Yet the explosion of US top executive pay that Crystal observed in the 1970s and 1980s pales in comparison to the volcanic eruption that has occurred in the 1990s and 2000s. According to AFL-CIO Executive Paywatch (2009), the ratio of the average pay of CEOs of 200 large US corporations to the pay of the average full-time US worker was 42:1 in 1980, 107:1 in 1990, 525:1 in 2000, and 319:1 in 2008. As shown in Table 1, the average annual real compensation in 2008 dollars of the 100 highest paid corporate executives named in company proxy statements was \$20.7 million in 1992-1995, \$78.2 million in 1998-2001, and \$62.0 million in 2004-2007.

As can be seen in Table 1, 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.¹ The higher the “top pay” group, the greater the proportion of the pay of that group that was derived from gains from exercising stock options. For the top 100 group in the years 1992-2008, this proportion ranged from a low of 57% in 1994, when the mean pay of the group was also at its lowest level in real terms, to 87% in 2000, when the mean pay was at its highest. In 2000 the mean pay of the top 3000 was, at \$10.8 million, only 10% of the mean pay of the top 100. Nevertheless, gains from exercising stock options accounted for 67% of the total pay of the top 3000 group.

¹ A stock option award gives an employee the non-transferable right to purchase a certain number of shares of the company for which he or she works at a pre-set “exercise” price between the date the option “vests” and the date it “expires”. Typically in US option grants, the exercise price is the market price of the stock at the date that the option is granted; vesting of the option occurs in 25% installments at each of the first four anniversaries from the date of the grant; and the expiration date of the option is ten years from the date of the grant. Unvested options usually lapse 90 days after termination of employment with the company. If the market price of the stock is above the exercise price, an option is said to be “in the money”. If the market price of the stock is below the exercise price, the option is said to be “underwater”.

Table 1. Total compensation of top executives of US-based corporations, average for 100, 500, 1500, and 3000 highest-paid executives, and the proportion of total compensation derived from gains from exercising stocks options

Mean compensation in millions of 2008 US dollars

	S&P 500 Index	NAS- DAQ Index	NAS- DAQ/ S&P	Top 100		Top 500		Top 1500		Top 3000	
				Mean \$.m.	% SO	Mean \$.m.	% SO	Mean \$.m.	% SO	Mean \$.m.	% SO
1992	100	100	1.00	22.8	71	9.2	59	4.7	48	2.9	42
1993	109	119	1.10	21.0	63	9.0	51	4.7	42	3.1	36
1994	111	125	1.13	18.3	57	8.0	45	4.3	35	2.9	29
1995	131	155	1.18	20.6	59	9.6	48	5.2	40	3.4	34
1996	162	195	1.20	31.9	64	13.7	54	7.1	47	4.5	41
1997	210	243	1.16	43.5	72	18.3	61	9.3	55	5.8	49
1998	261	300	1.15	77.2	67	26.9	65	12.5	59	7.5	54
1999	319	462	1.45	69.0	82	27.5	71	13.2	63	7.9	57
2000	341	614	1.80	104.1	87	40.4	80	18.7	73	10.8	67
2001	284	332	1.17	62.3	77	23.7	66	11.3	58	6.8	53
2002	237	252	1.06	37.4	57	16.8	49	8.6	43	5.4	38
2003	232	275	1.18	48.4	64	21.0	55	10.7	48	6.7	43
2004	272	330	1.21	54.6	75	24.6	62	12.8	55	8.0	50
2005	290	348	1.20	66.5	78	28.2	63	14.3	56	8.9	51
2006	316	463	1.47	67.3	68	29.0	58	15.1	51	9.5	46
2007	354	428	1.21	59.6	69	27.4	58	14.6	50	9.3	45
2008	291	356	1.22	39.2	62	16.6	48	8.3	38	5.0	33

The S&P 500 Index and the NASDAQ Composite Index have each been set to 100 in 1992 for purposes of comparison.

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).

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, as shown in Table 2, high real stock yields characterized the US corporate economy. These high yields came mainly from stock-price appreciation as distinct from dividends yields, which were low in the 1990s despite high dividend payout ratios.² With the S&P 500

² US corporations were not skimping on dividends in the 1980s and 1990s. It is simply that when a company’s stock price increases, its dividend yield – the amount of dividends paid out as a percentage of the stock price – will fall unless the amount of dividends increases at least proportionately. In the 1980s

Index rising almost 1400% from March 1982 to August 2000, the availability of gains from exercising stock options became almost automatic. Given the extent to which the explosion in US top executive pay over the past three decades has been dependent on gains from exercising stock options, there is a need to understand the drivers of the stock-price increases that generate these gains.

Table 2: Average annual US corporate stock and bond yields (%), 1960-2009

	1960- 1969	1970- 1979	1980- 1989	1990- 1999	2000- 2009
Real stock yield	6.63	-1.66	11.67	15.01	-3.08
Price yield	5.80	1.35	12.91	15.54	-2.30
Dividend yield	3.19	4.08	4.32	2.47	1.79
Change in CPI	2.36	7.09	5.55	3.00	2.57
Real bond yield	2.65	1.14	5.79	4.72	3.41

Stock yields are for Standard and Poor's composite index of 500 US corporate stocks. Bond yields are for Moody's Aaa-rated US corporate bonds.

Sources: Updated from Lazonick and O'Sullivan 2000, 27, using US Congress 2010, Tables B-62, B-73, B-95, B-96.

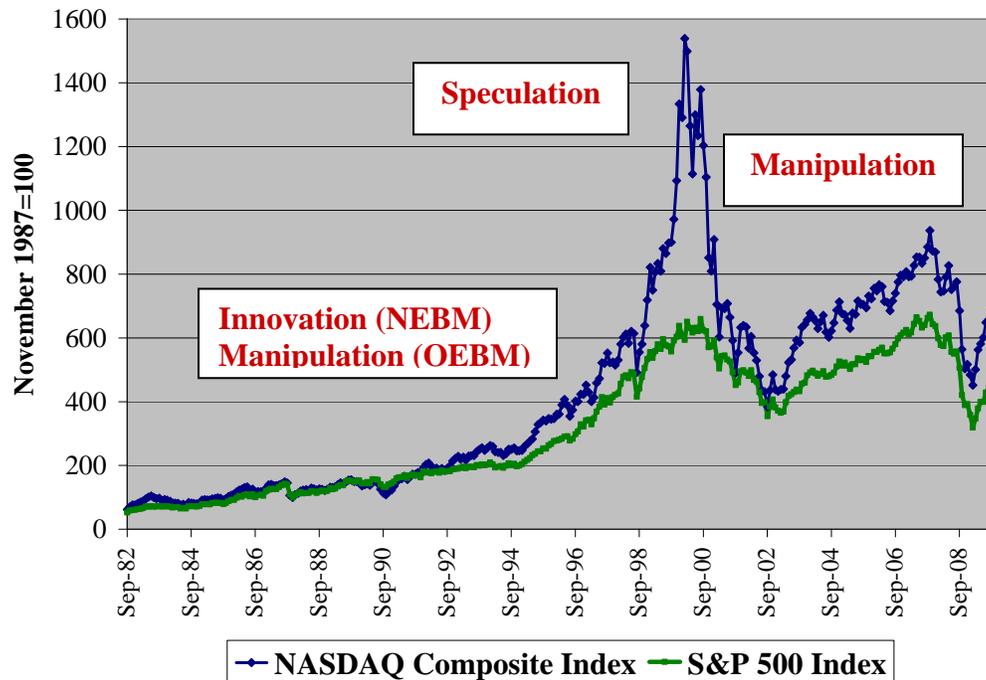
The gains from exercising stock options depend on increases in a company's stock price. There are three distinct forces – *innovation*, *speculation*, and *manipulation* – that may be at work in driving stock-price increases. Innovation generates higher quality, lower cost products (given prevailing factor prices) that result in increases in earnings per share, which in turn lift the stock price of the innovative enterprise. Speculation, encouraged perhaps by innovation, drives the stock-price higher, as investors assume either that innovation will continue in the future (which, given that innovation is involved, is inherently uncertain) or that there is a “greater fool” who stands ready to buy the stock at yet a higher price. Manipulation occurs when those who exercise control over corporate resource allocation do so in a way that increases earnings per share despite the absence of innovation.

Figure 1 charts the roles of innovation, speculation, and manipulation as *primary* drivers of US stock-price movements from the mid-1980s to the late 2000s. In the last half of the 1980s Old Economy companies that had run into trouble because of conglomeration in the United States and/or competition from the Japanese sought to manipulate stock prices through a “downsize-and-distribute” resource-allocation strategy (Lazonick 2004). This redistribution of corporate revenues from labor incomes to capital incomes often occurred through debt-financed hostile takeovers, with post-takeover downsizing enabling the servicing and retirement of the massive debt that a company had taken on. In addition,

dividends paid out by US corporations increased by an annual average of 10.8 percent while after-tax corporate profits increased by an annual average of 8.7 percent. In the 1990s these figures were 8.0 percent for dividends (including an absolute decline in dividends of 4.0 percent in 1999, the first decline since 1975) and 8.1 percent for profits. The dividend payout ratio – the amount of dividends as a proportion of after-tax corporate profits (with inventory evaluation and capital consumption adjustments) – was 48.9 percent in the 1980s and 55.0 percent in the 1990s compared with 39.5 percent in the 1960s and 41.6 percent in the 1970s. From 2000 to 2009 the dividend payout ratio was 61.5 percent, including a record 70.4 percent in 2007 (US Congress 2010, Table B-90).

from the mid-1980s, many Old Economy companies engaged for the first time in large-scale stock repurchases in an attempt to support their stock prices. In the 1990s and 2000s stock buybacks would become a prime mode of corporate resource allocation. The main, and for most major US corporations only, purpose of stock buybacks is to manipulate stock prices (Lazonick 2009b).

Figure 1. S&P 500 and NASDAQ Composite Indices, September 1982-October 2009 (monthly data, standardized for the two indices to 100 in November 1987)



As of August 2009 the S&P 500 Index consisted of 500 stocks, of which 410 were NYSE and 90 NASDAQ; and the NASDAQ Composite Index consisted of 2,809 stocks.

Source: Yahoo! Finance at <http://finance.yahoo.com> (Historical Prices, Monthly Data).

While Old Economy companies were manipulating stock prices in the 1980s and early 1990s, New Economy companies such as Intel, AMD, Microsoft, Oracle, Solectron, EMC, Sun Microsystems, Cisco Systems, Dell, and Qualcomm were reinvesting virtually all of their incomes to finance the growth of their companies, neither paying dividends nor, once they had gone public, repurchasing stock (Lazonick 2009a, ch. 2). It was *innovation* by New Economy companies, most of them traded on NASDAQ, that culminated in the Internet revolution that provided a real foundation for the rising stock market in the 1980s and first half of the 1990s.

These New Economy companies had broad-based stock option programs that extended to non-executive employees. In the speculative boom of 1999-2000, the gains from exercising stock options of the average worker could be enormous. The most extreme example is Microsoft; in 2000 alone the gains across about 39,000 employees (not

including the five highest paid executives) averaged an estimated \$449,000 (see Lazonick 2009b). During the same year, the gains from exercising stock options of the five highest paid Microsoft executives averaged \$50.7 million (see Table 3) – a ratio of “top5” gains to average worker gains of 113:1.

In the late 1990s speculation took over, driving the stock market to unsustainable heights. As Figure 1 shows, the speculation in companies listed on NASDAQ was much more pronounced than in the companies that make up the S&P 500 Index, over 80% of which are listed on the New York Stock Exchange (NYSE). As can be seen in Table 3, which shows the average gains of exercising stock options of top5 executives of selected “Old Economy” and “New Economy” companies in the information and communication technology (ICT) industries, the top executives of the New Economy companies, all of which are listed on NASDAQ, did especially well in the last half of the 1990s and in the 2000s.³ Nevertheless, in many years the top executives of the selected Old Economy companies, all of which are listed on the less speculative New York Stock Exchange (NYSE), made millions of dollars from exercising stock options.

In 2000 the average compensation of the top 100 NASDAQ executives was 19% higher than that of the top 100 NYSE executives, while in 2007 the compensation of the top 100 NYSE executives was 11% higher than that of the top 100 NASDAQ executives. In both years the proportion of the compensation that came from exercising stock options was higher for NASDAQ executives than for NYSE executives. Still, even for the NYSE executives, this proportion was 78% for the top 100 and 53% for the top 3000 in 2000, and 65% for the top 100 and 43% for the top 3000 in 2007. Whether their companies are listed on NASDAQ or NYSE, stock options give the top executives of US corporations a huge personal financial stake in a rising stock market.

In the 2000s the stock-option gains of these executives have come primarily through manipulation as distinct from innovation and speculation. The key instrument of stock-market manipulation is the stock repurchase. A stock repurchase occurs when a company buys back its own shares. In the United States, the Securities and Exchange Commission (SEC) requires stock repurchase *programs* to be approved by the board of directors. These programs authorize a company’s top executives to do a certain amount of buybacks over a certain period of time. 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.”⁴ 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. The company is not required to announce the buybacks at the time they are actually done, although since 2004 it has been an SEC rule that, in their quarterly financial reports, companies must state the amount of repurchases in the past quarter and the average purchase price.

³ For the distinction between the Old Economy and New Economy companies, see Lazonick 2009a, ch. 1.

⁴ The announcement also noted that Microsoft had completed its previous \$40 billion stock repurchase program.

Table 3: Average gains (million US dollars) per top-5 executive from the exercise of stock options, selected “Old Economy” and “New Economy” ICT companies, 1995-2008

Old Economy companies (year founded): HPQ, Hewlett-Packard (1939); IBM, International Business Machines (1911); LU, Lucent Technologies (1869); MOT, Motorola (1928); TXN, Texas Instruments (1930)

	HPQ	IBM	LU	MOT	TXN
1995	0.5	0.2		3.2	4.1
1996	1.1	5.4	na	1.0	0.0
1997	2.2	3.8	0.2	0.2	1.3
1998	1.1	10.2	15.6	0.0	1.5
1999	8.7	24.5	0.2	2.3	5.0
2000	4.4	13.3	6.1	0.6	15.0
2001	0.0	29.3	0.0	0.5	1.0
2002	0.1	0.9	0.0	0.1	0.0
2003	0.5	2.2	0.0	0.0	9.2
2004	0.2	2.9	0.0	0.8	0.5
2005	2.3	3.6	0.2	2.9	2.2
2006	4.9	3.2	na	8.2	7.3
2007	8.8	2.5		0.6	1.3
2008	2.3	4.1		0.0	0.0

New Economy companies (year founded): CSCO, Cisco Systems (1984); DELL, Dell Computer (1984); INTC, Intel (1968); MSFT, Microsoft (1975); ORCL, Oracle (1977)

	CSCO	DELL	INTC	MSFT*	ORCL
1995	4.1	0.4	4.9	2.5	4.3
1996	15.8	0.8	24.6	0.0	8.3
1997	3.1	2.0	12.5	4.1	3.6
1998	6.0	14.4	40.1	3.3	3.8
1999	60.6	37.0	4.8	30.2	6.8
2000	51.3	98.8	32.1	50.7	83.5
2001	11.9	75.2	4.1	31.5	169.7
2002	0.8	28.6	3.5	1.4	0.0
2003	1.3	2.1	6.3	6.9	13.0
2004	14.2	14.0	6.3	8.6	8.6
2005	15.8	9.4	4.2	0.0	22.0
2006	17.6	31.5	2.9	0.0	13.0
2007	22.5	6.7	4.3	0.0	46.9
2008	3.9	0.0	0.1	0.0	126.3

* In 2003, Microsoft ended its stock option program.

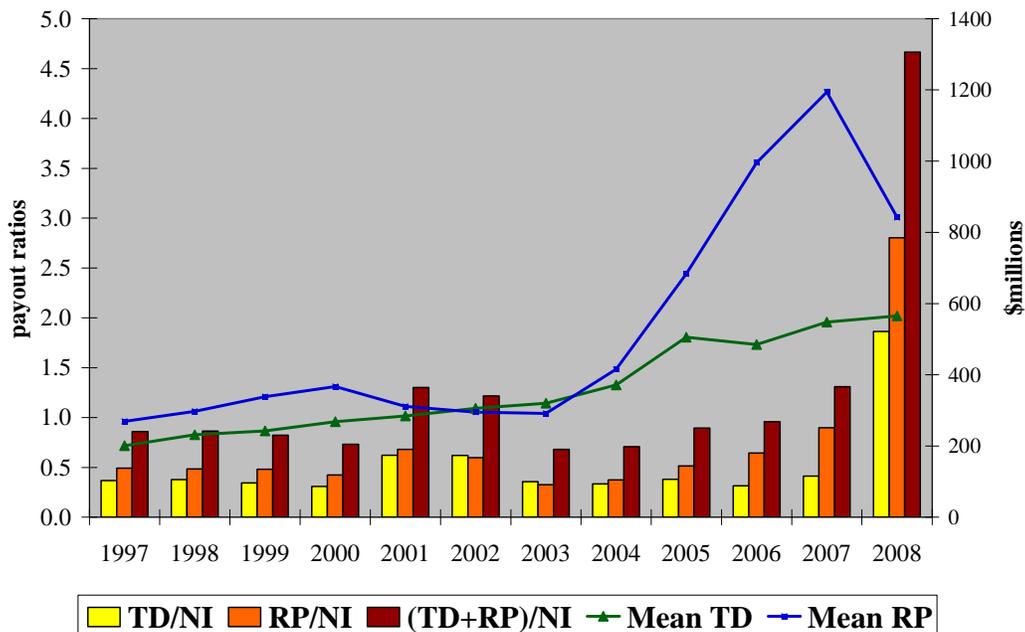
na, not available.

Source: Company proxy statements

Data on 373 companies in the S&P 500 Index in January 2008 that were publicly listed in 1990 show that they expended an annual average of \$106.3 billion (or \$285 million per company) on stock repurchases in 1995-1999, representing 44% of their combined net income. These figures represented a significant increase from \$25.9 billion in repurchases (or \$69 million per company) in 1990-1994, representing 23% of their combined 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. Figure 2 shows the payout ratios and mean payout levels for 438 companies in the S&P 500 Index in January 2008 that were publicly listed from 1997 through 2008.⁵

From 1997 through 2008 these 438 companies expended \$2.4 trillion on stock repurchases, an average of \$5.4 billion per company, and distributed a total of \$1.6 trillion in cash dividends, an average of \$3.8 billion per company. Stock repurchases by these 438 companies averaged \$292 million in 2003, rising to \$1,194 million in 2007. Combined, the 500 companies in the S&P 500 Index in January 2008 repurchased \$486 billion of their own stock in 2006, representing 64% of their net income, and \$592 billion in 2007, representing 91% of their net income.

Figure 2: Ratios of cash dividends and stock repurchases to net income, and mean dividend payments and stock repurchases among S&P 500 (438 companies), 1997-2008



Data for 438 corporations in the S&P 500 Index in January 2008 that were publicly listed 1997 through 2008.

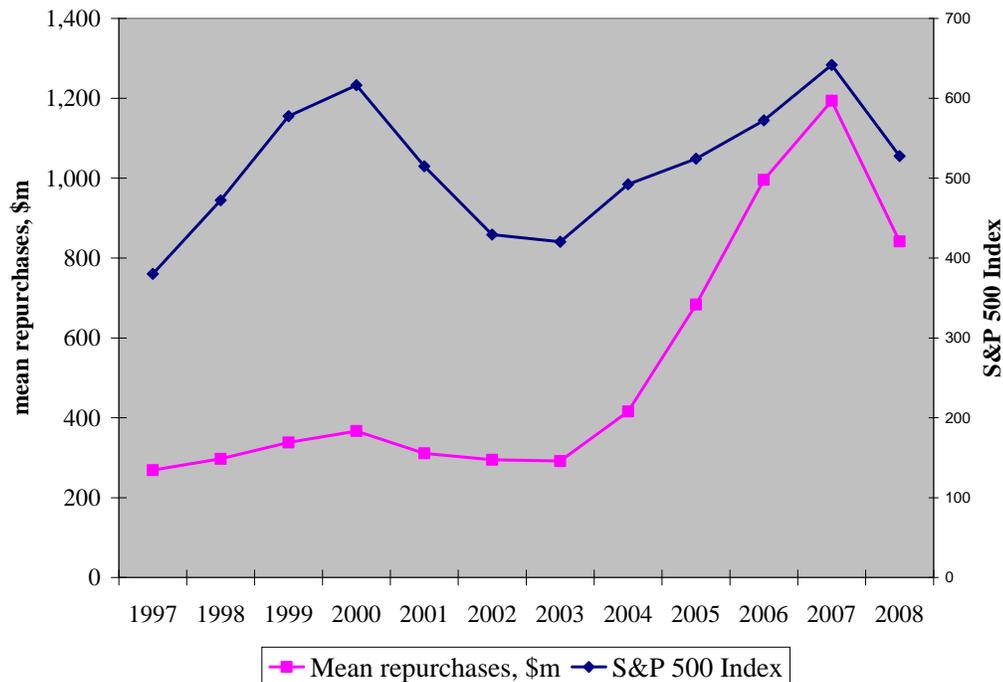
RP, stock repurchases; TD, total dividends (common and preferred); NI, net income (after tax with inventory evaluation and capital consumption adjustments).

Sources: S&P Compustat database (North America, Fundamentals Annual, 1997-2008); company 10-K filings for missing or erroneous data from the Compustat database.

⁵ For each company, I treat the fiscal year as the calendar year in which its fiscal year ends.

Figure 3 shows how the escalating stock repurchases 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 before the 2008 financial debacle. In 2008 repurchases fell substantially for these 438 companies, constrained by a dramatic decline in combined net income from \$583 billion in 2007 to \$132 billion in 2008. Nevertheless, their combined repurchases only declined from \$523 billion to \$369 billion. As a result, the repurchase payout ratio more than tripled from 0.90:1 to 2.80:1. In addition, these companies paid out \$5 billion more in dividends in 2008 than in 2007, with the result that the dividend payout ratio leapt from 0.41:1 to 1.86:1. Allocated differently, the billions spent on buybacks could have helped stabilize the economy. Instead, collectively, these companies not only spent all their profits on repurchases but also ate into their capital.

Figure 3. Stock repurchases by the S&P 500 (438 companies) 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).

Why do corporations repurchase stock? Companies often state explicitly in their financial statements that they are doing stock repurchases to offset dilution from their stock-option programs, especially if, like many ICT companies, these programs are broad-based, extending to most of their employees. The economic rationale for this argument is not clear. If, from the shareholder-value perspective, a company deems it worthwhile to remunerate employees partially 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 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. In any case, for many leading ICT companies, the number of shares repurchased over the period 2000-2008 was well in excess of the number of stock options exercised, and hence the number needed to offset dilution. For example, at IBM this ratio was 3.97:1, Texas Instruments 3.53:1, Intel 3.15:1, HP 3.02:1, Dell 2.30:1, Oracle 2.24:1, Cisco Systems 2.19:1, Motorola 1.69:1, Microsoft (which ended its stock option program in 2003) 1.92:1, and Sun Microsystems (which, constrained by losses, did not do repurchases from 2004 through 2006) 1.19:1.

Executives often claim that buybacks are financial investments that signal confidence in the future of the company and its stock-price performance (Louis and White 2007; Vermaelen 2005, ch. 3). In fact, however, 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 its stock price had peaked. According to the “signaling” argument, we should have seen massive sales of corporate stock in the speculative boom of the late 1990s, as was in fact the case of US 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 boom of the late 1990s corporate executives as *personal investors* sold their own stock to reap speculative gains (often to the tune of tens of millions). Yet, if anything, 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 extent to which stock repurchases have become a systematic mode of corporate resource allocation, and given the extent to which through this manipulation of their corporations’ stock prices top executives have enriched themselves personally in the process, there is every reason to believe that, in the absence of legislation that restricts both stock repurchases as well as speculative and manipulative gains from stock options, executive behavior that places personal interests ahead of corporate interests will continue in the future.⁶

There are a number of ways in which stock options as a mode of executive compensation can be abused. A company might reprice options that are underwater by cancelling an existing option and replacing it with a new option with a lower exercise price (Chance et al. 2000; Ellig 2007, 434-435). As a result, an executive may be able to reap gains from stock-option grants even when the company’s stock price declines. In 2006 a scandal broke out over the practice of backdating stock options – that is, granting option awards today as if they were granted at an earlier date when the market price of the stock and hence the exercise price of the options were lower (Lie 2005; Forelle and Bandler 2006; Bernile and Jarrell 2009). Abuses can also occur in the timing of the exercise of options. Given the fact that in the United States companies are not required to announce the dates on which they actually do 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).

⁶ Many countries do not permit stock repurchases, while others place restrictions on them. See Grullon and Michaely 2002.

The more fundamental problem with US-style stock options, however, is that they virtually never carry any performance criteria that would only permit an executive to gain from the exercise of stock options when the company's stock-price increases are greater than those warranted by innovation (Bebchuk and Fried 2004). As a result, an executive, or any other employee with stock options, can gain from a speculative stock market as distinct from an improvement in the company's productive performance. In addition, as I have argued, executives can augment their stock-option gains by allocating corporate resources to do buybacks, the sole purpose of which is to manipulate the company's stock price. Some of the stock-based compensation of US executives is undoubtedly attributable to innovation, although even then there is the question of whether the stock-based compensation that executives secure is equitable relative to other contributors to the innovation process. Be that as it may, since the last half of the 1990s it has been speculation and manipulation that have been the main drivers of the explosion in the pay of US corporate executives.

3. Maximizing shareholder value and disgorging the “free cash flow”

In the United States, there has never been a legislative attempt to eliminate the possibility of speculative gains from exercising stock options.⁷ Historically, US legislation concerning the gains from exercising stock options has focused on the appropriate tax treatment for this income. In 1945, with the personal tax rate on income over \$200,000 at 94% and the capital gains tax rate at 25%, the Internal Revenue Service ruled that gains from the exercise of stock options had to be taxed as personal income. The Revenue Act of 1950 ruled that the income from the exercise of *restricted* stock options was subject to capital gains treatment.⁸ In 1950 the capital gains tax rate was still 25%, while the personal tax rate on income over \$200,000 was 84.4%. From 1951 through 1964 this top personal tax rate stood at 91%.⁹

The capital gains tax was levied on the difference between the exercise price and the market price of the acquired stock at the time the stock *was actually sold*. In contrast, when option gains were taxed at the personal income tax rate, the executive had to pay tax in the year that the option was exercised. An executive who held on to the acquired stock was then exposed to the risk that a subsequent decline in the stock price would reduce the gains on which taxes had already been paid.

⁷ In the United Kingdom, the Cadbury (1992), Greenbury (1995), and Hampel (1998) reports subjected the income that executives could reap from stock-based compensation to performance criteria that reduced the gains from speculation and manipulation (Main 1999). See also Financial Reporting Council 2008, 23.

⁸ A restricted stock option was non-transferable, had an exercise price of at least 85% of the fair market value of the stock at the time it was granted, and could expire up to ten years from the date of the grant. To be eligible for capital gains treatment, the stock acquired through the exercise of the option could not be sold for at least two years from the option grant date and for at least six months from the exercise date. For a comprehensive documentation of changes in the tax laws relating to stock options, see Ellig 2007, ch. 8 and Appendix B.

⁹ See “Top Federal Income Tax Rates on Regular Income and Capital Gains since 1916,” at <http://www.ctj.org/pdf/regcg.pdf>.

Executive stock options were, therefore, fundamentally a tax dodge. Stock option awards helped to focus a corporate executive on his company's stock price. Like public stock market investors whose main interest was capital gains from selling shares rather than dividend yields from holding shares, stock options gave top executives a personal interest in capitalizing on speculative stock-price movements (Livingston 1958, ch. 16).

With the gains on the exercise of stock options taxed as capital gains, executive stock options became very widespread among US corporations. They averaged 36% of the total compensation of top executives of 50 large US corporations over 1955-1963 (Lewellen 1968, 137). In the late 1950s and early 1960s, however, there was a public-opinion backlash against this enrichment of top managers (for an initial critique, see AFL-CIO 1959). In a 1960 *Harvard Business Review* article entitled "Are Stock Options Getting Out of Hand?", Erwin Griswold, Dean of Harvard Law School, criticized the tax rules on stock options for favoring a special class of people who did not in any case make investments that justified capital gains. He argued that option grants focused the minds of executives more on the gamble of holding publicly traded stocks than on the requirements of managing large corporations. Griswold's article provoked a vigorous debate that included academic articles in *Harvard Business Review* and elsewhere (Campbell 1961; Holland and Lewellen 1962; Lent and Menge 1962; Baker 1963); and whose non-academic participants included Henry Ford II, CEO of Ford Motor Company; Thomas Watson, Jr., CEO of IBM; Nelson Rockefeller, Governor of New York; and Albert Gore, US Senator from Tennessee.

In 1961 Gore introduced a bill in Congress to rescind the tax privileges of executive stock options, arguing that the 1950 legislation permitted a "glaring loophole" in the tax law that had resulted in "flagrant abuses" (Washington Post 1961). In 1964 Congress revised the tax code pertaining to stock options. The "restricted" stock option of the 1950 Act became a "qualified" stock option; to qualify for capital gains treatment, the option had to be exercised within five rather than ten years, and, upon exercise, the acquired stock had to be held for three years rather than six months. Qualified options also had to be exercised in the order in which they were granted (Ellig 2006, 57). Each of these changes reduced the probability that the executive would realize benefits from stock options. Nevertheless, in a *New York Times* article, "How to be rich without paying taxes", published in 1965, Gore continued his attack on executive stock options, noting that "Congress made some changes in the law last year, but its action fell far short of need" (Gore 1965, 29).

Over the next decade, changes in relative tax rates served to erode the special tax privilege of the stock-option gains of corporate executives. Congress lowered the personal income tax rate on income over \$200,000 to 70% in 1965, and progressively raised the capital gains tax rate to a high of 39.9% in 1976, thus vastly reducing, but not eliminating, the tax advantage of qualified stock options. The Tax Reform Act of 1969 included the introduction of the Alternative Minimum Tax that meant that some executives would have to pay higher effective tax rates on their stock-option income even when it was eligible for the capital gains tax rate.

Then, under the Tax Reform Act of 1976, Congress eliminated the capital gains treatment of all future employee stock option grants. In 1978 Graef Crystal (1978, 145) – a compensation consultant who, as we have already seen, would later become a vocal critic of excessive executive pay (Crystal 1991) – stated that qualified stock options, “once the most popular of all executive compensation devices, . . . have been given the last rites by Congress.”

In the Economic Recovery Act of 1981, however, Congress restored the qualified stock option that was subject to capital gains tax treatment, now called the “incentive stock option”. To qualify for this tax treatment, the stock option had to be awarded under a shareholder approved plan, have an exercise price of at least 100% of the market value of the stock at the date of the grant, expire no more than 10 years from the date of the grant, and, when exercised, the acquired stock had to be held for at least two years after the grant date and one year after the exercise date. In addition, Congress decreed that the value of the exercisable grant (that is, the number of shares in the grant times the exercise price) be no more than \$100,000 in a given year (Ellig 2006, 58). While resuscitating the executive stock option with its capital gains tax benefit, therefore, the 1981 Act also limited their use by placing what was, from the perspective of top executives, a relatively low limit on value of the annual awards that they could receive as incentive stock options.

In the 1980s, however, the much lower taxes characteristic of “Reaganomics” made *both* incentive and nonqualified stock options popular as modes of employee compensation. The 1981 Act lowered the highest bracket personal income tax rate to 50% on income over (initially in 1982) \$85,600, and in 1988 it was lowered much further to 28% on income over \$30,050. It now stands at 35% on incomes over \$360,050.¹⁰ As a result, the vast majority of stock options grants that corporate executives receive are of the “non-qualified” (that is “non-incentive”) variety that are subject to the personal income tax rate and on which the tax must be paid at the time that the option is exercised.¹¹

Since the Reagan tax revolution of the 1980s, therefore, the popularity of executive stock options has had little to do with the tax treatment that they receive. In the process of focusing solely on the types of stock options that would be eligible for capital gains tax treatment, Congress failed to initiate, much less pass, any legislation that would limit the gains that executives could make on stock options more generally.

While in the early 1980s US Congress was making executive stock options more attractive by lowering personal tax rates, the SEC, which regulates the stock market, was clearing the way for corporate executives to manipulate stock prices by allocating substantial corporate resources to stock repurchases. Under the Securities Exchange Act of 1934, stock repurchases could be construed as an attempt to manipulate a company’s

¹⁰ Meanwhile Congress lowered the capital gains tax rate to 20% in 1982, raised it to 28% in 1987, and lowered it again to 20% in 1997. The Job and Growth Tax Relief Reconciliation Act of 2003 (that is, the “Bush tax cuts”) further reduced the capital gains tax rate to 15%.

¹¹ When an employee exercises a non-qualified stock option, the company withholds the estimated tax and receives a dollar-for-dollar tax credit known as the “stock-option income tax benefit”, which is typically reported on the company’s cash-flow statement. In 2000, for example, at the peak of the Internet boom, Cisco Systems had a stock-option income tax benefit of \$5.5 billion, more than offsetting its actual 2000 federal and state income tax liability of \$4.7 billion (Pender 2000).

stock price. In 1982, however, with the promulgation of Rule 10b-18, the SEC provided companies with a “safe harbor” that manipulation charges would not be filed if each day’s open-market repurchases were not greater than 25% of the stock’s average daily trading volume and if the company refrained from doing buybacks at the beginning and end of the trading day.¹² According to a contemporary news report, Rule 10b-18 “made it easier for companies to buy back their shares on the open market without fear of stock-manipulation charges” (Hudson 1982). SEC Chairman John Shad was an advocate of the rule change, arguing that large-scale open market purchases would fuel an increase in stock prices that would be beneficial to shareholders. One of the SEC Commissioners, John Evans, argued that as a result of Rule 10-18b some manipulation would go unprosecuted, but then agreed to make the Commission’s vote for the rule change unanimous.

As it happens, 1982 was the beginning of the 18-year upward movement in stock prices that is generally described as the longest “bull run” in US stock market history. Since the early 1980s executives have justified their stock-based compensation as well as the corporate financial behavior that increases it by the dominant ideology that the role of the corporate executive is to “maximize shareholder value” (Rappaport 1981 and 1983). At the same time, academic economists supported this ideology by propounding a shareholder-value perspective on corporate governance that is consistent with the neoclassical theory of the market economy (Fama and Jensen 1983a and 1983b).

For adherents of the theory of the market economy, “market imperfections” necessitate managerial control over the allocation of resources, thus creating an “agency problem” for those “principals” who have made investments in the firm. These managers may allocate corporate resources to build their own personal empires regardless of whether the investments that they make and the people whom they employ generate sufficient profits for the firm. They may hoard surplus cash or near-liquid assets within the corporation, thus maintaining control over uninvested resources, rather than distributing these extra revenues to shareholders. Or they may simply use their control over resource allocation to line their own pockets. According to agency theory, in the absence of corporate governance institutions that promote the maximization of shareholder value, one should expect managerial control to result in the inefficient allocation of resources.

The manifestation of a movement toward the more efficient allocation of resources, it is argued, is a higher return to shareholders. But why is it shareholders for whom value should be maximized? Why not create more value for creditors by making their financial investments more secure, or for employees by paying them higher wages and benefits, or for communities in which the corporations operate by generating more corporate tax revenues? Neoclassical financial theorists argue that among all the stakeholders in the business corporation only shareholders are “residual claimants”. The amount of returns that shareholders receive depends on what is left over after other stakeholders, all of whom it is argued have guaranteed contractual claims, have been paid for their

¹² 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 shares repurchased in the previous quarter and the average price paid per share. See <http://www.sec.gov/rules/final/33-8335.htm>.

productive contributions to the firm. If the firm incurs a loss, the return to shareholders is negative, and vice versa.

By this argument, shareholders are the only stakeholders who have an incentive to bear the risk of investing in productive resources that may result in superior economic performance. As residual claimants, moreover, shareholders are the only stakeholders who have an interest in monitoring managers to ensure that they allocate resources efficiently. Furthermore, by selling and buying corporate shares on the stock market, public shareholders, it is argued, are the participants in the economy who are best situated to reallocate resources to more efficient uses.

Within the shareholder-value paradigm, the stock market represents the corporate governance institution through which the agency problem can be resolved and the efficient allocation of the economy's resources can be achieved. Specifically, the stock market can function as a "market for corporate control" that enables shareholders to "disgorge" – to use Michael Jensen's evocative term – the "free cash flow". As Jensen (1986, 323), a leading academic proponent of maximizing shareholder value, put it in a seminal 1986 article:

Free cash flow is cash flow in excess of that required to fund all projects that have positive net present values when discounted at the relevant cost of capital. Conflicts of interest between share-holders and managers over payout policies are especially severe when the organization generates substantial free cash flow. The problem is how to motivate managers to disgorge the cash rather than investing it at below cost or wasting it on organization inefficiencies.

How can those managers who control the allocation of corporate resources be motivated, or coerced, to distribute cash to shareholders? If a company does not maximize shareholder value, shareholders can sell their shares and reallocate the proceeds to what they deem to be more efficient uses. The sale of shares depresses that company's stock price, which in turn facilitates a takeover by shareholders who can put in place managers who are willing to distribute the free cash flow to shareholders in the forms of higher dividends and/or stock repurchases. Better yet, as Jensen argued in the midst of the 1980s corporate takeover movement, let corporate raiders use the market for corporate control for debt-financed takeovers, thus enabling shareholders to transform their corporate equities into corporate bonds. Corporate managers would then be "bonded" to distribute the "free cash flow" in the form of interest rather than dividends (Jensen 1986, 324).

Additionally, as Jensen and Murphy (1990), among others, contended, the maximization of shareholder value could be achieved by giving corporate managers stock-based compensation, such as stock options, to align their own self-interests with those of shareholders. Then, even without the threat of a takeover, these managers would have a personal incentive to maximize shareholder value by investing corporate revenues only in those "projects that have positive net present values when discounted at the relevant cost of capital" and distributing the remainder of corporate revenues to shareholders in the forms of dividends and/or stock repurchases.

During the 1980s and 1990s, maximizing shareholder value became the dominant ideology for corporate governance in the United States. Top executives of US industrial corporations became ardent advocates of this perspective; quite apart from their ideological predispositions, the reality of their stock-based compensation inured them to maximizing shareholder value. The long stock market boom of the 1980s and 1990s combined with the remuneration decisions of corporate boards to create this pay bonanza for corporate executives.

To some extent, as I have argued, the stock market boom of the 1980s and 1990s was driven by New Economy innovation. By the late 1990s, however, innovation had given way to speculation as a prime mover of stock prices. Then, after the collapse of the Internet bubble at the beginning of the 2000s, corporate resource allocation sought to restore stock prices through manipulation in the form of stock buybacks. This massive “disgorging” of the corporate cash flow manifests a decisive triumph of agency theory and its shareholder-value ideology in the determination of corporate resource allocation.

Has this financial behavior led to a more efficient allocation of resources in the economy, as the proponents of maximizing shareholder-value claim? The preliminary evidence on the impact of stock buybacks on innovation and employment that I will present below should lead one to question this hypothesis. Yet quite apart from this empirical evidence, there are a number of critical flaws in agency theory’s analysis of the relation between corporate governance and economic performance. These flaws have to do with 1) a failure to explain how, historically, corporations came to control the allocation of significant amounts of the economy’s resources; 2) the measure of “free cash flow”; and 3) the claim that only shareholders have “residual claimant” status. These flaws stem from the fact that agency theory, like the neoclassical theory of the market economy in which it is rooted, lacks a theory of innovative enterprise (see Lazonick 2009b). These flaws are, moreover, amply exposed by the history of the industrial corporation in the United States, the national context in which agency theory evolved and in which it is thought to be most applicable.

Agency theory makes an argument for taking resources out of the control of inefficient managers without explaining how, historically, corporations came to possess the vast amounts of resources over which these managers could exercise allocative control (see Lazonick 1992). From the first decades of the 20th century, the separation of share ownership from managerial control characterized US industrial corporations. This separation occurred because the growth of innovative companies demanded that control over the strategic allocation of resources to transform technologies and access new markets be placed in the hands of salaried professionals who understood the investment requirements of the particular lines of business in which the enterprise competed. At the same time, the listing of a company on a public stock exchange enabled the original owner-entrepreneurs to sell their stock to the shareholding public. Thereby enriched, they were able to retire from their positions as top executives. The departing owner-entrepreneurs left control in the hands of senior salaried professionals, most of whom had been recruited decades earlier to help to build the enterprises. The resultant disappearance of family owners in positions of strategic control enabled the younger generation of

salaried professionals to view the particular corporations that employed them as ones in which, through dedicated work effort over the course of a career, they could potentially rise to the ranks of top management.

With salaried managers exercising strategic control, innovative managerial corporations emerged as dominant in their industries during the first decades of the century. During the post-World War II decades, and especially during the 1960s conglomerate movement, however, many of these industrial corporations grew to be too big to be managed effectively. Top managers responsible for corporate resource allocation became segmented, behaviorally and cognitively, from the organizations that would have to implement these strategies. Behaviorally, they came to see themselves as occupants of the corporate throne rather than as members of the corporate organization, and became obsessed by the size of their own remuneration. Cognitively, the expansion of the corporation into a multitude of businesses made it increasingly difficult for top management to understand the particular investment requirements of any of them (Lazonick 2004).

In the 1970s and 1980s, moreover, many of these US corporations faced intense foreign competition, especially from innovative Japanese corporations (also, it should be noted, characterized by a separation of share ownership from managerial control). An innovative response required governance institutions that would reintegrate US strategic decision makers with the business organizations over which they exercised allocative control. Instead, guided by the ideology of maximizing shareholder value and rewarded with stock options, what these established corporations got were managers who had a strong personal interest in boosting their companies' stock prices, even if the stock-price increase was accomplished by a redistribution of corporate revenues from labor incomes to capital incomes and even if the quest for stock-price increases undermined the productive capabilities that these companies had accumulated in the past.

Agency theory also does not address how, at the time when innovative investments are made, one can judge whether managers are allocating resources inefficiently. Any strategic manager who allocates resources to an innovative strategy faces technological, market, and competitive uncertainty. Technological uncertainty exists because the firm may be incapable of developing the higher-quality processes and products envisaged in its innovative investment strategy. Market uncertainty exists because, even if the firm succeeds in its development effort, future reductions in product prices and increases in factor prices may lower the returns that can be generated by the investments. Finally, even if a firm overcomes technological and market uncertainty, it still faces competitive uncertainty: the possibility that an innovative competitor will have invested in a strategy that generates an even higher-quality, lower-cost product that enables it to win market share.

One can state, as Jensen did, that the firm should only invest in "projects that have positive net present values when discounted at the relevant cost of capital." But, quite apart from the problem of defining the "relevant cost of capital," anyone who contends that, when committing resources to an innovative investment strategy, one can foresee the stream of future earnings that are required for the calculation of net present value knows

nothing about the innovation process. It is far more plausible to argue that if corporate managers really sought to maximize shareholder value according to this formula, they would never contemplate investing in innovative projects with their highly uncertain returns (see Baldwin and Clark 1992).

Addressing the third point, it is simply not the case, as agency theory assumes, that all the firm's participants other than shareholders receive contractually guaranteed returns according to their productive contributions. Given its investments in productive resources, the state has residual-claimant status. Any realistic account of economic development must take into account the role of the state in 1) making infrastructural investments that, given the required levels of financial commitment and inherent uncertainty of economic outcomes, business enterprises would not have made on their own; and 2) providing business enterprises with subsidies that encourage investment in innovation. In terms of investment in new knowledge with applications to industry, the United States was the world's foremost developmental state over the course of the 20th century (see Lazonick 2008). As a prime example, it is impossible to explain US dominance in computers, microelectronics, software, and data communications without recognizing the role of government in making seminal investments that developed new knowledge and infrastructural investments that facilitated the diffusion of that knowledge (see, for example, National Research Council 1999).

The US government has made investments to augment the productive power of the nation through federal, corporate, and university research labs that have generated new knowledge as well as through educational institutions that have developed the capabilities of the future labor force. Business enterprises have made ample use of this knowledge and capability. In effect, in funding these investments, the state (or more correctly, its body of taxpayers) has borne the risk that the nation's business enterprises would further develop and utilize these productive capabilities in ways that would ultimately redound to the benefit of the nation, *but with the return to the nation in no way contractually guaranteed*.

In addition, the US government has often provided cash subsidies to business enterprises to develop new products and processes, or even to start new firms. The public has funded these subsidies through current taxes, borrowing against the future, or by making consumers pay higher product prices for current goods and services than would have otherwise prevailed. Multitudes of business enterprises have benefited from subsidies without having to enter into contracts with the public bodies that have granted them to remit a guaranteed return from the productive investments that the subsidies help to finance.

Workers can also find themselves in the position of having made investments without a contractually guaranteed return. The collective and cumulative innovation process demands that workers expend time and effort now for the sake of returns that, precisely because innovation is involved, can only be generated in the future, which may entail the development and utilization of productive resources over many years. Insofar as workers involved in the innovation process make this investment of their time and effort in the

innovation process without a contractually guaranteed return, they have residual claimant status.¹³

Investments that can result in innovation require the strategic allocation of productive resources to particular processes to transform particular productive inputs into higher-quality, lower-cost products than those goods or services that were previously available at prevailing factor prices. Investment in innovation is a direct investment that involves, first and foremost, a strategic confrontation with technological, market, and competitive uncertainty. Those who have the abilities and incentives to allocate resources to innovation must decide, in the face of uncertainty, what types of investments have the potential to generate higher-quality, lower-cost products. Then they must mobilize committed finance to sustain the innovation process until it generates the higher-quality, lower-cost products that permit financial returns.

What role do public shareholders play in this innovation process? Do they confront uncertainty by strategically allocating resources to innovative investments? No. As portfolio investors, they diversify their financial holdings across the outstanding shares of existing firms to minimize risk. They do so, moreover, with limited liability, which means that they are under no legal obligation to make further investments of “good” money to support previous investments that have gone bad. Indeed, even for these previous investments, the existence of a highly liquid stock market enables public shareholders to cut their losses instantaneously by selling their shares – what has long been called the “Wall Street walk”.

Without this ability to exit an investment easily, public shareholders would not be willing to hold shares of companies over the assets of which they exercise no direct allocative control. It is the liquidity of a public shareholder’s portfolio investment that differentiates it from a direct investment, and indeed distinguishes the public shareholder from a private shareholder who, for lack of liquidity of his or her shares, must remain committed to his or her direct investment until it generates financial returns. The modern corporation entails a fundamental transformation in the character of private property, as Adolf Berle and Gardiner Means (1932) recognized. As property owners, public shareholders own

¹³ In an important contribution to the corporate governance debate, Margaret Blair (1995) argued that, alongside a firm’s shareholders, workers should be accorded residual-claimant status because they make investments in “firm-specific” human capital at one point in time with the expectation – but without a contractual guarantee – of reaping returns on those investments over the course of their careers. Moreover, insofar as their human capital is indeed firm-specific, these workers are dependent on their current employer for generating returns on their investments. A lack of interfirm labor mobility means that the worker bears some of the risk of the return on the firm’s productive investments, and hence can be considered a residual claimant. Blair goes on to argue that if one assumes, as shareholder-value proponents do, that only shareholders bear risk and residual-claimant status, there will be an underinvestment in human capital to the detriment of not only workers but the economy as a whole. See, however, Blair 2009, where she seems to accept the “free cash flow” argument that when corporate executives decide to do buybacks it must be because no superior alternatives to corporate resource allocation exist. She also takes issue with my characterization of stock repurchases as instruments of manipulation by making the specious argument that, since repurchases are legal, they cannot be used to manipulate the stock market. In fact, as exemplified by the SEC’s Rule 10b-18 that provides corporate stock repurchasers with a safe harbor from manipulation charges discussed above, the deregulation of stock repurchases reflects the rise of shareholder-value ideology.

tradable shares in a company that has invested in real assets; they do not own the assets themselves.

Indeed, the fundamental role of the stock market in the United States in the 20th century was to transform illiquid claims into liquid claims *on the basis of investments that had already been made*, and thereby separate share ownership from managerial control. Business corporations sometimes do use the stock market as a source of finance for new investments, although the cash function has been most common in periods of stock market speculation when the lure for public shareholders to allocate resources to new issues has been the prospect of quickly “flipping” their shares to make a rapid speculative return. Public shareholders want financial liquidity; investments in innovation require financial commitment. It is only by ignoring the role of innovation in the economy, and the necessary role of insider control in the strategic allocation of corporate resources to innovation, that agency theory can argue that superior economic performance can be achieved by maximizing the value of those actors in the corporate economy who are the ultimate outsiders to the innovation process.

4. Stock repurchases and investments in innovation: some preliminary evidence

The ideology of maximizing shareholder value is an ideology through which US corporate executives have been able to enrich themselves. In this they were aided in the 1980s and 1990s by academic proponents of the ideology such as Michael Jensen who argued that aligning the interests of top executives with those of public shareholders would result in a mode of resource allocation that would result in superior performance in the economy as a whole. The result has been an explosion and re-explosion of executive pay over the past three decades, fueled by stock-based compensation.

In his 2008 book, *Supercapitalism*, Robert Reich (2008, 105-114), former Secretary of Labor in the Clinton administration, justifies the explosion in executive pay by arguing that intense competition makes it much more difficult to find the talent who can manage a large corporation than it used to be. Without going so far, others might argue that while this concentration of income at the top is highly inequitable, its impact on the performance of the US economy is neutral.¹⁴ The problem with these arguments is that they do not actually analyze the relation between the incentives inherent in different types of executive compensation – in this case, stock-based compensation, particularly in the form of stock-option grants – and the ways in which the executives who receive these incentives allocate resources.

My analyses of different industries (some of which I have studied in more depth than others) strongly suggest that the explosions in executive pay are coming at the expense of innovation and the upgrading of employment opportunities in the US economy. In what follows, I present some pertinent evidence from key sectors of the US economy.¹⁵

¹⁴ For example, in their articles on the concentration of income at the top, Thomas Piketty and Emmanuel Saez (2004 and 2007) do not raise, let alone analyze, the impact of the distribution of income on the performance of the economy.

¹⁵ I am currently engaged in ongoing studies of the relation between executive pay and innovative performance in these sectors.

Among the biggest stock repurchasers in the years prior to the financial crisis were many of 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 \$5.3 billion in 2006-2007. 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 the 2000s 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.

Among the top ten repurchasers of stock in 2000-2008 were five of the leading ICT companies: Microsoft (the #2 repurchaser with \$94.3 billion in buybacks), IBM (#3, \$72.9 billion), Cisco Systems (#5, \$53.6 billion), Intel (#8, \$48.8 billion), and Hewlett-Packard (#10, \$43.3 billion). All of these companies spent more on buybacks than they spent on R&D in 2000-2008. In the 2000s, all of these companies have been globalizing employment, and profiting through the creation of high-tech jobs in lower wage parts of the world such as China and India while using the profits of globalization to do stock buybacks at home (Lazonick 2009b; Milberg 2008).

Meanwhile, US high-tech companies lobby the US government for more public investment in the US high-technology knowledge base, even as the companies allocate their own profits to huge stock buybacks. For example, in the 2000s Intel along with the Semiconductor Industry Association (SIA) has been lobbying the US Congress for more spending on the National Nanotechnology Initiative (NNI). At a press conference that the SIA organized in Washington DC in March 2005, Intel CEO Craig Barrett 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 state and federal governments to ensure that America continues to be the world leader in information technology" (Electronic News 2005). In 2005 the annual NNI budget was \$1.2 billion, just 11% of the \$10.6 billion that Intel spent on stock repurchases in that year alone. Indeed, Intel's 2005 expenditures on stock buybacks exceed the total of \$10.1 billion that has been spent on NNI since its inception in 2001 through 2009.¹⁶ Given the extent to which the ICT industry in general, and a company like Intel in particular, has benefited from decades of government investments in the high-tech knowledge base, one might ask whether a

¹⁶ In 2008 the NNI budget was \$1,554 million with an estimated budget for 2009 of \$1,657 million, and a proposed \$1,640 million for 2010 (www.nano.gov/html/about/funding.html).

portion of the massive funds that Intel allocates to buying back its own stock could not be more productively allocated “to ensure that America continues to be the world leader in information technology.”

Among the largest repurchasers of stock in the 2000s have been pharmaceutical companies. For 2000-2008 Pfizer was the #7 repurchaser with \$50.6 billion in buybacks, Johnson & Johnson #12 with \$33.3 billion, Amgen #24 with \$22.6 billion, and Merck #31 with \$18.7 billion. These and other US pharmaceutical companies charge higher drug prices in the United States than in other rich nations such as Japan, Canada, and France because, their executives argue, they need the higher earnings to fund their R&D efforts in the United States. Yet the very same companies do massive stock buybacks for the sole purpose of manipulating their stock prices. Meanwhile, the United States is the world leader in biopharmaceuticals in large part because of \$31 billion per annum that the National Institutes of Health spend in support of the life sciences knowledge base, as well as numerous government subsidies to the pharmaceutical industry, including those under the Orphan Drug Act of 1983 (see Lazonick and Tulum 2009). Instead of doing stock buybacks, the pharmaceutical companies could be contributing to the national life sciences effort, or lowering their drug prices to make their products more affordable to the American public.

There has been virtually no public policy debate in the United States over the practice of buybacks, its acceleration in recent years, or the implications for innovation, employment, income distribution, and economic growth. Exceptionally, in the summer of 2008 four Congressional Democrats took aim at stock repurchases by the big oil companies, after Exxon Mobil, by far the largest repurchaser of stock (\$144 billion in 2000-2008), had announced record second quarter profits of \$11.7 billion, of which \$8.8 billion went to stock buybacks (US Congress 2008). In a letter to oil industry executives, the Congressmen asked them to “pledge to greatly increase the ratio of investments in production and alternatives to the amount of stock buybacks this year and next by investing much more of your profits into exploration and production on the leases you have been awarded in the U.S., and in the research and development of promising alternative energy sources” (US Congress 2008). Exxon Mobil did not pay much attention to this plea; in the last half of 2008 it repurchased another \$17.5 billion for a total of \$35.7 billion, or 79% of its net income, on the year. In the first three-quarters of 2009 Exxon Mobil did another \$17.3 billion in buybacks, equivalent to 131% of its net income.

Currently, the United States is in the midst of a major, and momentous, debate over health care reform, with the companies that provide health insurance in the forefront of opposition to progressive change, including the availability of a “public option” that would provide households with an alternative source of health insurance to that offered by the business corporations. Among the top 50 repurchasers for 2000-2008 were the two largest corporate health insurers: UnitedHealth Group at #23 with \$23.7 billion in buybacks and Wellpoint at #39 with \$14.9 billion. For each of these companies, repurchases represented 104% of net income for 2000-2008. Over this period, repurchases by the third largest insurer, Aetna, were \$9.7 billion, or 137% of net income, and the fifth largest, Cigna, \$9.8 billion, or 125% of net income. Meanwhile the top executives of these companies typically reaped millions of dollars, and in many years

tens of millions of dollars, in gains from exercising stock options. A serious attempt at health care reform would seek to eliminate the profits of these health insurers, given that these profits are used solely to manipulate stock prices and enrich a small number of people at the top.

5. Weapons of value destruction

In the United States, the problem of exploding executive pay has been around for a long time, and virtually nothing has been done about it. As we have seen, the last serious attempt by the US Congress to control the gains from executive stock options was in the 1960s when Senator Albert Gore was engaged in a battle with corporate tax-dodgers. Through the Tax Reform Act of 1976, there was a legislative movement toward restricting the tax advantages of stock options. All that changed in the early 1980s. Reductions in the personal income tax rate ensured that substantial benefits could be derived from executive stock options and the deregulation of corporate stock repurchases gave corporate executives a powerful means of manipulating stock prices.

The one attempt in the 1990s by Democrats to control the rise of executive pay ended up doing just the opposite. In 1993, after Bill Clinton became President of the United States, his administration implemented a campaign promise to legislate a cap of \$1 million on the amount of nonperformance-related, top-executive compensation that could be claimed as a corporate tax deduction. One perverse result of this law was that companies that were paying their CEOs less than \$1 million in salary and bonus *raised* these components of CEO pay toward \$1 million, which was now taken as the government-approved “CEO minimum wage”. The other perverse result was that companies increased CEO stock-option awards, for which tax deductions were not in any case being claimed, as an alternative to exceeding the \$1 million salary-and-bonus cap (Byrne 1994 and 1995).

A further irony of the Clinton legislation was that the high-tech lobby at the time was fighting against an attempt by the Financial Accounting Standards Board (FASB) to require companies to expense stock options. Especially for companies with broad-based stock option plans, this prospective regulatory change would have resulted in lower reported earnings that, it was thought, would result in lower stock prices. Hence, even though the proposed FASB regulation (which was ultimately decreed in 2004) would have reduced the corporate tax bill, corporate executives were against it. Why would these same executives have given much thought to the fact that there would be no *corporate* tax deductions for personal pay that exceeded the million-dollar cap?

Then as now, it is futile to talk about placing restrictions on executive compensation without limiting the extent to which executives can reap gains from stock options that result from either speculation or manipulation. Besides making manipulative stock repurchases illegal, legislation is needed to place limits on stock-option grants to individuals and to make the gains from the exercise of stock options dependent on achieving a variety of performance goals, including first and foremost ongoing contributions to high-quality job creation in the United States.

Economic activity entails both the creation of value, as goods and services are produced, and the extraction of value, as goods and services are consumed. Investment in innovation creates the potential for higher standards of living for those who contribute to the innovation process. Inequity occurs when certain groups in the economy – for example, top corporate executives – use their control over resource allocation to extract more than they create. Instability occurs when this excessive value extraction undermines innovation, and with it the potential for higher standards of living for the broader population. It is my contention that in the United States in the 2000s the stock-based compensation of corporate executives is a prime source of this instability, and the stock buyback is their most powerful “weapon of value extraction”. Indeed, my research suggests that, by undermining innovation, stock repurchases have become “weapons of value destruction”. Corporate stock repurchases should be banned, and stock-based compensation should be controlled. If not, we can expect that executive pay will continue to explode, and that, for lack of innovation and high-quality job creation, American prosperity will continue to erode.

References:

- AFL-CIO, 1959, *The Stock Option Scandal*, Industrial Union Department AFL-CIO.
- AFL-CIO, 2009, "Executive PayWatch," at <http://www.aflcio.org/corporatewatch/paywatch/pay/index.cfm>.
- Baker, John C., 1963, "Stock Options at the Crossroads," *Harvard Business Review*, 41, 1: 22–29, 164–166.
- Baldwin, Carliss, and Kim Clark, 1992, "Capabilities and Capital Investment: New Perspectives on Capital Budgeting," *Journal of Applied Corporate Finance*, 5, 2: 67–87.
- Bebchuk, Lucian, and Jesse Fried, 2004, *Pay without Performance: The Unfulfilled Promise of Executive Compensation*, Harvard University Press.
- Berle, Adolf A., and Gardiner C. Means, 1932, *The Modern Corporation and Private Property*, Macmillan.
- Bernile, Gennaro, and Gregg A. Jarrell, 2009, "The Impact of the Options Backdating Scandal on Shareholders," *Journal of Accounting and Economics*, 47, 1-2: 2-26.
- Blair, Margaret M., 1995, *Ownership and Control: Rethinking Corporate Governance for the Twenty-First Century*, Brookings Institution.
- Blair, Margaret M., 2009, "Comment on 'The New Economy Business Model and the Crisis of U.S. Capitalism'," *Capitalism and Society*, 4, 2.
- Byrne, John A., 1994, "That's some pay cap, Bill," *Business Week*, April 25.
- Byrne, John A., 1995, "CEO pay: Ready for takeoff," *Business Week*, April 24.
- Campbell, Erwin D., 1961, "Stock Options Should Be Valued," *Harvard Business Review* 39, 4: 52–58.
- Chance, Don M., Raman Kumar, and Rebecca B. Todd, 2000, "The 'Repricing' of Executive Stock Options," *Journal of Financial Economics*, 57, 1, 129-154.
- Crystal, Graef, 1978, *Executive Compensation: Money, Motivation, and Imagination*, American Management Association.
- Crystal, Graef, 1991, *In Search of Excess: The Overcompensation of American Executives*, W. W. Norton.
- Electronic News, 2005, "US could lose race for nanotech leadership, SIA panel says," *Electronic News*, March 16.
- Ellig, Bruce R., 2006, "The Evolution of Executive Pay in the United States," *Compensation & Benefits Review*, January/February: 55-61.
- Ellig, Bruce R., 2007, *The Complete Guide to Executive Compensation*, McGraw-Hill.
- Fama, Eugene F., and Michael C. Jensen, 1983a, "Agency Problems and Residual Claims," *Journal of Law and Economics*, 26, 2: 327-349.
- Fama, Eugene F., and Michael C. Jensen, 1983a, "Separation of Ownership and Control," *Journal of Law and Economics*, 26, 2: 301-325.
- Financial Reporting Council, 2008, "The Combined Code on Corporate Governance," June 2008, available at [http://www.frc.org.uk/documents/pagemanager/frc/Combined_Code_June_2008/Combined%20Code%20Web%20Optimized%20June%202008\(2\).pdf](http://www.frc.org.uk/documents/pagemanager/frc/Combined_Code_June_2008/Combined%20Code%20Web%20Optimized%20June%202008(2).pdf).
- Forelle, Charles, and James Bandler, 2006, "The perfect payday: Some CEOs reap millions by landing stock options when they are most valuable; Luck – or something else?" *Wall Street Journal*, March 18, A:1.

- Fried, Jesse M., 2000, "Insider Signaling and Insider Trading with Repurchase Tender Offers." *University of Chicago Law Review*, 67, 2: 421–477.
- Fried, Jesse M., 2001. "Open Market Repurchases: Signaling or Market Opportunism." *Theoretical Inquiries in Law*, 2, 2: 1–30.
- Gore, Albert, 1965, "How to be rich without paying taxes," *New York Times*, April 11.
- Griswold, Erwin N, 1960, "Are Stock Options Getting Out of Hand?" *Harvard Business Review* 38, 6: 49–55.
- Grullon, Gustavo, and Roni Michaely, 2002, "Dividends, Share Repurchases, and the Substitution Hypothesis," *Journal of Finance*, 57, 4: 1649–1684.
- Holland, Daniel M., and Wilbur G. Lewellen, 1962, "Probing the Record of Stock Options," *Harvard Business Review*, 40, 2: 132–150.
- Hudson, Richard L., 1982, "SEC eases way for repurchase of firms' stock: Agency assures it won't file charges of manipulation if certain rules are met," *Wall Street Journal*, November 10.
- Jensen, Michael C., 1986, "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers," *American Economic Review*, 76, 2: 323-329.
- Jensen, Michael C., and Kevin J. Murphy, 1990, "Performance Pay and Top Management Incentives," *Journal of Political Economy*, 98, 2: 225-264.
- Lazonick, William, 1992, "Controlling the Market for Corporate Control: The Historical Significance of Managerial Capitalism," *Industrial and Corporate Change*, 1, 3: 445-488.
- Lazonick, William, 2004, "Corporate Restructuring," in Stephen Ackroyd, Rose Batt, Paul Thompson, and Pamela Tolbert, eds., *The Oxford Handbook of Work and Organization*, Oxford University Press: 577-601.
- Lazonick, William, 2008, "Entrepreneurial Ventures and the Developmental State: Lessons from the Advanced Economies," World Institute of Development Economics Research Discussion Paper dp2008-01.
- Lazonick, William, 2009a, *Sustainable Prosperity in the New Economy?: Business Organization and High-Tech Employment in the United States*, Upjohn Institute for Employment Research.
- Lazonick, William, 2009b, "The New Economy Business Model and the Crisis of U.S. Capitalism," *Capitalism and Society*, 4, 2.
- Lazonick, William, and Mary O'Sullivan, 2000, "Maximizing Shareholder Value: A New Ideology for Corporate Governance," *Economy and Society*, 29, 1: 13-35.
- Lazonick, William, and Öner Tulum, 2009, "US Biopharmaceutical Finance and the Sustainability of the Biotech Boom," University of Massachusetts Lowell Center for Industrial Competitiveness, paper presented at the Sloan Industry Studies Conference, Chicago, May 29 (revised July).
- Lent, George E., and John A. Menge, 1962, "The Importance of Restricted Stock Options in Executive Compensation," *Management Record*, June: 6–13.
- Lewellen, Wilbur, 1968, *Executive Compensation in Large Industrial Corporations*, Columbia University Press.
- Lie, Erik, 2005, "On the Timing of CEO Stock Option Awards," *Management Science* 51, 5: 802–812.
- Livingston, J. A., 1958, *The American Stockholder*, J. B. Lippincott.

- Louis, Henock, and Hal White, 2007, "Do Managers Intentionally Use Repurchase Tender Offers to Signal Private Information?: Evidence from Firm Financial Reporting Behavior," *Journal of Financial Economics*, 85, 1: 205-233.
- Main, Brian G. M., 1999, "The Rise and Fall of Executive Share Options in Britain," in Jennifer Carpenter and David Yermack, eds., *Executive Compensation and Shareholder Value*, Kluwer Academic Publishers.
- Microsoft, 2008, "Microsoft announces share repurchase program and increases quarterly dividend," at <http://www.microsoft.com/presspass/press/2008/sep08/09-22dividend.mspx>.
- Milberg, William, 2008, "Shifting Sources and Uses of Profits: Sustaining U.S. Financialization with Global Value Chains," *Economy and Society*, 37, 3: 420-451.
- National Research Council, 1999, *Funding a Revolution: Government Support for Computing Research*, National Academies Press.
- O'Sullivan, Mary, 2004, "What Drove the U.S. Stock Market in the Last Century?" INSEAD Working Paper.
- Pender, Kathleen, 2000, "Giant Cisco didn't pay any federal income tax: Businesses get break on employee stock options," *San Francisco Chronicle*, October 9.
- Piketty, Thomas, and Emmanuel Saez, 2004, "Income Inequality in the United States, 1913-2002," in A. B. Atkinson and Thomas Piketty, eds., *Top Incomes over the Twentieth Century: A Contrast between European and English-Speaking Countries*, Oxford University Press.
- Piketty, Thomas, and Emmanuel Saez, 2007, "The Evolution of Top Incomes: A Historical and International Perspective," *American Economic Review*, 96, 2: 200-205.
- Rappaport, Alfred, 1981, "Selecting Strategies that Create Shareholder Value," *Harvard Business Review*, 59, 3: 139-149.
- Rappaport, Alfred, 1983, "Corporate Performance Standards and Shareholder Value," *Journal of Business Strategy*, 3, 4: 28-38.
- Reich, Robert B., 2008, *Supercapitalism: The Transformation of Business, Democracy, and Everyday Life*, Vintage Books.
- Saez, Emmanuel, 2009, "Table and Figures Updated to 2007 in Excel Format," August, available at <http://elsa.berkeley.edu/~saez/>.
- US Congress, 2008, "Democrats tell big oil: Spend more on production and renewable energy, less on stock buybacks before making demands for new drilling leases," *US Congressional Documents and Publications*, July 31, at <http://menendez.senate.gov/newsroom/record.cfm?id=301639>.
- US Congress, 2009, *Economic Report of the President*, US Government Printing Office.
- Vermaelen, Theo, 2005. *Share Repurchases: Foundations and Trends in Finance*, Now Publishers: Hanover, MA.
- Washington Post, 1961, "Gore bill would end stock option plans," *Washington Post*, April 15.