

Technological and Institutional Crossroads: The Life and Times of Adolf A. Berle Jr.

Bernard C. Beaudreau

ABSTRACT

In this paper, I examine the life and times of Adolf A. Berle Jr., perhaps the most influential scholar in the field of corporate governance. Specifically, I examine his contribution in light of the technological and institutional changes that occurred in the late nineteenth century—changes that were germane to his thinking and understanding of corporate governance. I argue that, despite his perspicacity, he failed to appreciate the changing role of corporate officers—that is, from that of fiduciary agent to that of visionary, founder, and essential element in corporate success. Put differently, in the early twentieth century, the key asset in the large, modern corporation was its officers' ability to manage and control several large-scale, vertically integrated lines of business. This paper will show that this was reflected in the composition of the Board in the post-WWII period where officers dominated and in corporate control in general.

INTRODUCTION

The late nineteenth century to early twentieth century was a period of extraordinary technological and institutional change in America. Large-scale, countrywide firms had emerged and were in the process of crowding out small-scale, local/regional ones. Similarly, vertically integrated value chains were replacing traditional small-scale, atomistic production units. Combined, these two developments prompted a political and intellectual upheaval as the founding principles of the American experience were under siege. Competitive markets where no one consumer or producer yielded any power were being replaced by concentrated markets. These new, concentrated markets possessed considerable market power, whether they chose to exercise it or not. A good example is Standard Oil, which controlled ninety-five percent of the market at its zenith, while passing substantial cost savings on to consumers in the form of lower prices. A

similar scenario played itself out with the Ford Motor Company, which held eighty-five percent of the market yet offered automobiles at the historically low price of \$300.00.

These changes begged a response on the part of the nation's intellectual elite. How would the economics profession respond? How would the legal profession respond? The stakes were high for a number of reasons. For example, the concentration of power that had been the bane of Western political, legal, and economic thought had nonetheless provided the post-WWII consumer with a standard of living that was without precedent. Whatever the nation's new captains of industry were doing, the fact remained that the standard of living was on the rise, more so than any other time in the nation's history—and indeed in the history of the Western world.

In this paper, I examine Adolf A. Berle Jr.'s role and contribution to this monumental task—that is, of understanding and coming to terms with these changes. I argue that, while his contribution was pathbreaking, it was flawed, in large measure due to his inability to understand and appreciate the associated technological change, which we show had important implications for the question of property within the modern corporation. The paper is organized as follows: I begin by reviewing the technological and institutional changes that defined the Second Industrial Revolution, including the implications of these changes for governance. This is then followed by a presentation and critique of Adolf A. Berle Jr. and his co-author Gardiner Means's contributions.

I. PRE- AND POST-SECOND INDUSTRIAL REVOLUTION TECHNOLOGY AND INSTITUTIONS

The late nineteenth century witnessed cataclysmic change in firm and industry structure in the United States. According to Alfred D. Chandler, this came in response to a number of key developments, including the Louisiana Purchase in 1803, the introduction of high-quality, affordable steel (due to the Bessemer Process), the opening up of the Western frontier to settlement, and the unprecedented growth of the railroad. Taken together, these developments ushered in a number of defining changes in the conduct of business. Notable among these were (1) the introduction of high-throughput material processes, (2) the integration under one roof of most/all of the links in value chains, and (3) the downstream integration into marketing, finance, and distribution.¹ Table 1 lists these changes, providing pre and post comparisons. We see, for example, that the small,

1. See ALFRED D. CHANDLER, *THE VISIBLE HAND: THE MANAGERIAL REVOLUTION IN AMERICAN BUSINESS* 245, 259, 285–376 (1977).

disparate, independent production units of yore were replaced by large-scale, high-throughput vertically integrated units. On-site hydro- and steam-power was being replaced by electric power. According to Warren Devine and others,² this was achieved in two phases: electric motors initially powering the existing belting and shafting drive technology and, in the early twentieth century, the introduction of electric unit drive. Firms went from generating power on-site to purchasing it from large-scale public utilities. Markets that had been local or regional in nature gave way to national ones. However, the most important of these changes, insofar as the current paper is concerned, was the fact that broadly defined technology (process and product) was no longer a free good but rather was proprietary in nature, embodied in the firm's officers and managers.³ A good example is Henry Ford and his team of upper-level managers and officers, who, over a period of a decade, introduced changes that would redefine not only the automobile industry but also the manufacturing sectors of the U.S. and world economies.⁴ Theoretically speaking, management became a new input—distinct from nineteenth century business administration—as witnessed by the introduction of management courses in university-level curricula.⁵ Firm officers (CEO, CFO, COO) introduced new products, new processes, and new marketing strategies.⁶ Edward Prescott and Michael Visscher referred to this as the firm's organization capital, while more recently, David Teece referred to this as “dynamic capabilities.”⁷ The end result was a revolution of sorts in the conduct and performance of industry, known as the Second Industrial Revolution and/or modernity.

2. See BERNARD C. BEAUDREAU, MASS PRODUCTION, THE STOCK MARKET CRASH, AND THE GREAT DEPRESSION: THE MACROECONOMICS OF ELECTRIFICATION 4–8 (1996); Warren D. Devine Jr., *Electrified Mechanical Drive: The Historical Power Distribution Revolution*, in ELECTRICITY IN THE AMERICAN ECONOMY: AGENT OF TECHNOLOGICAL PROGRESS 21, 29–34 (Sam H. Schurr, Calin C. Burwell, Warren D. Devine, Jr. & Sidney Sonenblum eds., 1990).

3. See generally Bernard C. Beaudreau, *Corporate Control: Towards a Realistic Theory*, 4 CAN. INV. REV. 47 (1991); Edward Prescott & Michael Visscher, *Organization Capital*, 88 J. POL. ECON. 446 (1980); David J. Teece, *A Dynamic Capabilities-Based Entrepreneurial Theory of the Multinational Enterprise*, 45 J. INT'L BUS. STUD. 8 (2014).

4. These included the power-driven assembly line and vertical upstream and downstream integration, the creation of a distribution network (dealers), and finance, among others.

5. One could argue that this marked the de facto beginning of the knowledge economy.

6. Interestingly, the 1910s and 1920s witnessed the emergence of a similar view, namely of management as a distinct factor input. See, e.g., HENRY C. METCALF, *BUSINESS MANAGEMENT AS A PROFESSION* (1927).

7. Michael Porter referred to it as dynamic/sustained competitive advantage or the ability to sustain the firm's advantage over the long haul via the judicious use of innovation both at the product and process levels.

Table 1: Pre- and Post-Second Industrial Revolution Characteristics

Pre	Post
Small, disparate, non-integrated units	Large, high-throughput vertically integrated units
Steam/water powered material processes	Electric-powered material processes (EUD)
Energy generated on-site	Energy purchased from public utilities
Known/free technology	Technology was not free
Standardized goods	Goods were differentiated (product design, marketing)
Markets were local/regional	Markets were national

Nathan Rosenberg, in his comments on Robert Hessen's 1983 *The Modern Corporation and Private Property: A Reappraisal*, described organization capital in the following terms:

To bring us back full circle to Berle and Means, let me close by calling attention to one specific aspect of the organizational revolution wrought by the modern corporation. In advanced industrial economies, corporations bring together a wide range of professional skills and highly specialized knowledge. This includes such things as commercial knowledge relating to the specific requirements of numerous submarkets, complex technological knowledge involving the performance characteristics of specific classes of machinery, and scientific knowledge that is increasingly essential in forming judgments concerning the direction of future research or new product development. A successful business organization is one that manages somehow to coordinate and to exploit such highly specialized bodies of knowledge and expertise in a commercial context. Quite independent of considerations respecting size of firm and the diffusion of ownership, this consideration, by itself, had already rendered totally impracticable, by 1930, the unity of ownership and control.⁸

These developments had important implications for the corporate power and control landscape in general.

The role of physical capital within organizations had undergone a fundamental change, going from one consisting of material process-based tools and energy-related tools (hydro/steam) to only the former. The latter was no longer a factor input provided by shareholders as power would now be purchased from public utilities. As such, the capital input was reduced

8. Nathan Rosenberg, *Comments on Robert Hessen, "The Modern Corporation and Private Property: A Reappraisal,"* 26 J. L. & ECON. 291, 296 (1983).

to tools and structures—both passive, non-physically productive inputs.⁹ Instead, that title went to organization capital, corporate officers, and upper-level management who were largely responsible for the firm's success (product development, process development, vertical integration, marketing, etc.). In short, those now responsible for the creation of value.

*A. Factor Inputs and Bargaining Power:
Pre- and Post-Second Industrial Revolution*

In this section, we examine the question of corporate control, or control in general, from the point of view of bargaining power.¹⁰ The latter will be defined in terms of (1) a factor input's physical contribution to the creation of wealth/value and (2) scarcity. Specifically, the greater a factor's contribution to wealth/value, the greater its bargaining power. For example, if I happen to be (or own) the prime factor input contributing the most to overall wealth/value, then it stands to reason that I would have more bargaining power and hence more control. In other words, the scarcer a factor, the greater its bargaining power. According to neoclassical production theory, wealth is an increasing function of labor and capital, both of which are considered to be physically productive. That is, both contribute physically to overall output/wealth. However, in *Energy and Organization: Growth and Distribution Reexamined*, Bernard Beaudreau argued that such a view of production was untenable as it violates the laws of physics.¹¹ In its place, he proposed the energy-organization approach, according to which wealth/value was an increasing function of two universal factor inputs, namely broadly defined energy and broadly defined organization, with the former being physically productive and the latter defining the framework in which energy transforms raw materials and semi-finished goods.¹² The key point, as far as we are concerned, is

9. In *Energy and Organization: Growth and Distribution Reexamined*, I referred to tools and structures as an organizational input, providing the physical framework in which the energy input creates value—that is, transforms inputs. As such, they are a necessary part of material processes but not physically productive per se. BERNARD C. BEAUDREAU, *ENERGY AND ORGANIZATION: GROWTH AND DISTRIBUTION REEXAMINED* 142 (1998).

10. Interestingly—and ironically—Berle made a similar argument in *How Labor Could Control*, arguing that the “shares” of corporations should be distributed “[a]ccording to the fairest appraisal of the value of the employee-stockholder's services.” In short, each worker would be given ownership and control in proportion to his contribution to the firm. Unfortunately, he stopped short of providing a detailed account of workers' and capital's “contribution” to the firm. See Adolf A. Berle, Jr., *How Labor Could Control*, 28 *NEW REPUBLIC* 37, 38 (1921).

11. BEAUDREAU, *supra* note 9, at 87. Capital or tools are not physically productive, not being a source of energy. The same applies to labor, which is largely a supervisory input, making energy the only factor capable of doing work, and hence capable of being physically productive. See *id.*

12. The Energy-Organization is consistent with Edward O. Wilson's notion of “consilience” in the sense that it is consistent with approaches to material processes found in the related fields of

the resulting view/role of capital (simple/complex tools and structures) in production as not being physically productive and not being a source of energy. Put differently, capital is a passive input whose constituent tools provide mechanical advantage, but it is not physically productive.¹³ Fast-forward to the Second Industrial Revolution and the underlying changes. Previously, small-scale firms owned and controlled the source of energy (thermal/hydro); afterwards, energy was, for the most part, purchased from large-scale private and public utilities.¹⁴ Table 2 lists the key differences between the “old” and “new” economy. For example, in the old economy the owners of capital provided the energy input; in the new economy, it was purchased. As such, none of the on-site factors were physically productive. Second, and perhaps more importantly, in the old economy, technology (process and product) was free; however, in the new economy, it was proprietary since the firm’s officers (entrepreneurs/managers) developed it. A good example is Apple’s Steve Wozniak and Steve Jobs, who together developed the original Macintosh PC. In this paper, we maintain that these changes hold the key to understanding the evolution of corporate governance in the late nineteenth and early twentieth century.

Table 2: Fundamental Changes in Twentieth Century
Material Processes

Old	New
Shareholders controlled energy input	Energy purchased
Production technique free	Production technique was proprietary (production technique, marketing, product line)
Capital, not physically productive	Capital, not physically productive
Labor, a supervisory input	Labor, a supervisory input

B. Implications for Corporate Governance

The changing face of production in the late nineteenth and early twentieth centuries, outlined by Alfred D. Chandler, had a profound impact on corporate governance. Specifically, the introduction of a new

process engineering, biology, and applied physics. See EDWARD O. WILSON, *CONSILIENCE: THE UNITY OF KNOWLEDGE* 8–14 (1998).

13. Mechanical advantage is defined as a measure of the force amplification achieved by using a tool, mechanical device, or machine system. The device preserves the input power and simply trades off forces against movement to obtain a desired amplification in the output force. The model for this is the law of the lever. Machine components designed to manage forces and movement in this way are called mechanisms. An ideal mechanism transmits power without adding to or subtracting from it. This means the ideal mechanism does not include a power source, is frictionless, and is constructed from rigid bodies that do not deflect or wear. The performance of a real system relative to this ideal is expressed in terms of efficiency factors that take into account departures from the ideal.

14. See BEAUDREAU, *supra* note 2, at 105–11; Devine, *supra* note 2, at 21.

form of capital, namely organization capital, along with the marginalization of traditional capital (from providers of energy and tools/structures to simply providers of passive, non-physically productive tools/structures) changed the face of control within the firm. These changes were reflected in virtually all aspects of the firm, including the composition of the board. From that point on, corporate officers occupied an increasingly important place on the board. They appeared to usurp control and power from shareholders when, in fact, they were simply exercising their legal right over what had become the key factor input and the key source of value creation: organization capital.

The post-WWII period witnessed boards that were, for the most part, dominated by insiders, consisting most often of firms' senior officers (CEO, CFO, COO). The CEO often wore two hats: chief officer and chair of the board. To observers on the political left, this was seen as evidence of the Berle–Means thesis. I maintain that it simply reflected the increased importance of organizational capital, which manifested itself in greater bargaining power. In short, the financial success of the firm depended on the officers' acumen, vision, and ability to invent, and reinvent, processes and products.

However, board composition changed in the 1990s and 2000s in response to the productivity slowdown when blame was assigned—at least in part—to the managerial class and its purported lack of accountability. This led to legislation intended to provide more transparency and more accountability, including the proposed Shareholder Bill of Rights Act of 2009 and The Shareholder Empowerment Act of 2009, which were based largely on the Berle–Means critique.¹⁵ While intended to increase accountability with the hope of improving the long-term performance of corporations and ultimately economic growth, the data show no discernable increase in growth. Some have attributed this to the increased presence of institutional investors and hedge-fund representatives on corporate boards. According to Martin Lipton, this has had the perverse effect of putting the emphasis on short-run returns on investment (known as short-termism) at the expense of long-term goals.¹⁶ It is my view that the trend towards outsider-dominated boards is potentially counterproductive for a number of other reasons, including the knowledge asymmetry referred to earlier. For a board to be effective, its members must be as, if

15. It bears reminding that neither of these became law, having been defeated in Congress. *See* Shareholder Bill of Rights Act of 2009, S. 1074, 111th Cong. (2009); Shareholder Empowerment Act of 2009, H.R. 2861, 111th Cong. (2009).

16. *See, e.g.,* Martin Lipton et al., *Corporate Governance: The New Paradigm*, HARV. L. SCH. F. ON CORP. GOVERNANCE & FIN. REG. (Jan. 11, 2017), <https://corpgov.law.harvard.edu/2017/01/11/corporate-governance-the-new-paradigm/> [<https://perma.cc/7YFV-2XPP>].

not more, qualified as the firm's officers. Anything short of this could, and would, impede the firm's growth and success.

C. Shareholders and the Ability to Control/Govern

Since *The Modern Corporation and Private Property (MCP)*, it is generally argued/held that the right to control and govern the firm has been usurped by pirate-like managers at the expense of the shareholders. I maintain that while it is true that managers gained control of the firm, the underlying reasons were not malevolent but rather were simply a reflection of the new reality described above. In fact, one could go as far as to argue that this came about by default. Put differently, shareholders (i.e., those with claims to tools and structures) or their agents could not possibly control the firm either in their own interest (ROI) or in the interest of society (welfare) for lack of relevant knowledge/information. The associated matrix of decisions involved in the new economy of the time (i.e., at the turn of the century) was simply beyond their comprehension, which made it impossible for them to de facto control the firm.¹⁷ Effective management—and hence control—is information- and experience-intensive, which puts it outside and beyond the reach of the average representative shareholder. No better proof of this is provided by the literature on the composition of the board of directors and its effect on firm performance. In the late 1980s and early 1990s, it was felt that corporate performance could be improved by increasing the presence of outside board managers. The evidence, however, showed that in many cases the ROA and Tobin's Q actually fell as a result. In the best-case scenario, there was no effect. This provides corroborative evidence that the effective management of today's (and yesterday's) modern corporations is highly information- and experience-intensive, and more importantly, frequently beyond the reach of shareholders or outsiders.¹⁸ Capital in new-economy firms was reduced to providing non-physically productive tools. Contrast this with capital in old-economy firms that provided, in addition to tools, the only physically productive factor input: power (hydraulic, steam, etc.).

Organization capital in the new economy consisted of the corporate visionaries of the late nineteenth and early twentieth centuries and their acolytes—that is, the personnel that provided logistical, financial, engineering, and other forms of services/knowledge. Put differently, these

17. This question was and is never raised. That this remains the case is, in my view, a reflection of the archaic view of the firm that underlies the literature, namely that of the perfectly competitive firm where the managers choose the profit-maximizing level of output—in short, choosing a point on a bivariate profit function.

18. Organization capital in the old economy consisted of individuals capable of executing well-known and well-worn production schedules—what is referred to as business administration.

individuals were complementary inputs to the founders/visionaries of the corporation. Table 3 lists a number of these visionaries and founders whose contributions collectively ushered in the Second Industrial Revolution.¹⁹

Table 3: Visionaries of Early Twentieth Century Modernity

Henry Ford of Ford Motor
Thomas Edison of General Electric
Gerald Swope of General Electric
John Francis Queeny of Monsanto
George Westinghouse of Westinghouse
William Crapo Durant of General Motors
John Rockefeller of Standard Oil
Pierre-Samuel Dupont de Nemours of Dupont

II. ADOLF A. BERLE JR.'S INTELLECTUAL CONTRIBUTION

Born and raised in Boston, Massachusetts, Adolf A. Berle Jr. was a product of his time. After completing both an undergraduate and graduate degree in history at Harvard, he went on to study law at Harvard Law School, graduating with a law degree at age twenty-one. In this section, I argue that these elements are important to understanding his approach to the issues of the day, specifically that of corporate control and public policy. Specifically, being from Massachusetts and a historian at heart, he had a model of business that was fashioned in large measure by his environment. For example, the firms in the nearby industrial Boston suburb of Cambridge, Massachusetts, like those in virtually all New England company towns, were small in scale and powered by waterpower, steam, or both, and they were owner-operated and managed—in short, Chandler-style “old-economy” firms.

I maintain that this came to define his prototypical view (e.g., his set point) and understanding of the firm, namely as being controlled by its owners—that is, the owners of capital. As the latter included the power generation and transmission equipment, it followed that control resided in what was by far the most important factor input, namely the owner/operator/shareholder. Put differently, shareholders/owners exercised *de facto* and *de jure* control of the firm.

By the 1920s, considerable shade had been cast on this almost folkloric view of the firm as large, vertically integrated national firms had

19. For more on the visionaries that collectively ushered in the Second Industrial Revolution, see generally CHANDLER, *supra* note 1.

come to dominate the industrial landscape.²⁰ As pointed out above, these firms differed fundamentally from their nineteenth century counterparts, with the most important difference being the presence of significant organization capital. In these firms, the key factor input was managerial ability because capital had been reduced to what was essentially a passive factor input (tools and structures). Bargaining power, it follows, would have shifted from the owners of physical capital to the owners of organization capital. It was in such a context that Berle, with the assistance of economist Gardiner Means, waded into the question of corporate control, examining the changes thrust upon corporate America against what was, essentially, a nineteenth-century understanding of control and welfare. Specifically, in keeping with both the economic and legal traditions of his day, they set out to understand these changes and their implications for welfare. Table 4 presents a non-exhaustive list of their findings, both micro and macro in nature. By far, the most important of these was the separation of ownership from control. In short, shareholders, the owners of the physical assets of the firm, no longer controlled what was their property, thus violating basic property law.²¹ However, the breadth of their endeavors extended well beyond the question of usurpation. For example, there was the question of the welfare implications of manager-controlled firms. Would they maximize profits in the interest of society? The free market system, as formalized in standard economic theory, is founded on two behavioral principles, namely utility maximization and profit maximization. If either of these is violated, then the much-celebrated welfare effects/benefits of a market-based system can no longer be invoked/defended.²² A good example of this is the working of the price system in downturns, specifically the self-regulating nature of markets. In the face of excess supply, prices fall, thus re-equilibrating the market. However, if firms are not maximizing profits—that is, responding to incentives—then it is no longer clear that prices will fall in the face of excess supply. Berle and Means in *MCP*²³—published in the depth of the Depression—went a long way to confirm the Keynesian notion that the price system, as outlined in neoclassical theory, was flawed.

While this view was an integral part of *MCP*, it was orthogonal to the view of large firms—and their behavior—found in the various policy measures introduced by Roosevelt's National Recovery Administration,

20. See, e.g., *id.*

21. In short, managers had shirked on their fiduciary duty vis-a-vis shareholders, pursuing non-shareholder consistent goals.

22. The many welfare results and theorems in standard economic theory are premised on profit maximization and, as such, are violated in its absence. Essentially, if firms fail to maximize profits, then virtually nothing can be said.

where they were seen as decidedly predatory in nature and hence in need of being regulated. President Franklin D. Roosevelt's Brains Trust, whose members included Adolf A. Berle Jr., believed that the key to recovery lay in higher real wages and stable prices. Getting in the way of the latter were the very corporations described in *MCPP*, namely the large-scale, vertically integrated, nation-wide conglomerates that were aggressively cutting prices. In short, they were accused of predatory aggressive price-chiseling, the result of which was to compromise the financial health of the more numerous smaller firms, invariably leading to bankruptcy. It was with this in mind that the Brains Trust proposed the "Codes of Fair Competition," which was the instrument through which New Deal policies would be formalized. Specifically, as the name indicates, each industry would collectively decide on a minimum price—consistent with the idea of "fair competition."

Table 4: Berle and Means's Major Findings

Micro

- New economy is controlled by 200 large corporations and 385 corporate officers.
- Diluted ownership, diluted control, hijacking.
- Shareholders denied basic property rights—that is, controlling investment.
- Profit maximization gave way to sales/market, share/managerial, and whim/perk maximization.
- Welfare was compromised (Great Depression).
- Large firms engaged in predatory practices at the expense of small firms.

Macro

- Large corporations did not maximize profits.
 - Pursued other interests.
 - Did not cut prices in response to excess supply.
 - Impinged on the workings of markets.
-

This illustrates one of the key shortcomings of the *MCPP* regarding the question of pricing behavior. Based largely on the writings of Gardiner Means, it maintained that prices were largely administered and hence set outside of the market framework. However, administered prices are not necessarily fixed prices, as witnessed by the aggressive price-cutting behavior of larger firms.

A. Berle and Means's Oversights

It is my view that Berle and Means's overall contribution to the field of corporate governance suffered from two fundamental oversights: ignoring the role of organization capital in twentieth century

conglomerates and failing to provide a theory of the manager-controlled firm—that is, a more detailed analysis of the large conglomerates described in Alfred D. Chandler’s *The Visible Hand, The Revolution in American Business*. As we have argued, this can be attributed in large measure to (1) Berle’s formal training in property law and (2) his (and Gardiner Means’s) view of the role of capital/tools in production. In his view, the de facto and de jure owners of the firm, the shareholders, should exercise de facto and de jure control. That this was not the case in the early twentieth century was seen as a violation of not only the rule of law but also of the workings of the for-profit market economy.

Table 5: Berle and Means’s Oversights

Micro

- Failed to grasp/appreciate the integral role of organization capital (was not alone as it failed to appear on the trade, I-O, and micro radars).
- Physical capital (essentially tools) had become secondary in nature, as had the role/place of its owners.
- Those in power were not property-less (organization capital).
- Shareholders could not effectively control the firm for lack of knowledge (new economy). Basic oversight owed partly to his legal background in property law and his understanding of the basic economic model (by now redundant), not to mention the American belief.
- In marketplace democracy many firms, many buyers, no market power.
- He was not alone in his condemnation of the rise of bigness, e.g., Theodore Roosevelt’s Progressive Party.

Macro

- In the downturn (1929–1932), large corporations were more aggressive cutting prices.
 - Large corporations were more likely to maintain wage levels in the downturn (Hoover and Roosevelt). Many large corporations were founded by visionary entrepreneurs with liberal values (e.g., Henry Ford). Large corporations were more likely to be unionized (Galbraith’s countervailing power).
-

Put differently, both Berle and Means sought to gain insight into the workings of the early-twentieth-century corporations that had transformed not only America but the world economy through the lenses of eighteenth-century law and political economy. For example, in the latter, firm size is viewed with great suspicion because it connotes market power, which is considered to be welfare reducing. However, according to the “efficient structure” view, firm size is a measure of success and is seen to be welfare increasing.²³ Interestingly, from a legal point of view, while they alleged malfeasance on the part of the two hundred largest corporations, they

23. See generally Harold Demsetz, *Industry Structure, Market Rivalry and Public Policy*, 16 J. L. & ECON. 1 (1973) [hereinafter Demsetz (1973)].

failed to provide systematic evidence of the injury that corresponding corporate officers had caused. In the next section, I argue that far from causing injury, this class of managers increased shareholder wealth/value more so than in any time in history. While we maintain that Berle and Means's contribution suffered from a number of shortcomings, I hasten to add that they were not alone. For example, as far as organization capital is concerned, the notion that among a corporation's assets are the knowledge/capabilities of its founders/managers/executives is a relatively recent development. Until the 1960s, only tangible assets (i.e., tools, structures) were considered as assets/capital. By the 1970s, the view that large, concentrated firms (like those found in *MCP*) were harmful to consumer and social welfare had been replaced by Harold Demsetz's "efficient structure" view, according to which these firms, while extremely profitable, actually contributed to raising welfare, relative to their smaller rivals.²⁴

B. Were Berle and Means's Fears/Misgivings/Doubts Warranted?

One of the overriding themes in both Berle's and Means's writings was the impending doomsday scenarios that were evoked. In their view—and that of many of their contemporaries, including Joseph A. Schumpeter—the usurpation of power and control by corporate officers augured poorly for the future of capitalism. The purported benefits of profit-maximization would be lost and large-scale inefficiency would be the final result. Throughout their work, there is an overriding pessimism and an implicit call to arms, so to speak. With the benefit of hindsight, this raises the question: Were their fears—shared by a whole generation of scholars (i.e., shareholder primacy)—warranted? Did they materialize? Were there grounds for the called-for government intervention?

Unfortunately, the ex-post evidence does not corroborate their fears, as the post-WWII period witnessed a golden age of sorts, dominated in large measure by the very large-scale corporations Berle and Means examined. In fact, these corporate visionaries were largely responsible for the greatest increase in wealth ever achieved.²⁵ Growth rates in the post-WWII period averaged 5% per annum. Shareholder value increased at a record pace. For example, the Dow-Jones Industrial Average went from a

24. While this view attributed firm success/performance to managerial ability, Demsetz and others continued to define the firm largely in terms of its shareholders—that is, in terms of its physical capital (tools and structures). See generally Harold Demsetz, *Two Systems of Belief About Monopoly*, in *INDUSTRIAL CONCENTRATION: THE NEW LEARNING* 164 (H.J. Goldschmid, H.M. Mann & J.F. Weston eds., 1974); Demsetz (1973), *supra* note 23.

25. See generally ROBERT J. GORDON, *THE RISE AND FALL OF AMERICAN GROWTH: THE U.S. STANDARD OF LIVING SINCE THE CIVIL WAR* (2016); Robert J. Gordon, *Does the "New Economy" Measure up to the Great Inventions of the Past?*, 14 *J. ECON. PERSP.* 49–74 (2000).

level of 153.6 in January 1945 to a level of 965 in December 1968—a 6.8-fold increase. Likewise, the Cowles Commission/S&P index went from 13.49 in January 1945 to 106.48 in December 1968—a 7.89-fold increase. Wages in manufacturing also increased at record levels. Richard B. Freeman et al. showed that compensation per man-hour increased at an annual compound rate of 3.30% from 1947 to 1966, tracking an output per man-hour growth rate of 3.39%.²⁶ Hence, while concentration may have been on the rise, and firm officers may have de facto usurped control from shareholders, the fact remains that overall social welfare increased throughout this period.

III. POLICY IMPLICATIONS

Following the productivity slowdown (mid-1970s), one of the proposed policy responses was to reform corporate officer remuneration, putting more emphasis on long-term instruments (e.g., stock options).²⁷ Unfortunately, this has not been, on the whole, successful, as growth rates have failed to return to their post-WWII levels. Specifically, growth rates have averaged 1.5% per annum, roughly half of their post-WWII levels. Nonetheless, in 2013, corporate officer remuneration was as much as 295.9 times that of the average worker, as compared to 1965 when it stood at 20 times.²⁸

I would argue that this has backfired in the sense that it has attracted the wrong type of officer. Instead of the visionaries of yore, the managerial landscape is now populated by MBA-trained corporate officers whose overriding purpose is to maximize ROI (aka short-termism). In other words, it has failed to attract or produce the visionaries of yore. Absent from the managerial landscape today are the Henry Fords, the Thomas Edisons, and the Gerald Swopes of the early 1900s.

There are important lessons to be learned here. First, in the tradition of Edward Prescott, Michael Visscher, and David Teece, the modern corporation's greatest asset is not its physical assets (tools and structures) but rather its organization capital. The owners of the former are essential, but not germane, to the corporation's success. This, I maintain, is where

26. See Richard B. Freeman, John T. Dunlop & R.F. Schubert, *The Evolution of the American Labor Market, 1948–80*, in *THE AMERICAN ECONOMY IN TRANSITION* 349, 352 (Martin Feldstein ed., 1980).

27. See, e.g., Kevin J. Murphy, *Executive Compensation*, in *HANDBOOK OF LABOR ECONOMICS* 2485 (O. Ashenfelter, R. Layard & D. Card eds., 1999); Tod Perry & Marc Zenner, *CEO Compensation in the 1990s: Shareholder Alignment or Shareholder Expropriation?*, 35 *WAKE FOREST L. REV.* 123 (2000).

28. See Lawrence Mishel & Alyssa Davis, *CEO Pay Continues to Rise as Typical Workers Are Paid Less*, *ECON. POL'Y INST.* (June 12, 2014), <https://www.epi.org/publication/ceo-pay-continues-to-rise/> [<https://perma.cc/8YXZ-L6ZA>].

Berle and Means erred. Specifically, giving shareholders control of the 200 large corporations contained in their sample would have been counter-productive in light of (1) the important information (dynamic capabilities) asymmetry that exists and (2) the relative rarity of top-notch organization capital vis-a-vis physical capital.

SUMMARY AND CONCLUSIONS

Adolf A. Berle Jr. and Gardiner Means's *MCP* was pathbreaking in its scope and breadth. It raised extremely important and relevant questions. The corporate world had changed, and the relevant question was how, why, and what were the consequences?

While it advanced the debate, I have argued that Berle and Means's past, education, and reading of these changes prevented them from not only accurately understanding these far-reaching changes but also from appreciating the contribution of a new generation of corporate officers to the growth and progress of the U.S. and world economies. Largely as the result of the visions and acumen of these officers, America, and indeed the world, were transformed forever. Growth rates in the post-WWII period broke all records. Material well-being increased across the board. In fact, for the last forty years, the World (and the economics profession) has attempted to recreate this episode in history.²⁹

What was surprising in the case of Adolf A. Berle Jr. is the extent to which his thinking (and that of Gardiner Means) failed to evolve despite the corporate performances in the post-WWII period. The 200 large corporations that were the focus of *MCP* performed exceptionally well in the post-WWII period, making fundamental contributions to the well-being and welfare of the United States and the world, raising the question: why? Why did they fail to acknowledge and, more importantly, integrate these changes into his (and, indeed, the legal profession's) thinking?

In this paper, I have pointed to a number of factors, including (1) their failure to understand the key role visionary managers played in the Second Industrial Revolution, (2) Berle's training/background in civil law where property connotes the notion of control, and (3) the Great Depression. The first is self-explanatory and, more importantly, not unique to him. It took the economics profession a half century to acknowledge that firm size was—or could be—a measure of efficiency rather than one of malevolent behavior on the part of firm's officers. Berle's legal background, in our view, probably did not help as it is founded on a statutory definition of the firm. Organization capital, per se, was not even

29. By "recreate this episode," it should be understood that I mean restoring growth rates to their post-WWII rates—roughly, 5% per annum on average.

so much as a consideration. The third factor was the Great Depression, which catapulted the *MCP* into a completely different stratosphere, elevating its authors and, more importantly, the resulting Berle–Means hypothesis to its legendary status as one of the foremost important rationales for market failure.