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Innovative Enterprise and Shareholder Value

William Lazonick

University of Massachusetts
Economics
william.lazonick@gmail.com

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Innovative Enterprise
and
Shareholder Value¹

William Lazonick*

*Professor and Director, University of Massachusetts Center for Industrial Competitiveness

and

President, The Academic-Industry Research Network (www.theAIRnet.org)

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Abstract

This essay invokes the theory of innovative enterprise to analyze the relation between value creation and value extraction in the evolution of the US economy. Beginning with a managerial, as distinct from financial, explanation for the separation of ownership and control in the US corporation a century ago, I focus on why and how a “retain-and-reinvest” corporate resource-allocation regime has been a necessary condition for innovative enterprise in the US economy. On that basis, I demonstrate that the ideology that the economy will achieve superior performance if business enterprises “maximize shareholder value” (MSV) is a theory of value extraction that promotes a “downsize-and-distribute” allocation regime and that results in employment instability and income inequity. Like the neoclassical theory of the market economy in which it is rooted, MSV lacks a theory of innovative enterprise, and hence cannot explain how, through the investment strategies and organizational structures of its major business enterprises, a national economy might achieve stable and equitable economic growth.

A. Value creation and value extraction

For a century, the large publicly listed corporation has been a dominant form of business enterprise in the US economy. Today, it is a form that dominates economic activity. In 2008 (the latest data available), 1,956 companies that had 5,000 or more employees, with an average workforce of just over 20,000, were only 0.03% of all companies, but had 37% of payrolls and 33% of employees.² There are about 3,300 companies listed on the New York Stock Exchange (NYSE) and 2,800 on NASDAQ, so we can assume that the vast majority of these largest employers were publicly listed companies. In 2012, the 500 largest US companies by revenues (the Fortune 500), all publicly listed, had a combined \$12.1 trillion in revenues, \$804 billion in profits, and 26.4 million employees worldwide.³

Any cogent analysis of the US economy must explain how these companies have grown to be so large and the implications of their ongoing resource-allocation decisions for the performance of the economy as a whole. That performance should be measured in terms of not only additions to GDP per capita, which provide foundations for higher standards of living, but also the equitability and stability of income distribution among the population of taxpayers, workers, and financiers who contributed to economic growth.

Central to this economic analysis is the distinction between “value creation” and “value extraction”. Value creation generates productivity. Value extraction enables individuals to share in that productivity. Put simply, value creation results in output; value extraction results in income. To understand the operation and performance of the economy, we have to understand the relationship between value creation and value extraction.⁴

Neoclassical economic theory posits that market forces of supply and demand determine the relation between output and income. But as individuals we create and

extract value through organizations, not markets.⁵ The resource-allocation decisions of organizations have a preponderant influence on the relationship between the creation and extraction of value in the economy as a whole. These organizations include

- *household families* that invest in the future labor force, relying heavily on a state-financed education system;
 - *government agencies* that invest in society's knowledge base, relying on research facilities operated by not only the state but also universities and companies;
- and
- *business enterprises* that invest in the current labor force, and on which we, as households, rely for the goods and services that we want or need at prices that we are willing or able to pay.

In this essay, I focus on how, given investments by households and governments, business enterprises generate products that are competitive in terms of quality and cost. In a world of technological change and global expansion, the standards of quality and cost that are required for products to be competitive are in constant transformation. The generic name for the value-creation process that results in higher quality, lower cost products is innovation.

Innovation is a *collective, cumulative, and uncertain* process. It is collective because it takes the application of the skills and efforts of large numbers of people in hierarchical and functional divisions of labor to generate the organizational learning that results in competitive products. It is cumulative because the process of developing and utilizing these value-creating capabilities must occur continuously over extended periods of time before competitive products emerge. And it is uncertain because a firm that seeks to be innovative may be incapable of transforming the technologies and accessing the markets that enable a product to be higher quality and/or lower cost than those of its competitors.

The collective, cumulative and uncertain characteristics of the innovation process have profound implications for understanding the relationship between value creation and value extraction. In the presence of innovation, it is organizations, not markets, that invest in the collective and cumulative learning processes that enable a firm to confront, and possibly overcome, the uncertainty inherent in innovation. Markets in labor, capital, and products give the firm access to suppliers of inputs and buyers of outputs. But it is organizations that determine the productivity of these inputs and hence the quality and cost of the outputs. Indeed, because innovation is uncertain, a market-determined matching of value extraction to value creation for participants in the economy would stifle the risk-taking by suppliers of labor and capital that the innovation process requires.⁶

Rather what is needed for innovation is a set of social norms, embedded in business organizations and supported by economic institutions, that regulates the relationship between value creation and value extraction.⁷ Building on the “social conditions of innovative enterprise” framework, my fundamental hypothesis is that in a particular national economy in a particular era this set of social norms reflects the resource-allocation principles of major business enterprises.⁸ In the case of the United States, which is the empirical focus of this essay, a dramatic change in social norms occurred in the transition from what I have call the “Old Economy business model” to the “New Economy business model”.⁹ In earlier work with Mary O’Sullivan, I characterized this transformation as a shift from a “retain-and-reinvest” resource-allocation regime to a “downsize-and-distribute” resource-allocation regime.¹⁰

Under “retain-and-reinvest”, business enterprises retain earnings and reinvest them in productive capabilities, including first and foremost the capabilities of employees who, in helping to make the enterprise more productive and competitive, i.e., more innovative, benefit in the forms of higher incomes and more employment security. “Retain-

and-reinvest”, therefore, is a resource-allocation regime that supports *value creation* at the business level. In addition, to motivate and reward those who contribute to the value-creation process, “retain-and-reinvest” implements a process of *value extraction* through which the firm shares the gains of innovative enterprise, if they occur, with a broad base of employees. In doing so, the innovative enterprise can contribute to equitable and stable growth in the economy as a whole.

In contrast, in a “downsize-and-distribute” regime, top executives of business enterprises look for opportunities to downsize the labor force and distribute earnings to financial interests. Had these executives made different allocation decisions, some or all of the earnings that were distributed could have been invested in the productive capabilities of the people thrown out of work. “Downsize-and-distribute”, therefore, is a resource-allocation regime that supports *value extraction* at the business level that may enrich financial interests at the expense of employees who contributed to the process of *value creation* that generated those earnings. As a result, a “downsize-and-distribute” allocation regime contributes to employment instability and income inequity in the economy as a whole. Since the organizational learning that is the essence of the innovation process depends on employment stability and income equity at the enterprise level, “downsize-and-distribute” can undermine the social conditions of innovative enterprise.

In this essay, I outline why and how a “retain-and-reinvest” allocation regime has been a necessary condition for innovative enterprise in the US economy. On that basis, I demonstrate that the ideology that the economy will achieve superior performance if business enterprises “maximize shareholder value” (MSV) is a theory of value extraction that promotes a “downsize-and-distribute” allocation regime and that results in employment instability and income inequity. Like the neoclassical theory of the market economy in which it is rooted, MSV lacks a theory of innovative enterprise, and hence

cannot explain how, through the investment strategies and organizational structures of its major business enterprises, the economy might achieve stable and equitable economic growth.

In the next section of this essay, I provide a brief overview of the rise of the modern business corporation, characterized by the separation of share ownership from managerial control, a functional division that agency theorists as proponents of MSV have construed as the original sin of American capitalism. I show that historically the reason for the separation of ownership and control in US industrial corporations was to enable both the “exit” of owner-entrepreneurs who had built successful managerial enterprises and the ascension of salaried managers, irrespective of their shareholding stakes, to positions of strategic control over corporate resource allocation. The separation of ownership and control overcame the *managerial constraint* on the growth of the firm. In major US industrial enterprises, the reason for the separation of ownership and control was *not* to overcome the *financial constraint* on the growth of the firm by raising capital on the stock market, as is conventionally believed.

In section C, I outline the theory of innovative enterprise as a theory of value creation that provides an indispensable foundation for both an analysis of how an economy achieves superior economic performance and a critique of MSV. The uncertain, collective, and cumulative characteristics of the innovative process give rise to three corresponding social conditions of innovative enterprise: strategic control, organizational integration, and financial commitment. This theoretical framework permits the analysis of the operation and performance of the business enterprise and its contribution to stable and equitable economic growth.

Then I show how and why MSV is a theory of value extraction that, when applied to corporate resource allocation in the United States, has undermined the social conditions of

innovative enterprise and resulted in employment instability and income inequity. I refute the fundamental economic assumption of MSV that of all participants in the business corporation it is only shareholders who bear risk and hence have a claim on profits if and when they occur. Taxpayers in funding government spending on productive resources that are essential to the innovation process and workers in supplying effort to the processes of organizational learning that are the essence of innovation make productive contributions to the enterprise without guaranteed returns. Indeed I argue that public shareholders do not in general invest in the innovation process but just extract value from it, and hence bear little, if any, risk of the failure of that process. I summarize a growing body of empirical research that shows that since the 1980s, backed by MSV ideology, financial interests, including top corporate executives, have been able to extract vast amounts of value from US industrial corporations in excess of value that they may have helped to create.

I conclude this essay by emphasizing that, like the neoclassical theory of the market economy in which it is rooted, MSV lacks a methodology for ensuring that theory explores, rather than ignores, reality. I locate this methodological failure in the reliance of neoclassical economists on the “constrained-optimization” analytical approach and the “positive-economics” mandate for the separation of economic theory from empirical reality. Given the relation between organizations and markets in the operation of the economy, this methodological failure has enabled MSV, as an extension of what I have called “the myth of the market economy”,¹¹ to become an exceedingly effective ideology of value extraction, at the expense of value creation. This process of value extraction without value creation has contributed to highly unstable and inequitable US economic performance.

B. The rise of the US industrial corporation

In *The Modern Corporation and Private Property*, published in 1932, Adolf Berle and Gardiner Means documented the importance of the separation of share ownership and managerial control in the largest US industrial corporations.¹² Shareholders were passive investors in securities already outstanding on a liquid stock market, the New York Stock Exchange (NYSE), while managers were in control of the allocation of massive amounts of capital and labor within these enterprises. The performance of the economy now depended on managerial resource-allocation decisions.

Agency theorists identify the separation of share ownership from managerial control as the prime reason for the inefficient operation of the business corporation and the economy to which it is central.¹³ Shareholders, they argue, are the risk-taking principals for whose benefit the corporation should be run. But shareholders employ managers to be corporate decision-makers, and hence act as their agents. Agency costs arise because managers may pursue their own self-interests at the expense of shareholders, the principals who have hired them. The economic problem, therefore, is to reduce or eliminate agency costs by aligning the interests of managers with shareholders.

The economic problems of agency costs, it is argued, are particularly acute in the large-scale publicly listed corporation in which common shareholding is highly fragmented, while corporate executives, who are not significant shareholders, control the allocation of vast amounts of capital and labor. These are precisely the types of corporations that Berle and Means documented in *The Modern Corporation and Private Property*. In this book, they assume that managerial decisions should be made on behalf of the collectivity of shareholders, although in the 1950s, when some economists began to talk about the “soulful” corporation,¹⁴ Berle accepted that corporations could allocate resources to philanthropic purposes.¹⁵

Yet even in the 1920s prominent businessmen such as Robert S. Brookings, founder of the eponymous think-tank,¹⁶ and Owen D. Young chairman of General Electric¹⁷ contended that, besides shareholders, the corporation could be run for the benefit of other stakeholders including employees and consumers. In the post-World War II decades many corporate executives viewed themselves as trustees of economic assets that could benefit a range of stakeholders. In October 1981, with Ronald Reagan now the president of the United States, the Business Roundtable, representing the views of the CEOs of the largest US industrial corporations, issued its “Statement of Corporate Responsibility” in which it identified “a web of complex, often competing relationships” among customers, employees, communities, society at large, suppliers, and shareholders that corporate executives had to take into account.¹⁸ As the Business Roundtable put it:

Balancing the shareholder’s expectations of maximum return against other priorities is one of the fundamental problems confronting corporate management. The shareholders must receive a good return but the legitimate concerns of other constituencies also must have appropriate attention. Striking the appropriate balance, some leading managers have come to believe that the primary role of corporations is to help meet society’s legitimate needs for goods and services and to earn a reasonable return for the shareholders in the process. They are aware that this must be done in a socially acceptable manner. They believe that by giving enlightened consideration to balancing the legitimate claims of all its constituents, a corporation will best serve the interest of the shareholders.

That corporate executives would even contemplate “other priorities” than “the shareholder’s expectations of maximum return” was, of course, the very source of “agency costs” that, according to MSV proponents, constituted the prime source of inefficiency in the corporation and the economy. In a 1970 magazine article, “The Social Responsibility of

Business is to Increase Profits,” Milton Friedman, the pre-eminent Chicago economist, had issued what subsequently became viewed as the clarion call for MSV:

In a free-enterprise, private-property system, a corporate executive is an employee of the owners of the business. He has direct responsibility to his employers. That responsibility is to conduct the business in accordance with their desires, which generally will be to make as much money as possible while conforming to the basic rules of the society, both those embodied in law and those embodied in ethical custom.

Friedman then concluded the article by quoting himself from his 1962 book, *Capitalism and Freedom*: “[T]here is one and only one social responsibility of business – to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud.”¹⁹

But the agency argument that, for the sake of superior economic performance, the business corporation should be run solely for the benefit of its shareholders begs a number of very big historical questions. How did share ownership in the publicly listed corporation become separated from managerial control in the United States? Why did shareholders cede control to managers? And what types of resource-allocation decisions were corporate executives making in the first half of the 20th- century when, despite the Great Depression of the 1930s, the US industrial corporation made the US economy the most productive economy the world had ever known?

The conventional wisdom was and remains, that in the late 19th and early 20th centuries the increasing capital requirements of companies in high fixed-cost industries such as steel, oil refining, chemicals, electric power, farm equipment, and automobiles outstripped the financial capacity of family proprietors and partnerships, thus

necessitating raising capital on the stock market. Berle and Means themselves made this “capital constraint” argument in *The Modern Corporation and Private Property*, and continued to do so in their later writings. For example, in his 1954 book, *The 20th Century Capitalist Revolution*, Berle states that the separation of stock ownership from managerial control “was inevitable, granting that modern organizations of production and distribution must be so large as to be incapable of being owned by any individual or small group of individuals”.²⁰

The historical facts do not support this argument. The primary reason for the separation of ownership and control in building the large-scale business enterprise was *not*, as this conventional wisdom has it, to overcome the capital constraint but rather, as historical research shows, to overcome the managerial constraint. The work of Alfred D. Chandler and other historians of “the managerial revolution in American business” – to highlight the subtitle of Chandler’s 1977 book, *The Visible Hand* – shows that the critical constraint on the growth of major industrial enterprises was not access to finance capital but rather the management of organizational capabilities that could develop and utilize productive resources.²¹

In a 1992 article, “Controlling the Market for Corporate Control: The Historical Significance of Managerial Capitalism”, I laid out the basic elements of the argument.²² In many of the more capital-intensive industries, dominant firms were central actors in the Great Merger Movement of the 1890s and early 1900s. The most successful mergers proved to be in those industries in which continuous product and process innovation and high-speed utilization of production and distribution facilities were most important for sustaining competitive advantage, and the most successful firms in those industries were the ones with superior managerial capabilities for the development and utilization of productive resources.

But the Great Merger Movement did more than merely concentrate market shares. With J. P. Morgan taking the lead, Wall Street financed the mergers by selling to the wealthholding public the ownership stakes of the entrepreneurs who had built up their companies from new ventures into going concerns during the rapid expansion of the US economy in the decades after the Civil War. The result was the transfer of ownership of corporate assets from the original owner-managers to an increasingly widely distributed population of shareholders. As a result, as business historians Thomas Navin and Marion Sears show, a market in industrial securities emerged.²³ In short, the rise of the large-scale industrial corporation created the stock market, not visa versa as agency theorists assume.

The enhanced dominance of the new combinations plus the backing of Wall Street encouraged private wealthholders to invest in industrial stocks. The result by the 1920s was a highly liquid market in industrial securities, thus making stock ownership all the more attractive. Beyond the price of the stock, shareholding did not require that the new shareholders make any further commitments of time, effort, or finance to the firms in which they had bought shares.

In contrast to the owner-managers who, as direct investors, had built the new public corporations into going concerns, the new shareholders were portfolio investors. The purchase of common shares did not in general finance new investments in organization and technology. In newly listed companies, stock issues financed the retirement of the old owners from the industrial scene. Going forward, the stringent listing requirements of NYSE, on which the major US corporations were traded, meant that the firms had a record of profitability and significant capitalization when their shares were made available to the public, and hence could count on a stream of earnings that, after paying dividends, formed the financial foundation for investing in productive assets. The

main role of Wall Street in financing these productive investments was to float long-term bond issues that enabled these corporations to leverage retained earnings.

The separation of ownership from control that occurred in US industrial enterprises at the turn of the century enhanced the managerial capabilities of dominant firms. When these companies went public, they already had in place powerful managerial organizations that could take over strategic control from the retiring entrepreneurs. By reducing the possibility of nepotism in top-management succession, the removal of proprietary control opened up new opportunities for upward mobility for career managers that helped to ensure the commitment of these managers to the long-run performance of their particular firms.²⁴

Over the course of their careers, these salaried managers, increasing numbers of whom in the first decades of the 20th century held engineering or advanced business degrees, developed irreplaceable knowledge of their firms' technologies and organizational structures. These managers, their upward mobility unimpeded by family control, increasingly rose to top-management positions in major industrial firms. Not coincidentally, the first decades of the 20th century also saw the dramatic transformation of the US system of higher education away from the elite British model with its aristocratic pretensions to one that serviced the growing needs of US industrial corporations for professional, technical, and administrative personnel.²⁵

From the perspective of sustained industrial innovation, therefore, the key impact of the separation of ownership from control in the United States was to overcome the managerial constraint on the building of organizational capabilities and the growth of the firm. Moreover, the way in which ownership was separated from control enhanced the access of these firms to committed finance, rooted in retained earnings and supplemented by bond issues, to fund investments in organization and technology. The managerial

revolution in American business was a powerful engine of economic growth, especially in corporations that built deep technological capabilities. Even in the Great Depression, when, for lack of product demand, major industrial corporations laid off production workers, they continued to invest in their research capabilities.²⁶ During World War II and the post-war decades, these investments enabled US industrial corporations to be integral to what in 1961 President Dwight Eisenhower would call the “military-industrial complex”.²⁷

Working with US government agencies and the US system of higher education, itself funded by a combination of taxpayer-financed government budgets along with philanthropic foundations based on business fortunes, the US managerial corporation, with its separation of ownership and control, made the United States the world technology leader.²⁸ And through its “retain-and-reinvest” allocation regime, the managerial corporation contributed to greater employment stability and income equity than had been the case before the 1940s and than would be the case after the 1970s.²⁹

C. The theory of innovative enterprise

A major intellectual barrier to understanding the growth of the firm and its influence on economic performance is the neoclassical theory of the market economy, from which agency theory is derived. Just as the development of a liquid stock market was the result, not the cause, of the rise and growth of the innovative enterprise, so too was the emergence of a highly mobile labor market for professional, technical, and administrative personnel.³⁰ And of course, it is innovative enterprise that generates the high quality, low cost goods and services that give households with employment incomes ample consumer choice on product markets. Developed markets in labor, capital, and products are the result, not the cause, of the growth of innovative enterprise. Hence, if we want to understand the operation and performance of a modern economy, we need a theory of innovative enterprise.

The purpose of the business enterprise is to produce competitive goods and services: that is, products that buyers want or need at prices that they are willing or able to pay. Given market prices of labor and capital, a competitive good or service is higher quality and/or lower cost than one that does not succeed on the product market. A business that generates higher quality, lower cost products over a sustained period of time is an “innovative enterprise”.

When revenues generated through the sale of competitive products exceed the costs of producing and distributing those products, a business generates a profit. Costs, however, are not simply imposed on the business enterprise by exogenous technology and factor markets, as neoclassical economics textbooks tell us. The innovative enterprise *develops* productive resources through collective and cumulative learning processes that, in and of themselves, burden the company with *high fixed costs* and expose it to the possibility of losses.³¹ If, however, through organizational learning, these high fixed costs enable the business to generate products that are *higher quality* than its competitors, it can potentially gain a large market share that, through economies of scale, transforms these high fixed costs into *low unit costs*. Through the generation of a good or service that is not only higher quality but also lower cost than those of competitors, potential losses can thus become actual profits, or, to put it differently, competitive disadvantage can be transformed into competitive advantage.

As already emphasized, the essence of this innovation process is collective and cumulative – i.e., organizational – learning. Given that the innovation process is inherently uncertain, investments in organizational learning must be made without any guarantee of returns. The innovative enterprise faces three types of uncertainty: technological, market, and competitive. 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 is successful 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. Moreover, the innovative enterprise must access a large enough extent of the product market to transform the fixed costs of developing a new technology into low unit costs. Finally, even if a firm can overcome technological and market uncertainty, it still faces competitive uncertainty: the possibility that a competitor will have invested in a strategy that generates an even higher quality, lower cost product. Nevertheless, if a firm is to have the opportunity to profit and grow through innovation, it must invest in the face of uncertainty.

Many of the critical productive inputs related to physical infrastructure and human capital that the business enterprise utilizes are made available through government spending, often in the form of public goods financed by tax revenues and public debt. Even the largest and most powerful business enterprises rely on government investments in physical and human resources to generate competitive products. In addition, business enterprises often receive government subsidies and procurement contracts that assist these enterprises in generating competitive products.³²

The development and utilization of the enterprises own investments in productive capabilities render it a social organization.³³ To contend with the uncertain, collective, and cumulative characteristics of the innovation process, the generation of competitive products requires three social conditions of innovative enterprise: “strategic control”, “organizational integration”, and “financial commitment”.³⁴

- *Strategic control* enables those executives who have the incentives and abilities to allocate a company’s resources to invest in inherently uncertain innovation processes.

- *Organizational integration* mobilizes the skills and efforts of people in a hierarchical and functional division of labor into the collective and cumulative learning processes that are the essence of innovation.
- *Financial commitment* ensures that financial resources are available to sustain the collective and cumulative innovation process from the time that investments in productive capabilities are made until the development and utilization of those capabilities can generate competitive product that yield financial returns.

The most critical investments that a strategic manager makes is in integrated skill bases that can engage in organizational learning, and thereby generate the high quality products that are essential for competitive advantage. For the profitable company, retained earnings represent the foundation of financial commitment that sustains investment in the productive capabilities until the firm can generate competitive products. For the innovative enterprise, distributions to shareholders in the forms of cash dividends and stock repurchases must be constrained by the financial commitment required to invest in productive resources, including integrated skill bases, that can generate competitive products.

When, through the generation of competitive products, a business becomes profitable, its stock price usually rises as, through earnings reports, public shareholders become aware of its success. These public shareholders may then begin to speculate on further increases in the corporation's stock price, even though the future earnings of the business are subject to uncertainty. The corporation in turn may seek to take advantage of the high price of its shares to augment its innovative capabilities by using its stock as a currency to *combine* with other companies, to *compensate* executives and other key employees, or to raise *cash* that can fund investments in productive capabilities.

There is a danger, however, that corporate executives who are incentivized by stock-based pay and who take advantage of stock market speculation for the purposes of combination, compensation, and cash may use their positions of strategic control to manipulate earnings and stock prices for their own benefit, and in the process lose the incentive and ability to engage in innovation. Rather than invest in innovation, corporate executives might prefer to foment stock-price increases by distributing corporate cash to public shareholders. And they might legitimize this type of resource allocation by arguing that they are “maximizing shareholder value”. Indeed this change in managerial incentives is precisely what has occurred in the United States since the 1980s as MSV has become the dominant *managerial* ideology of corporate governance.³⁵

D. MSV: A theory of value extraction

In the 1970s and 1980s agency theorists trained in the conservative economics tradition of the University of Chicago propounded the theory that a corporation would maximize the efficiency of the economy if it maximized the value of the company’s shares.³⁶ The problem, as they saw it, was that the managers of large corporations, in control of the allocation of significant resources, had a tendency, if left to their own devices, to build empires and invest in wasteful projects.

The MSV perspective viewed hostile takeovers, or what was more generally known as “the market for corporate control”, as one way in which shareholders could force managers to stop wasting corporate resources and distribute cash to shareholders. They also argued that by making stock-based pay a major proportion of executive compensation, the incentives of corporate managers in the allocation of resources could be aligned with those of public shareholders.³⁷ Only by disgorging the corporation’s “free cash flow” to shareholders, the MSV proponents contended, would the economy’s resources be allocated to their most efficient uses. In short, by “maximizing shareholder value” corporate resource

allocation would result in the best possible performance in the economy as a whole. The money from the corporate coffers could be distributed to shareholders in the forms of cash dividends and stock repurchases.

The MSV argument is that, of all participants in the business corporation, shareholders are the only economic actors who make productive contributions *without a guaranteed return*. All other participants such as creditors, workers, suppliers, and distributors allegedly receive a market-determined price for the goods or services that they render to the corporation, and hence take no risk of whether the company makes or loses money. On this assumption, only shareholders have an economically justifiable claim to the “residual” that is left over after the company has paid all other stakeholders their guaranteed contractual claims for their productive contributions to the firm.

By the MSV argument, shareholders are the only stakeholders who need to be incentivized to bear the risk of investing in productive resources that may result in superior economic performance. As the only “residual claimants”, moreover, shareholders are the only stakeholders who have an interest in monitoring managers to ensure that they allocate resources efficiently. Furthermore, by buying and selling corporate shares on the stock market, public shareholders, it is argued, can directly reallocate resources to more efficient uses.

The fundamental problem with MSV lies in the assumption that shareholders are the only corporate participants who bear risk. Taxpayers through government agencies and workers through the firms that employ them make risky investments in productive capabilities on a regular basis. From this perspective, both the state and labor have “residual claimant” status; that is, an economic claim on the distribution of profits.

Through government investments and subsidies, *taxpayers* regularly provide productive resources to companies without a guaranteed return. As an important example,

but only one of many, the annual budget of the National Institutes of Health (NIH) is about \$31 billion, with a total NIH investment from 1938 through 2012 of \$840 billion in 2012 dollars.³⁸ As risk bearers, taxpayers have a claim on corporate profits if and when they are generated. Through the tax system, governments, representing taxpayers in general, seek to extract this return from corporations and individuals that reap the rewards of government spending. Through the political process, however, tax rates and revenues are subject to change, and hence the returns to taxpayers are by no means guaranteed.

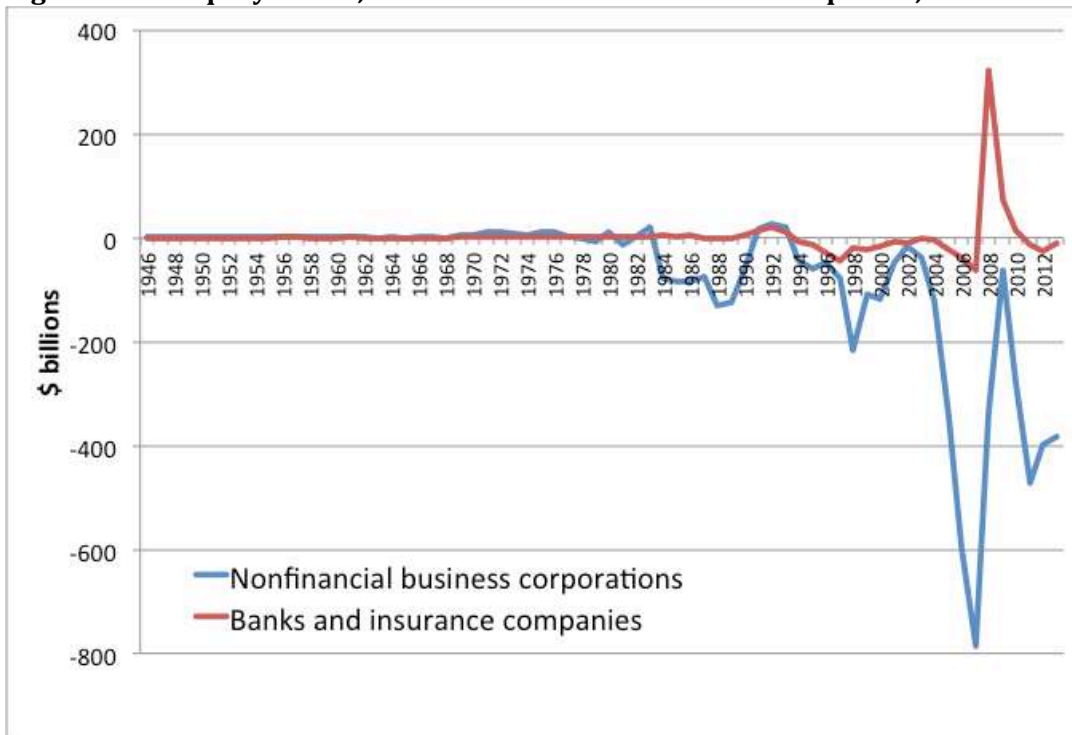
Workers regularly make productive contributions to the companies for which they work through the exercise of skill and effort beyond those levels required to lay claim to their current pay, but without guaranteed returns.³⁹ Any employer who is seeking to generate higher quality, lower cost products knows the profound productivity difference between employees who just punch the clock to get their daily pay and those who engage in learning to make productive contributions through which they can build their careers and thereby reap future returns in work and in retirement. Yet these careers and the returns that they can generate are not guaranteed.

As risk bearers, therefore, taxpayers whose money supports business enterprises and workers whose efforts generate productivity improvements have claims on corporate profits if and when they occur. MSV ignores the risk-reward relation for these two types of economic actors in the operation and performance of business corporations.⁴⁰ Instead it erroneously assumes that only shareholders are residual claimants.

The irony of MSV is that the public shareholders whom it holds up as the only risk bearers typically never invest in the value-creating capabilities of the company at all. Rather they invest in outstanding shares in the hope that they will rise in price on the market. And, following the directives of MSV, a prime way in which corporate executives fuel this hope is by disgorging the so-called “free” cash flow.

Figure 1 shows net equity issues of US corporations from 1946 to 2013. Since the mid-1980s in aggregate, it has been corporations that have funded the stock market rather than vice versa.⁴¹ And the massive repurchases that make net equity issues negative raise questions about how much of corporate cash flow is really “free” to be distributed to shareholders without appropriating returns that should go to taxpayers and workers and without undermining the purpose of the corporation to invest in competitive products.

Figure 1. Net equity issues, US nonfinancial and financial companies, 1980-2013

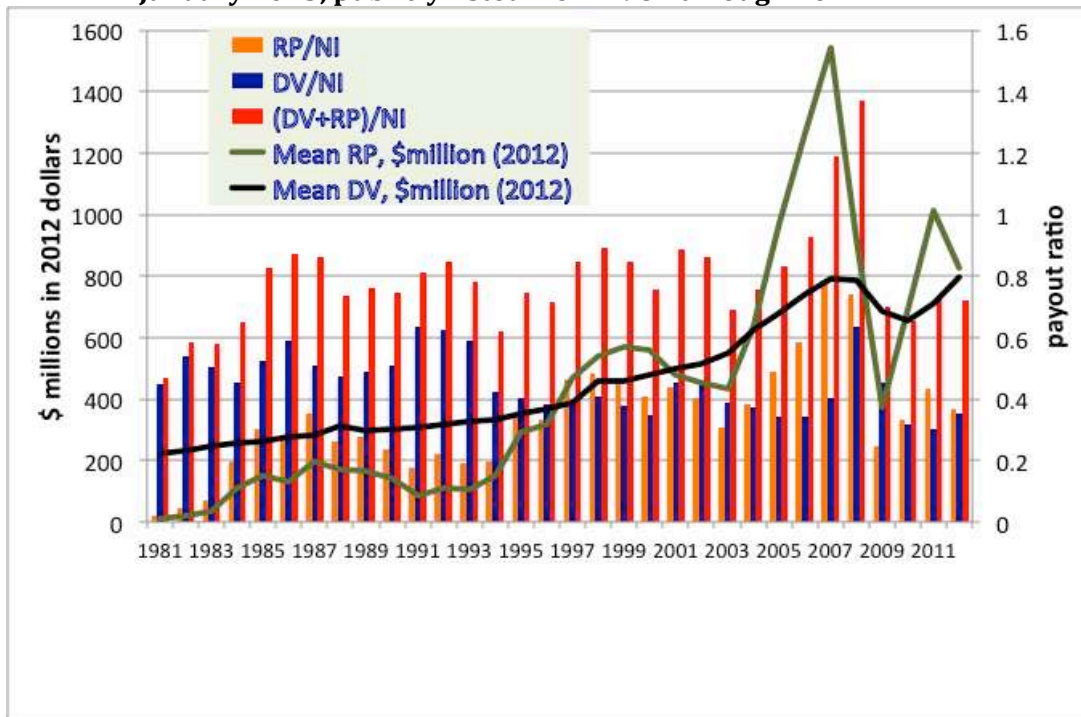


Source: Federal Reserve Flow of Funds data, F-213, “Corporate Equities”, March 6, 2014

As the traditional mode of distributing corporate cash to shareholders, dividends provide shareholders with a yield for, as the name says, *holding* stock. In contrast, buybacks provide shareholders with a yield for selling stock; that is, for ceasing to be shareholders. Since the time that MSV became the dominant ideology of corporate governance in the 1980s, the ratio of dividends to net income for all US corporations rose from 37% in both the 1960s and 1970s to 46% in the 1980s to 58% in the 1990s to 63% in the 2000s.⁴² Meanwhile the buyback payout ratio went from miniscule to massive, with buybacks

surpassing dividends as a mode of distributions to shareholders in 1997. As shown in Figure 2, for the 251 companies in the S&P 500 Index in January 2013 that were publicly listed back to 1981, the buyback payout ratio was less than 5% in 1981-1983 but 39% in 2010-2012, with a three-year peak of 70% in 2006-2008. By decade for these companies, the dividend payout ratio was 50% in the 1980s, 44% in the 1990s, and 41% in the 2000s, while the buyback payout ratio rose from 22% to 35% to 50%. For the decade 2000-2009, therefore, the distributions to shareholders of these 251 companies represented 91% of net income. In 2010-2012, these companies generated \$1.6 trillion in profits, of which \$620 billion were spent on buybacks and \$532 billion on dividends.

Figure 2. Mean stock repurchases (RP) and cash dividends (DV) in 2012 dollars and as percentages of net income (NI), 251 companies in the S&P 500 Index in January 2013, publicly listed from 1981 through 2012



Source: S&P Compustat database, corrected from company 10-Ks by Mustafa Erdem Sakinç, for The Academic-Industry Research Network

What have been the impacts of this MSV-driven financial behavior on the performance of the economy?⁴³ Answers to this question require in-depth analyses at the

microeconomic level. Industries differ dramatically in terms of technologies, markets, and competitors, while innovation differentiates companies even in the same industry. Therefore, the assessment of the impacts of MSV on economic performance – defined in terms of stable and equitable growth – must build on industry and company studies.⁴⁴ Let us look for example at some of the corporations that, as shown in Table 1, were among the top ten repurchasers in the United States for the decade 2003-2012.

Table 1. Repurchases (RP) and dividends (DV) as percentages of net income, ten largest repurchasers among US corporations, 2003-2012

Company Name	NI \$b	RP \$b	DV \$b	%RP/NI	%DV/NI	%(RP+DV)/NI
EXXON MOBIL	347	207	80	60	23	83
MICROSOFT	148	114	71	77	48	125
IBM	117	107	23	91	20	111
CISCO SYSTEMS	64	75	2	118	3	121
PROCTER & GAMBLE	93	66	42	71	46	116
HEWLETT-PACKARD	41	64	9	155	21	177
WAL-MART STORES	134	62	35	46	27	73
INTEL	79	60	27	76	34	109
PFIZER	84	59	63	71	75	146
GENERAL ELECTRIC	165	45	87	28	53	81

Source: Compilations by Mustafa Erdem Sakinç, University of Bordeaux,, cleaning and correcting the Standard and Poor's Compustat database.

Given the importance of these companies in the industries in which they operate, MSV-driven resource allocation has enormous economic costs. For example, Exxon Mobil spends about \$21 billion a year on buybacks, while the United States needs investment in alternative energy. Indeed, through the self-styled American Energy Innovation Council, top executives of Microsoft and General Electric, among others, have lobbied the U.S. government to triple investment on alternative energy to \$16 billion per year. Yet these two companies alone have spent about that amount annually on buybacks.⁴⁵

Similarly Intel executives have lobbied the U.S. government to increase spending on nanotechnology research, arguing that, as former Intel CEO Craig Barrett did in 2005, "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.”⁴⁶ Yet from the time that the U.S. National Nanotechnology Initiative (NNI) was launched in 2001 through 2012, Intel’s buybacks were over four times the total NNI budget.

Until its restructuring in the early 1990s that saw its worldwide employees drop from 374,000 at the end of 1990 to 220,00 at the end of 1994, IBM was a company that touted its “lifelong employment” policy, claiming that it had never laid off anyone involuntarily since 1921. Through the 1980s the norm of a career with one company characterized most established “Old Economy” companies. By 1994, with Louis Gerstner as CEO, IBM had obliterated the system of lifelong employment, and over the next decade every other major Old Economy company followed suit. Meanwhile, focusing on software and services, and shedding its manufacturing capabilities, IBM led the U.S. offshoring movement. By 2008 the company employed 398,000 people, but only 30% of them were in the United States, down from 52% in 1996. At that point, IBM ceased publication of data on the number of US employees in its global labor force, and, as it continued to do massive buybacks also did massive layoffs of North American employees, replacing them with hires in India and other low-wage countries.⁴⁷

Hewlett-Packard (HP) was once an icon of American innovation that, like IBM, provided stable careers and equitable pay to its employees. Into the last half of the 1990s, its “HP Way” epitomized a “retain-and-reinvest” allocation regime. But in 1999 it spun off its engineering division as Agilent, and then did away with employment security, becoming known as a “hire-and-fire” company that engaged in “employee churn”.⁴⁸ From 2004 to 2011, HP did \$61.4 billion in buybacks, equal to 120% of its net income, along with \$6.8 billion in dividends. Unlike IBM, however, HP largely failed in its attempt to shift from

selling hardware to high-margin software and services.⁴⁹ After spending \$11.0 billion on buybacks in 2010 and \$10.1 billion in 2011, the company took a \$12.7 billion loss in 2012. In 2013 HP had stagnant revenues but restored its profitability by cutting its labor force from 349,600 to 331,800, with another 16,500 job cuts announced as of January 2014.

In the 1990s Cisco Systems, founded in Silicon Valley, was the fastest growing company in the world as it captured more than 70% of the global Internet router market. Using its stock as an acquisition currency, from 1993 through 2000, Cisco did 71 acquisitions for over \$35 billion, of which 98% was paid in its shares. In March 2000, Cisco had the highest market capitalization in the world, but by September 2001, despite revenues that were 17% higher in fiscal 2001 than the previous year, Cisco's stock price had fallen to just 14% of its peak.⁵⁰ At that point Cisco started buying back its stock, and from 2002 through 2013 expended 107% of its net income on buybacks. In the process Cisco eschewed investment in sophisticated communication technologies, despite the fact that it was well positioned to do so at the beginning of the 2000s. Many of Cisco's new products have quickly become commodities, and in recent years the company has engaged in rounds of large-scale layoffs to sustain its buyback habit. In global competition, the relatively young company that made the high-end investments in communication technology that Cisco ignored was Huawei Technologies, a Chinese employee-owned company founded in 1988 that is now challenging Sweden's Ericsson – another company that does not do buybacks – for top spot in the global communication equipment industry.⁵¹

Or a U.S. pharmaceutical company such as Pfizer counters the complaint that drugs in the United States are at least twice their price in any other country with the argument that the profits from these high drug prices permit more R&D to be done in the United States than elsewhere.⁵² Yet in 2003-2012, 71% of Pfizer's profits went to buybacks, along

with 76% distributed as dividends. In reality, Americans pay high drug prices so that major pharmaceutical companies can boost their stock prices and pad executive pay.

Prime beneficiaries of the allocation of corporate resources to buybacks for the purpose of manipulating stock prices are the very same corporate executives who make these allocation decisions. It has been estimated that in the United States in 1982 CEO pay was about 42 times that of the average worker, a high ratio by international standards even today. By 1992, when the overcompensation of the US corporate executive became widely discussed, the ratio had risen to over 200:1. But the explosion of US executive pay was just beginning. The ratio peaked at well over 500:1 in 2000 at the zenith of the Internet boom, and was about 350:1 in 2012.⁵³

Data from company proxy statements compiled in Standard and Poor’s Execucomp database shows that in 2004-2007 top executive pay was three times in real terms its level in 1992-1995, with stock-based pay, already very important in the earlier period, driving the increase.⁵⁴ Table 2 shows the mean total remuneration for 2012 of the highest paid US corporate executives named on proxy statements that corporations file with the US Securities and Exchange Commission (SEC). As can be seen, stock-based pay in the forms of realized gains from exercising stock options and from the vest of stock awards contributes the vast majority of these enormous compensation packages.

Table 2. Highest paid US corporate executives, 2012, mean total pay and percentages of total from realized gains from exercising stock options and from vesting of stock awards

2012 Exec. Pay top group	Mean total pay, \$m.	percent from stock options	percent from stock awards
100	76.2	44	46
500	30.3	42	41
1,500	15.2	37	40
3,000	9.4	34	38

Source: Standard and Poor’s Execucomp database of “named” executives in company proxy statements filed with the U.S. Securities and Exchange Commission. Calculations by Matt Hopkins, The Academic-Industry Research Network.

How do these executives manage to get these pay packages? It is neither market forces nor rocket science.⁵⁵ Here is a quick six-step guide to how top corporate executives take home their pay:

1. Appoint compliant boards made up of other top executives who all have an interest in increasing their own remuneration;
2. Hire compensation consultants who benchmark the pay of other top executives who hire the same consultants to benchmark the pay of other top executives;
3. Get paid in a currency – the company’s stock – that the board can dole out abundantly and the value of which executives can manipulate by, for example, doing stock buybacks;
4. Convince government regulators – in this case the SEC – to permit executives to engage in stock-market manipulation through large-scale buybacks, the precise timing of which is only known to the executive insiders;⁵⁶
5. Convince government regulators – the SEC again – reinterpret the timing of short-swing profits so that top executives can trade on this insider information to reap more fully the compensation rewards of stock-market manipulation;⁵⁷
and
6. Legitimize these actions and outcomes by invoking the ideology that “maximizing shareholder value” results in superior economic performance.

Like neoclassical economics in general, the “agency theory” that underpins MSV lacks a theory of innovative enterprise. In its MSV form, it is a theory of how to defund a company that has been successful, but provides no theory of how the company became successful or the conditions under which that success may be reproduced. An analysis of the influence of buybacks on the capability of a company to generate competitive products requires a theory of innovative enterprise that links the uncertain, collective, and

cumulative characteristics of the innovation process with the social conditions – strategic control, organizational integration, and financial commitment – necessary to transform productive inputs into competitive outputs.

Strategic control: Companies that follow “retain-and-reinvest” resource allocation strategies may not always generate innovative products, but success never comes to companies that avoid investments in innovation. Encouraging so-called “short-termism” – which is in fact a euphemism for excessive value extraction – US-style stock-based pay incentivizes executives to do buybacks to keep their companies’ stock prices rising, while creating a disincentive to invest in innovative projects for which the gestation periods are long and the outcomes uncertain. Moreover, executives who focus on allocating resources to manage their company’s stock price may over time lose the ability to recognize the company’s unique opportunities for innovation, given its accumulated capabilities and market position.

Organizational integration: A company that is more committed to boosting its stock price than augmenting its productive capabilities is apt to neglect the investments in and rewards to employees who can give it the innovative edge. In a “downsize-and-distribute” allocation regime, the company may even lay off employees who, if retained and retrained, could make value-creating contributions to the next round of innovation. We also have to assess the negative impacts of “downsize-and-distribute” on the incentives of those employees who remain to contribute their extra time and effort to the organizational learning that innovation requires.

Financial commitment: Buybacks reduce the internal funds available for financial commitment. For companies that have attained strong market positions and high levels of profit, large-scale buybacks may seem affordable today. But the committed finance disgorged today may become necessary tomorrow. A prime example is Motorola, which in

2005 tripled its profits to \$4.6 billion largely through sales of its 2G Razr cellphones. To that point, the company had never done buybacks, but in 2005-2007 Motorola repurchased \$7.7 billion, equal to 94% of its net income, including \$3.0 billion in 2007 when it sustained a small loss. In 2008, the company lost \$4.2 billion, and was finished as a serious competitor in the booming cellphone industry.

E. Integrating theory and history

Given the importance of large corporations to the operation and performance of the economy, MSV contributes to a highly inequitable distribution of income and instability in employment opportunities.⁵⁸ It also ultimately undermines innovative enterprise. For the sake of superior economic performance, OECD countries, the United States foremost among them, need to reject the ideology of MSV. The theory of innovative enterprise can help governments and businesses recognize the economic damage that MSV does and engage in new economic thinking about how to invest for the future for the sake of stable and equitable economic growth.

The new economic thinking needs to confront the methodological as well as ideological limits of the neoclassical theory of the market economy in which MSV is rooted. The theory of innovative enterprise demonstrates the importance of an analysis that integrates theory and history so that theory functions as both a distillation of what we know and a guide to what we need to know.

The elaboration of the theory of innovative enterprise requires systematic comparative-historical research on the organizational and institutional determinants of the processes that transform technological and market conditions to generate goods and services that are higher quality and lower cost than those that previously existed. For theory to be relevant to real-world phenomena, it must be derived from the rigorous study of historical reality. To develop relevant theory requires an iterative methodology; one

derives theoretical postulates from the study of the historical record, and uses the resultant theory to analyze history as an ongoing and, viewing the present as history, unfolding process. Theory, therefore, serves as an abstract explanation of what we already know, and as an analytical framework for identifying and researching what we need to know.

The constrained-optimization methodology that is central to the training of economists can be a useful analytical tool once its limits are recognized. An understanding of the industrial, organizational, and institutional conditions that “constrain” economic activity at a point in time can enable integrative research to be more systematic in analyzing how, why, and under what conditions certain “constraints” are, or are not, transformed over time.⁵⁹ An example outlined in this paper is the analysis of whether, in the historical process that separated ownership from control in the US industrial enterprise, it was finance or management that constrained the growth of the firm.

Another example of prime importance to this essay is the agency-theory allegation that in the 1980s, US corporate executives were misallocating corporate resources, and hence the solution was to disgorge the free cash flow.⁶⁰ Insofar as this argument of a failure of corporate resource allocation was valid, one would want an analysis of the factors that were constraining innovative success and how, through a dynamic process of industrial and corporate change, these constraints could be overcome. As a theoretical guide to such an analysis, one could have enlisted Joseph Schumpeter’s analytical distinction between innovation and adaptation in the process of economic change.⁶¹

The investment strategies of many established Old Economy US companies were, as Michael Jensen and other agency theorists argued, vulnerable in the 1980s.⁶² The problems were rooted, however, in the increasing role of the stock market to allocate resources in the US economy as well as competition from innovative enterprise abroad and

at home based on new models of organizational learning. In the United States, the conglomerate movement of the 1960s, driven by the ideology that a good manager could manage anything and by the reliance on inflated stock prices for buying and selling companies, had by the 1970s and 1980s greatly weakened established US companies, largely because of a segmentation of strategic control from the processes of organizational learning.⁶³ Meanwhile, US companies faced new competition from the Japanese in leading industries such as automobiles, consumer electronics, memory chips, machine tools, and steel. Whereas the US business model had largely excluded production workers from the processes of organizational learning, the Japanese succeeded through the organizational integration of shop-floor workers into process and product development.⁶⁴ Also in the 1980s, the US Old Economy business model was facing competition from the New Economy business model, centered in Silicon Valley, for professional, technical, and administrative personal who were critical to the processes of organizational learning. The New Economy business model was highly reliant on the stock market to attract both labor, through partial compensation in stock options, and capital, through the promise of a quick exit via an initial public offering on the highly speculative NASDAQ exchange or a stock-based M&A deal.⁶⁵ In sum, by the 1980s, when MSV ideology gained traction, it was a combination of the heightened role of the stock market in the allocation of the economy's resources and the appearance of superior models of organizational learning that made the Old Economy companies vulnerable to value extractors who demanded that these corporations should disgorge their "free" cash flow.

The MSV policy prescription that corporate executives should disgorge corporate cash in the form of dividends and buybacks assumed that money transferred to public shareholders would end up being invested in new firms and industries that offered superior growth opportunities. Jensen and his followers derived this assumption from the

neoclassical theory of the market economy, not from empirical analysis of how public shareholders actually reinvest the higher incomes that, through the disgorging of corporate cash, they actually receive. That analysis would require a theory of the creation of superior growth opportunities, i.e., a theory of innovative enterprise.

MSV is a theory of value extraction without a theory of value creation. Jensen's 1993 American Finance Association presidential address, "The Modern Industrial Revolution, Exit, and The Failure of Internal Control Systems"⁶⁶ is, as the title states, all about *exiting* existing industrial investments, not about entering new ones. Jensen even interprets Joseph Schumpeter's notion of "creative destruction" as being about "efficient exit", i.e., "destruction",⁶⁷ when in fact Schumpeter's entire theoretical orientation was about the conditions for "entry" through entrepreneurship and innovation; that is, the "creative" part of the catchphrase that then made old ways of doing things obsolete (what Schumpeter meant by "destruction").⁶⁸ To understand entry, one needs a theory of innovative enterprise, which is precisely what agency theory lacks.

As the dominant methodology of neoclassical economists, constrained-optimization is typically an excuse for ignoring history, when what is required is a methodology that both uses theory to explore history and uses history to reshape theory. Theory provides us with a framework that directs our historical research to ask the relevant questions and explore the relevant material to provide answers. In short, economists require a methodology that brings history and theory into dynamic interaction with one another so that our theoretical deductions remain anchored in our understanding of historical reality. And when that historical reality is of an *innovative* economy, it will by definition be a reality that is always in the process of change.

Obviously, rigorous historical analysis is essential if an economic theory is to have descriptive value. But in contrast to the "positive" economics methodology proposed in the

1950s by Milton Friedman,⁶⁹ rigorous historical analysis is also essential if a theory is to have predictive value. Friedman argued that, because all theories involve abstraction from reality, one's choice of theoretical assumptions does not matter as long as one's predictions prove to be correct.

There are two basic problems with this methodological position. First, if one's predictions prove to be incorrect (as has often been the case with neoclassical economists), then one requires a methodology that entails rigorous empirical analysis in order to discover what assumptions would yield correct predictions. Given their ahistorical constrained-optimization approach, neoclassical economists lack such a methodology. Second, even when one's predictions do prove to be correct at one point in time, they may prove to be incorrect at another point in time because the underlying model takes as given one or more variables that are in fact integral to the changes that have occurred over the time period. Put differently, two very different theoretical models may yield the same predictions at a point in time, but only one of the models may be able to account for changes in outcomes over time.⁷⁰ If a theory is to have predictive (and hence prescriptive) value, rigorous historical analysis (brought up to the present) is a precondition for rigorous logical analysis.

The agency-theory prediction that MSV would result in superior economic performance has proven to be absolutely wrong. In the United States, it has contributed, and continues to contribute, to an ever-increasing concentration of income at the top and the erosion of middle-class employment opportunities.⁷¹ In its latest incarnation, MSV has provided justification for hedge-fund activists who buy stock in a company, and then demand that management do multi-billion dollar buybacks to "unlock value" which these predators had no part in creating.⁷²

MSV is arguably the most damaging economic theory that has ever been inflicted on an economy precisely because it is a theory of value extraction without a theory of value creation. And, as an academic exercise, MSV continues to be propounded by professional economists who, by their very training, have no capacity to do the type of empirical research that could reveal where and how their fundamental assumptions went wrong. From an academic perspective, what new economic thinking needs is a theory of innovative enterprise, including the training of economists in a methodology that integrates theory and history. Then we can get to work to try to undo the immense damage that, by legitimizing “downsize-and-distribute”, MSV has done.

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- ¹ A shorter version of this paper was background for a presentation at the Purpose of the Corporation
 - ² United States Census Bureau, “Statistics about Business Size” Table 2a. Employment Size of Employer and Non-Employer Firms, 2008, at <https://www.census.gov/econ/smallbus.html>, accessed 8 March 2014.
 - ³ Fortune, “Fortune 500, 2013,” at http://money.cnn.com/magazines/fortune/fortune500/?iid=F500_sp_header, accessed on 8 March 2014.
 - ⁴ W Lazonick “Creating and Extracting Value: Corporate Investment Behavior and American Economic Performance” in M Bernstein and D Adler, eds., *Understanding American Economic Decline* (Cambridge University Press 1994) 79-113; W Lazonick and M Mazzucato, “The Risk-Reward Nexus in the Innovation-Inequality Relationship: Who Takes the Risks? Who Gets the Rewards?” (2013) 22, 4 *Industrial and Corporate Change* 1093-1128.
 - ⁵ W Lazonick, *Competitive Advantage on the Shop Floor* (Cambridge MA, Harvard University Press, 1990); W Lazonick, *Business Organization and the Myth of the Market Economy* (Cambridge University Press, 1991); W Lazonick, “The Theory of the Market Economy and the Social Foundations of Innovative Enterprise” (2003) 24, 1 *Economic and Industrial Democracy*, 9-44.
 - ⁶ Lazonick and Mazzucato, *supra* n 4.
 - ⁷ W Lazonick, “The Theory of Innovative Enterprise: A Foundation of Economic Analysis” AIR Working Paper #13-02/01, February 2014 at http://www.theairnet.org/files/research/WorkingPapers/Lazonick_InnovativeEnterprise_AIR-WP13.0501.pdf, accessed 9 March 2014.
 - ⁸ *Ibid.*
 - ⁹ W Lazonick, *Sustainable Prosperity in the New Economy: Business Organization and High-Tech Employment in the United States* (Kalamazoo, MI, Upjohn Institute for Employment Research, 2009).
 - ¹⁰ W Lazonick and M O’Sullivan, “Maximizing Shareholder Value: A New Ideology for Corporate Governance” (2000) 29, 1, *Economy and Society*, 13-35.
 - ¹¹ Lazonick, *Business Organization*, *supra*, n 5.
 - ¹² A Berle and G Means, *The Modern Corporation and Private Property* (New York: Macmillan, 1932).
 - ¹³ M Jensen and W Meckling, “Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure” (1976) 3, 4 *Journal of Financial Economics* 305-360; E Fama and M Jensen, “Separation of Ownership and Control” (1983), 26, 2 *Journal of Law and Economics* 301-325.
 - ¹⁴ C Kaysen, “The Social Significance of the Modern Corporation” (1957) 47, 2 *American Economic Review* 311-319.
 - ¹⁵ J Weiner, “The Berle-Dodd Dialogue in the Concept of the Corporation” (1964) 64, 8 *Columbia Law Review* 1458-1467; A. Berle, *The 20th Century Capitalist Revolution* (New York: Harcourt, Brace and Company, 1954), ch. V.
 - ¹⁶ R. Brookings, *Industrial Ownership: Its Economic and Social Significance*, (New York, Macmillan, 1925); R. Brookings, *Economic Democracy: America’s Answer to Socialism and Communism* (New York, Macmillan, 1929).
 - ¹⁷ O Young, “Dedication Address” (1927) 5, 4 *Harvard Business Review*, 385-394.

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- ¹⁸ K Jacobson, "Whose Corporations? Our Corporations!" *Huffington Post*, 5 April 2012 at http://www.huffingtonpost.com/ken-jacobson/whose-corporations-our-co_b_1405832.html, accessed 8 March 2014.
- ¹⁹ M Friedman, "The Social Responsibility of Business is to Increase Its Profits" *New York Times Magazine*, 13 September 1970.
- ²⁰ Berle, *supra*, n 15, 30; G Means, "Hessen's 'Reappraisal'" (1983) 26, 2 *Journal of Law and Economics*, 298.
- ²¹ See W Lazonick, "Alfred Chandler's Managerial Revolution" in W Lazonick and D Teece, eds., *Management Innovation: Essays in the Spirit of Alfred D. Chandler, Jr.* (Oxford University Press, 2012).
- ²² W Lazonick, "Controlling the Market for Corporate Control" (1992) 1, 3 *Industrial and Corporate Change*, 445-448. See also W Lazonick and M O'Sullivan, "Finance and Industrial Development, Part I: The United States and the United Kingdom" (1997) 4, 1 *Financial History Review* 7-29; M O'Sullivan, *Contests for Corporate Control: Corporate Governance and Economic Performance in the United States and Germany* (Oxford University Press, 2000) ch. 3; M O'Sullivan, "The Expansion of the Stock Market, 1885-1930: Historical Facts and Theoretical Fashions" (2007) 8, 3 *Enterprise and Society* 489-542.
- ²³ T Navin and M Sears, "The Rise of a Market for Industrial Securities, 1887-1902" (1955) 29, 2 *Business History Review* 105-38.
- ²⁴ W Lazonick "Strategy, Structure, and Management Development in the United States and Britain" in K Kobayashi and H Morikawa, eds., *Development of Managerial Enterprise* (Tokyo, University of Tokyo Press, 1986) 101-146.
- ²⁵ *Ibid.*; D Noble, *America by Design: Science, Technology, and the Rise of Corporate Capitalism* (New York, Knopf, 1979); L Ferleger and W Lazonick, "Higher Education for an Innovative Economy: Land-Grant Colleges and the Managerial Revolution in America" (1994) 23, 1 *Business and Economic History* 116-128.
- ²⁶ D Mowery and N Rosenberg, *Technology and the Pursuit of Economic Growth* (Cambridge University Press, 1989) chs. 2-4.
- ²⁷ D Eisenhower, "Military-Industrial Complex Speech" at <http://coursesa.matrix.msu.edu/~hst306/documents/indust.html>, accessed 9 March 2014.
- ²⁸ W Lazonick, "The Innovative Enterprise and the Developmental State: Organizational Foundations for Sustainable Prosperity" AIR working paper, March 2014.
- ²⁹ Lazonick, *supra* n 9.
- ³⁰ *Ibid.*
- ³¹ Lazonick, *Business Organization, supra*, n 5, ch. 3; W Lazonick, "The Chandlerian Corporation and the Theory of Innovative Enterprise" (2010) 19, 2 *Industrial and Corporate Change* 317-349
- ³² W Lazonick, "Entrepreneurial Ventures and the Developmental State: Lessons from the Advanced Economies," World Institute of Development Economics Research, dp2008/01, January 2008; available at http://www.wider.unu.edu/publications/working-papers/discussion-papers/2008/en_GB/dp2008-01/, accessed 9 March 2014; F Block and M Keller, eds., *The State of Innovation: The U.S. Government's Role in Technology Development* (Boulder CO, Paradigm Publishers, 2011); M Mazzucato, *The Entrepreneurial State* (London, Anthem Press, 2013); Lazonick *supra*, n 28.
- ³³ W Lazonick, "Organizational Learning and International Competition" in J Michie and J Smith, eds., *Globalization, Growth, and Governance* (Oxford University Press, 1998) 204-238; M O'Sullivan, "The Innovative Enterprise and Corporate Governance" (2000) 24, 4 *Cambridge Journal of Economics* 393-416.
- ³⁴ Lazonick, *supra*, n 28; Lazonick, *supra*, n 7.
- ³⁵ Lazonick and O'Sullivan, *supra* n 10; W Lazonick, "The Financialization of the US Corporation: What Has Been Lost, and How It Can Be Regained" (2013) 36 *Seattle University Law Review* 857-909.
- ³⁶ See M Jensen, "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers" (1986) 76, 2 *American Economic Review* 323-329.
- ³⁷ M Jensen and K Murphy, "Performance Pay and Top Management Incentives" (1990) 98, 2 *Journal of Political Economy* 225-264.
- ³⁸ W Lazonick and Ö Tulum, "US Biopharmaceutical Finance and the Sustainability of the Biotech Business Model" (2011) 40, 9 *Research Policy* 1170-1187.
- ³⁹ Lazonick, *Competitive Advantage, supra* n 5; *on the Shop Floor* (Cambridge MA, Harvard University Press, 1990); Lazonick, *supra*, n 33.
- ⁴⁰ Lazonick and Mazzucato, *supra*, n 4.
- ⁴¹ The spike in equity issues for financial corporations in 2009 occurred when they sold stock to the US government in the bailout. These banks that were bailed out had been major repurchasers of their stock in the years before the financial meltdown. See W Lazonick, "Everyone is Paying the Price for Share Buy-Backs" *Financial Times*, 26 September 2008, 25.
- ⁴² Federal Reserve Bank of St. Louis, *Federal Reserve Economic Data*, "Corporate Profits after tax with IVA and CCAdj: Net Dividends (DIVIDEND)" at <http://research.stlouisfed.org/fred2/series/DIVIDEND>, accessed 9 March 2014.

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- ⁴³ Lazonick, *supra*, n 35.
- ⁴⁴ See the body of research of The Academic-Industry Research Network at www.theAIRnet.org.
- ⁴⁵ J Broder, "A Call to Triple U.S. Spending on Energy Research" *New York Times* 9 June 2010, B3; Lazonick, "Financialization," *supra* 35, 890-891.
- ⁴⁶ "U.S. could lose race for nanotech leadership, SIA panel says" *EDN Network*, 16 March 2005, at <http://www.edn.com/electronics-news/4326508/U-S-Could-Lose-Race-for-Nanotech-Leadership-SIA-Panel-Says>, accessed 9 March 2014.
- ⁴⁷ Lazonick, *supra*, n 9, ch. 3; W Lazonick, "The New Economy Business Model and the Crisis of US Capitalism" (2009) 4, 2 *Capitalism and Society* article 4.
- ⁴⁸ Lazonick, *supra*, n 9, ch. 3. See D. Packard, *The HP Way: How Bill Hewlett and I Built Our Company* (New York, HarperBusiness, 1995).
- ⁴⁹ R Dragani, "HP Rearranges Chairs in Hopes of Propelling Turnaround" *E-Commerce Times*, 23 August 2013, at <http://www.ecommercetimes.com/story/78791.html>, accessed 9 March 2014.
- ⁵⁰ M Carpenter, W Lazonick, and M O'Sullivan, "The Stock Market and Innovative Capability in the New Economy: The Optical Networking Industry," (2003) 12, 5 *Industrial and Corporate Change* 963-1034.
- ⁵¹ B Bell, M Carpenter, H Glimstedt, and W Lazonick, "Cisco Systems: The Virtues and Vices of the New Economy Business Model," paper presented at the Business History Conference, Frankfurt, Germany, 15 March 2014,
- ⁵² Lazonick and Tulum, *supra*, n 38.
- ⁵³ See AFL-CIO Executive Paywatch, at <http://www.aflcio.org/Corporate-Watch/CEO-Pay-and-You>, accessed 9 March 2014.
- ⁵⁴ W Lazonick, "The Explosion of Executive Pay and the Erosion of American Prosperity" (2009) 57 *Entreprises et Histoire* 141-164.
- ⁵⁵ For an elaboration, see W Lazonick, "Taking Stock: Why Executive Pay Results in an Unstable and Inequitable Economy, Roosevelt Institute White Paper, June 5, 2014.
- ⁵⁶ In November 1982 the SEC promulgated Rule 10b-18 which gave corporations a "safe harbor" to do large-scale buybacks without risking manipulation charges. R. Hudson, "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*, 10 November 1982, 2; Lazonick, "Financialization" *supra* n 35, pp. 880-882.
- ⁵⁷ In May 1991, the SEC changed the rules so that top executives could reap gains by selling the shares acquired from stock options immediately upon exercise rather than having to wait six months as had previously been the case, thus eliminating the risk that the stock price might fall between exercise and sale. C Gould, "Shaking Up Executive Compensation" *New York Times*, 9 April 1989, F13; J Rosen, "New Regulations on Stock Options" *New York Times*, 27 April 1991, 38; Lazonick, "Financialization" *supra*, n 35, 886-887.
- ⁵⁸ Lazonick, "Financialization" *supra*, n. 35
- ⁵⁹ W Lazonick, *Organization and Technology in Capitalist Development* (Aldershot UK, Edward Elgar, 1992); W Lazonick, "Innovative Enterprise and Historical Transformation" (2002) 3, 1 *Enterprise & Society* 35-54.
- ⁶⁰ Jensen, *supra*, n 36.
- ⁶¹ J Schumpeter, "The Creative Response in Economic History" (1947) 7 *Journal of Economic History* 149-159; W Lazonick, "The Integration of Theory and History: Methodology and Ideology in Schumpeter's Economics" in L Magnusson, *Evolutionary and Neo-Schumpeterian Approaches to Economics* (Dordrecht, Kluwer, 1994) 245-263.
- ⁶² See Lazonick, *supra*, n 4; Lazonick, *supra* n 22; Lazonick and O'Sullivan, *supra*, n 10; O'Sullivan, *supra*, 22, chs. 4 and 5; Lazonick, *supra*, n 9.
- ⁶³ W Lazonick, "Corporate Restructuring" in S Ackroyd, R Batt, P Thompson, and P Tolbert, eds., *The Oxford Handbook of Work and Organization* (Oxford University Press, 2004) 577-601.
- ⁶⁴ Lazonick, "Competitive Advantage" *supra*, n 5; Lazonick, *supra*, n 33; W. Lazonick, "Innovative Business Models and Varieties of Capitalism" (2010) 84, 4 *Business History Review* 675-702.
- ⁶⁵ Lazonick, "New Economy Business Model" *supra*, n 47.
- ⁶⁶ M Jensen, "The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems" (1993) 48, 3 *Journal of Finance* 831-880.
- ⁶⁷ *Ibid.* 833
- ⁶⁸ J Schumpeter, *Capitalism, Socialism, and Democracy* (New York, HarperCollins, 2008; originally published in 1942) 81-85.
- ⁶⁹ M Friedman, *Essays in Positive Economics* (Chicago, University of Chicago Press, 1953), Part I.
- ⁷⁰ See *supra*, n. 59.
- ⁷¹ Lazonick, *supra*, n 35.
- ⁷² See e.g. W Lazonick, M Mazzucato, and Ö Tulum, "Apple's Changing Business Model: What Should the World's Richest Company Do With All Those Profits?" (2013) 37, 4 *Accounting Forum* 249-267.