THE STRUCTURE OF OWNERSHIP AND THE THEORY OF THE FIRM*

HAROLD DEMSETZ
University of California, Los Angeles

THE separation of ownership and control in the modern corporation, an issue brought to the fore so effectively by Berle and Means fifty years ago, retains a central position in recent writings about the economic theory of the firm. The problem is stated succinctly by Berle and Means:

> The separation of ownership from control produces a condition where the interests of owner and of ultimate manager may, and often do, diverge, and where many of the checks which formerly operated to limit the use of power disappear. . . .
> In creating these new relationships, the quasi-public corporation may fairly be said to work a revolution. It . . . has divided ownership into nominal ownership and the power formerly joined to it. Thereby the corporation has changed the nature of profit-seeking enterprise.[1]

The holder of corporate stock experiences a loss of control over his resources because ownership is so broadly dispersed across large numbers of shareholders that the typical shareholder cannot exercise real power to oversee managerial performance in modern corporations. Management exercises more freedom in the use of the firm's resources than would exist if the firm were managed by its owner(s), or at least, if ownership interests were more concentrated. Because management and ownership interests do not naturally coincide when not housed in the same person, Berle and Means perceive a conflict of interest, which, with ownership dispersed, is resolved in management's favor.

To Berle and Means, this signifies a serious impairment of the social function of private property. Profit maximization constrained and guided by competition is the link between private ownership and efficient resource utilization, a link presumably broken by a structure of ownership

* This study benefited from suggestions made by Professors Ken Lehn and Barry Weingast. Financial support was provided by a Sloan Foundation grant to UCLA.

[1] Adolf A. Berle & Gardiner C. Means, The Modern Corporation and Private Property 6 (1932).

[*Journal of Law & Economics*, vol. XXVI (June 1983)]

that reduces the incentives of corporate managers to maximize profit. Corporate wealth is used to further ends other than profit maximization. The logical consequences of decentralization through private ownership of the means of production, then, are no longer those deduced with the aid of a theory of price based on owner-managed firms. The argument is as appealing to socialists as it is credible to noninterventionists. Indeed, businessmen themselves implicitly support the central thesis of separation. They are among the first to deny the dominance of the profit motive in business decisions, frequently appealing to the evidence that exists in the record of corporate financial support of various charitable and educational endeavors.

Other social critics have welcomed the modern corporation because it seems to provide a vehicle by which efficiency can be restored. Thorstein Veblen,[2] for example, saw the alleged separation of ownership and control as a transfer of control from capitalists to engineers. He believed capitalists were mainly interested in creating scarcity through monopolization, while engineers were mainly interested in technical efficiency and output growth. For Veblen, the separation of ownership and control turned control over to efficiency-seeking management. Growth was unwelcome to one of Veblen's more famous students, J. K. Galbraith, who gave to the technostructure the desire and power to produce an undesirably large growth of the private sector.

For all these commentators on the modern corporation, the cutting edge is the separation between ownership and control. A closer look at the problem of ownership structure is warranted, if for no other reason than that these commentators fail to examine either the theoretical problem or the empirical premise carefully. In the discussion that follows, I will be recovering some subject matter that has emerged in recent writings by economists on organization theory,[3] but the views taken in this paper offer some difference in emphasis and mild disagreement.

[2] Thorstein Veblen, The Engineers and the Price System (1924).

[3] See Oliver E. Williamson, The Economics of Discretionary Behavior: Managerial Objectives in a Theory of the Firm (1964); Armen Alchian & Harold Demsetz, Production Information Costs and Economic Organization, 62 Am. Econ. Rev. 777 (1972); Michael C. Jensen & William H. Meckling, Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, 3 J. Financial Econ. 305 (1976); Eugene Fama, Agency Problems and the Theory of the Firm, 88 J. Pol. Econ. 288 (1980). My mild disagreement with this literature revolves around the following issues: I do not believe that resorting to agency relationships reduces the value of the firm to its owners. On the contrary, it increases this value. I do not believe that on-the-job consumption is necessarily, or even probably, greater with professional management than with management by owners. The cost of agency, I believe, is borne by the firm, not by the agents. I am not prepared to presume the fact of diffuseness in the ownership of the modern corporation.

I view the ownership structure of the firm as an endogenous outcome of a maximizing process in which more is at stake than just accommodating to the shirking problem. A broader perspective on the problem of the optimum ownership structure makes the fears of Berle and Means meaningless. I conclude with a discussion of evidence bearing on the empirical premise assumed by the alleged separation between ownership and control.

The Firm in Economic Theory

Two concepts of the firm motivate Berle and Means to level the charge of social inefficiency at the modern corporation: their conception of the firm in economic theory and their contrasting conception of the real modern corporation. The first of these associates the profit-maximizing firm of economic theory with the precorporation firms that populated the business world during most of the nineteenth century. The theoretical firm is viewed as a good approximation of precorporate real firms, and the theory pictures these as lean, no-nonsense institutions devoid of managerial amenities. The second conception is a firm largely controlled by a management possessing an insignificant interest in the profitability of the firm's activities. A la Baumol,[4] the firm may seek to keep shareholders contented with a minimum acceptable positive return, but beyond that, profit is traded off to increase the *utility* of management. Utility-maximizing managerial behavior requires the use of the firm's resources to provide on-the-job amenities. These might include not only the usual amenities but also abnormally high managerial wages and excessively large firms. If the organization pictured by the firm of economic theory promotes efficiency, then, for Berle and Means, the organization they perceive as the real corporation surely does not. These two conceptions of the firm draw a contrast that remains popular and guides much of the clamor for radically reorganizing corporate law, if not the private sector.[5]

It is a mistake to confuse the firm of economic theory with its real-world namesake. The chief mission of neoclassical economics is to understand how the price system coordinates the use of resources, not to understand the inner workings of real firms.[6] There are two broad divisions of use to which resources may be put, consumption and production. One of the important tasks of the theory of price is to explain how prices influence

[4] William I. Baumol, Business Behavior, Value, and Growth (1967).

[5] See Ralph Nader, Mark Green, & Joel Seligman, Taming the Giant Corporation (1976), and John Kenneth Galbraith, The New Industrial State (1967).

[6] See Harold Demsetz, Economic, Legal and Political Dimensions of Competition (1982), for an extended discussion of the task of neoclassical economic theory.

each of these uses. To this end, the theory *defines* the household, not to approximate the activities of a family of four, but as the theoretical institution in which rational decisions about consumption take place. Correspondingly, the firm is *defined*, not to approximate the activities of a real firm, pre- or postcorporate organization, but as the theoretical institution in which production (for others) takes place. This distorts some characteristics of real families and real firms. Some family activity is devoted to production and, as such, is guided primarily by profit considerations (the family rents rooms in its house to boarders), and no doubt the persons who manage real firms consume while on the job, but this is unimportant to the theory's objective, for the theory does not seek to understand the actual loci of consumption and production. Its concern is with how these activities are affected by exogenous changes (such as a tax change) and with how the price system determines the quantities and mixtures of goods consumed and produced.

The study of these problems is simplified considerably by defining households and firms to be specialized, respectively, to consumption activity and production activity. Consumption, by definition, creates utility, so the household's decisions in theory are utility-maximizing decisions. Production is devoid of direct utility-creating activities (which are defined as consumption), so the firm's decisions are guided only by profit considerations. However, the maximization of the firm's profit delivers to its owners a maximum capability for (indirect) utility-creating consumption in their households. The entire process really is concerned with utility maximization, but some activities, identified as production (for use by others), deliver utility indirectly to factor owners through the easing of their household budget constraints.

Real firms, whether or not they are owner-managed, are not so specialized in their activities. This does not undermine the relevance of the theoretical firm for explaining the guidance given to economic activity by prices. To see why the conclusions of economic theory remain valid in this task even when consumption, as well as production, takes place in real firms, let us consider an owner-managed firm that houses both activities. For the present discussion, let us be concerned only about *known* on-the-job consumption.

The compensation received by the owner-manager of such a firm potentially contains three components—pecuniary wages of management, known amenities of office, and profit of owner. The behavior of such an owner-manager surely is guided by utility maximinization, not simply the pursuit of profit. One owner may prefer spotlessly clean surroundings for the large part of the day he spends at the office. Another values managing a larger or faster-growing firm. A third values associating with laborers who practice a particular religion or who have a particular skin color. Nothing in the theory of the price system bars the owner from indulging these desires. The theory of competitive markets, which is based on full knowledge of such consumption, requires only that he pay for these indulgences, just as if he were purchasing them as a consumer. (This is common knowledge among students of labor markets, and it has frequently been documented quantitatively by them.)

Because a good part of a real owner-manager's life is on the job, he very well may decide in favor of on-the-job consumption. This more realistically depicted firm, because of the resources used to provide on-the-job consumption, appears to add needlessly to its cost of producing goods. This seems to be at odds with the firm of economic theory, which minimizes the cost of producing goods that its customers will consume. The appearance is a delusion. Because those who consume on the job pay for their amenities, such consumption will take place only when it *reduces* the cost of producing goods for others. Competitive markets for the firm's goods prevent its owner-manager from financing his amenities through customers' contributions to his revenue. Customers always can purchase from firms whose owners prefer to confine their consumption in greater degree to their households. Competitive markets for labor similarly block an owner-manager from taxing his workers to pay for his amenities, and finally, investors always can put their funds elsewhere if they cannot receive a competitive return (corrected for risk) from a firm whose owner-manager consumes on the job.

Because the owner-manager pays for his amenities by accepting a reduction in his implicit managerial compensation he will not consume while on the job unless the cost of doing so, per unit of utility received, is *less* than if he consumed at home. The same must be true of all workers, including hired managers. If the owner-manager or his employees desire to consume on the job, paying for what they consume, then their services can be acquired more cheaply by allowing such consumption than by barring it, for in such a case the cost of on-the-job amenities is smaller than would be the increase in take-home pay required to maintain identical utility levels for these employees. On-the-job consumption, when known, occurs only if there is a utility advantage to consuming at the firm, because the equivalent value in larger take-home pay is more fungible than is on-the-job consumption. If consumption at home is more efficient, then it will not take place on the job; the increase in pecuniary compensation required to compensate persons for not consuming on the job will be less than the cost of providing such consumption if workers' or managers' utility level is to be unchanged.

The assumption that firms minimize the cost of producing goods for others, derived so easily from the profit-maximizing assumption, remains valid even when the firm is permitted to provide on-the-job amenities. The producing activity of the firm is carried on at least cost because such consumption possibilities are available. The neoclassical theory of the firm merely simplifies the study of the price system by implicitly assuming, or defining, consumption activity to be more efficient in households.

It follows that the claim, and presumed empirical observation, that consumption takes place on the job cannot refute either profit maximization or efficiency in the production of goods by real firms. The deployment of resources in firms may differ because of different degrees of on-the-job consumption, but firms that supply more such amenities are producing them more cheaply for their employee-consumers (or perhaps more accurately, are producing more utility per dollar expended) than if these employee-consumers were forced to consume substitute "amenities" at home. Hence, goods that are produced for employee consumption on the job and goods produced for outside consumers (which the firm of economic theory is designed to explain) are both produced at as low an opportunity cost as is possible. The firm of economic theory may be only a sketch of real firms, but it nonetheless yields useful insights about resource utilization in a decentralized economy.

Shirking

To this point, I have discussed only known consumption on the job by individual employees. In a model of the firm in which monitoring cost is zero, this would be the only possible on-the-job consumption; each quality of worker, including managers, receives his market-determined wage, but the way in which that wage is received depends on whether the worker prefers to consume on the job or at home. Once we turn to a model of the firm in which monitoring cost is positive, the inverse correlation between take-home wages and on-the-job consumption is weakened, at least in the case of the individual worker. If positive monitoring cost means anything, it certainly means the weakening of this inverse correlation.

Take-home wages for an identifiable quality grouping of workers will be inversely correlated with their *collective* on-the-job consumption even when monitoring cost is positive, but some workers in the group will consume more on the job than others, and the amount of collective consumption by the group will be higher (than with zero monitoring cost) by virtue of the fact that this inverse relationship cannot be preserved so strongly when compensating each individual. Correspondingly, the group's take-home pay will be lower. We may interpret the amount by which on-the-job consumption, given positive monitoring cost, exceeds the amount of consumption that would take place when modeled with zero monitoring cost as shirking. Shirking is a nonactivity in the zero monitoring cost model. Unlike the mutually advantageous on-the-job consumption that takes place when monitoring cost is zero, shirking can be reduced and both employer and employees made better off if the monitoring cost required to reduce shirking is less than the value of the resources consumed in shirking. Presumably, shirking is reduced to its optimal level by various pressures from within and outside the firm, but shirking nonetheless will exist.

The average quality of employees contained in an identifiable quality group determines the compensation that is paid, per employee, to this group. This compensation contains a larger fraction of on-the-job consumption than it would in a zero monitoring cost model. In firms that have more difficulty (higher cost) monitoring, this fraction will be greater. The fraction that is take-home pay will be lower than for the same quality group of employees employed in a low monitoring cost firm.

Aggregate On-the-Job Consumption

There are thus two sources of on-the-job consumption: known individual consumption (possibly the owner-manager's) that reflects personal taste, and unknown individual consumption—shirking—that reflects the existence of positive monitoring cost. Once this is recognized, it is no longer clear that diffuse ownership gives rise to more on-the-job consumption. Where is it written that the owner-manager of a closely held firm prefers to consume only at home?

Consider an owner-manager who delights in associating with people of his religion or of his skin color. Because he spends most of his waking hours on the job, this is where he will choose to indulge his preferences. If, to indulge his taste for on-the-job consumption, he must employ workers who are less productive in supplying the goods that he sells to others, then consuming in the firm will force him to accept lower pecuniary returns. For him, this may be superior to higher income and less preferred on-the-job associations.

Imagine now that this same person becomes specialized to the task of owning, not managing, the firm. Let us suppose that the professional managers that he employs to replace him in the firm's management share his tastes in fellow workers. In his new role as specialized owner, however, he derives no utility from the composition of the labor force, for he no longer puts in time at the office. He prefers instead the higher pecuniary returns that can be had with a less homogeneous mixture of laborers. His desire for profit now leads him to search for a management that is less prone to discriminate by religion and color. Alternatively, he may insist on reducing the pecuniary compensation of his hired managers until his net return rises to what could be secured from a new and different management.

The reduction in the compensation of existing management may nonetheless be insufficient to keep this management in the managing game. The owner, when he was manager, was prepared to accept some reduction in pecuniary income because *he* consumed on-the-job amenities, and he preferred this to higher take-home compensation because his utility from such consumption is time and place specific. Because he sacrifices this specificity when he consumes at home, he will insist on a greater reduction in the compensation of hired management than he was prepared to accept when he managed the firm; now it is hired management, not he, that enjoys these time- and place-specific amenities. He will ask a greater financial sacrifice from such a management than he would have asked of himself, were he managing, if he is to be just as well off consuming at home. The net result of his becoming a specialized owner, therefore, may very well be a reduction in on-the-job consumption.

This important aspect of specialization in ownership has largely gone unnoticed. The specialized owner derives little or no direct utility from on-the-job consumption by his management. He may be unaffected by such consumption if his management is prepared to stay on the job while absorbing *enough* of a wage cut to compensate the specialized owner for the resulting increase in other costs. But because of the time and place specificity of on-the-job consumption, the required wage cut will be larger than would have been required by the owner were he managing his own firm. In general, we can expect that specialized ownership, in and of itself, creates pressure for less on-the-job consumption so long as monitoring cost is not a barrier to guaranteeing that what is promised by management is what is delivered.

We thus have two opposing forces at work. The "pure" effect of specialized ownership is to reduce on-the-job consumption below levels that would obtain if owners were also managers. The opposing force is the increase in monitoring cost associated with organizational structures most likely to create specialized ownership interests. The shareholder of a large publicly held corporation derives no direct utility from on-the-job consumption of management, so his interests are fixed on the bottom line of the profit and loss statement. The more broadly based is the ownership of the firm, however, the greater is the cost of monitoring management.

It is clearly an error to suppose that a firm managed by its only owner comes closest to the profit-maximizing firm postulated in the model firm of economic theory. The owner-manager of such a firm may or may not be motivated only by the search for profit. He may habitually consume on the job. This consumption can take many forms. It need not be the proclivity for association with homogeneous fellow workers described above. The senior Ford, who built the Ford Motor Company into a position of dominance in the automobile industry, is said to have had such a proclivity. But also, in his later years, he proved to be stubborn, single-minded, and without managerial flexibility. He "consumed" dominance over his fellow workers at the sacrifice of profit to himself. His lieutenants were disgruntled but helpless as they witnessed the decline of the company. Ford survived as the managerial leader of his company only because it was *his* company. Had the Ford Motor Company been a publicly held corporation, it is unlikely that he would have been allowed to indulge his taste for dominance for so long. Those who criticize the publicly held corporation for favoring on-the-job consumption may be aiming at the wrong target.

Whether on-the-job consumption finds its source in the personal tastes of owners and employees of the firm or in the cost of monitoring is irrelevant to either profit maximization or efficiency. Specialization of business activity into one set of rights that we identify as share ownership and which we may, if we insist, call ownership of the corporation, and a second that we call managerial control, surely raises the utility level achievable by those with funds to invest and those with managerial skills to sell. This division of property rights allows persons the option of combining "ownership" and control in any mixture that they wish, given the budget constraints they face. Investment funds *and* control, therefore, become available at *lower* costs to society than would be possible were fractional ownership barred. The advent of the modern corporation, organized exchanges, and corporation law have reduced the cost of specializing one's interest as between the different tasks of owning and managing.

The Equilibrium Business Organization

If greater monitoring cost is associated with one type of business organization (perhaps the large publicly held corporation) than with another (perhaps the small closely held corporation), then we may expect differences in the uses to which resources are put because of differences in *shirking*. The high-monitoring-cost business will use a larger fraction of its resources to deliver compensation to management in the form of on-the-job consumption, where this may include larger firm size and faster growth as well as the usual amenities. The pecuniary component of managerial compensation, over time and on average, will adjust downward appropriately, so that the sum of amenities and take-home pay for a group of like-quality managers is the same as they could obtain from the second firm, but the first firm's deployment of resources will nonetheless differ from the second firm's.

The existence of alternative business organizations (meaning different capabilities for monitoring employee behavior) implies a predictable self-selection process, in which managerial talent (of a given quality) with a taste for on-the-job consumption will tend to manage firms that have chosen a high-monitoring-cost organization. Such firms cannot easily prevent on-the-job consumption, so it is to their advantage to accept larger amounts of it in return for lower take-home compensation. Managerial talent with a preference for take-home pay will find its comparative advantage in low-monitoring-cost firms, because these firms, by virtue of their ability to monitor on-the-job consumption, are willing to offer a larger fraction of compensation in the form of take-home wages.

The different deployments of the resources of firms called forth by differences in monitoring cost are consistent with the requirements of efficiency. They represent ways of accommodating to the different tastes of investors and managers. The preferences of some investors for diversification of their capital and for absence of monitoring responsibility, and of some managers for on-the-job consumption, are catered to efficiently by a different deployment of the firm's resources, and a different ownership structure, than would be the case for investors and managers who have other preferences. Underlying technical and market conditions will set boundaries to the type of business organization through which investors and managers may combine financial and human resources to achieve their goals in a mutually advantageous manner, and within these limits cooperation will be achieved efficiently by different resource deployment.

It is important to treat monitoring cost as we would treat any other cost of production if we are to develop a useful perspective for assessing the consequences of a diffuse ownership structure. The structure of ownership that emerges is an endogenous outcome of competitive selection in which various cost advantages and disadvantages are balanced to arrive at an equilibrium organization of the firm. One cannot simply assert that diffuse ownership fails to yield maximum profit or maximum value of the firm, or that it fails to yield efficient resource allocation. On-the-job consumption, and even control by owners, cannot be judged independently of other aspects of the equilibrium organization.

The monitoring cost that must be incurred to reduce shirking to its optimal level is a function of the way the firm has been organized and of the technological conditions that underlie the production of its goods. The cost is borne by the firm, not its employees. Because a given quality group of employees must receive the same total compensation (although its mix may differ) whether the group works for a firm with a high or a low monitoring cost, the cost of monitoring cannot be passed on to the employees. In making its choice of business organization, the firm (or its owners) therefore must pay attention to how this choice affects the cost of monitoring and whether a higher-monitoring-cost organization will also bring with it reductions in other costs that make the higher monitoring cost worth bearing.

Consider the model of the owner-managed, hierarchically organized business firm. Lines of control branch out from the president's office, occupied, naturally, by the only owner of the firm. He supervises middle management. In turn, middle management supervises shop foremen, and the foremen monitor the rest of the firm's labor force (which receives agreed upon fixed wages). Middle management may be paid by fixed salary and/or a share in the profit of the firm. The owner-president's income is derived wholly from the revenue left after paying these agreed-upon wages and other costs, including monitoring cost, of operating the firm.

This type of firm will maximize the value of the owner's assets only under a limited set of conditions, even though there is *no* separation between ownership and control of the kind associated with a diffuse ownership structure. For such an organization to be effective in holding down cost, the tasks peformed by those working under the middle management's direction, or, perhaps, under the foremen's direction, must be relatively easy to direct and monitor. When laborers receive fixed wages, not at all influenced (in the short run) by the profitability of the firm, they have a powerful incentive to shirk. If the tasks performed by these workers are physical, repetitive ones, perhaps turning out intermediate parts for the assembly of a final product, this shirking can be held within tolerable limits when fixed wages have been agreed upon. The owner-president's task is to direct and monitor middle management, reducing the degree to which it shirks. Because the president's income is the revenue that remains after paying other factors of production, he has no incentive to *shirk* (which is *not* to say he never consumes on the job). Shirking by middle management may be reduced if they are allowed to share in profits, because their tasks are unlikely to be so easy to monitor. Sharing in profit gives some incentive to curtail *voluntarily* the degree of shirking.

The viability of such a business organization depends on how well three conditions are satisfied. (1) The tasks of fixed-wage workers must be easy to monitor. (2) The funds that the owner-president is able and willing to commit to the equity of the firm must be sufficient to maintain an effective scale of operations. (3) The owner's taste for managing and his ability to lead the firm must be appropriate to the situation in which the firm finds itself. These three conditions will not be satisfied by every situation in which a firm may exist, and when they are not competitive pressures will call for a different organization. A firm whose scale requirement is relatively small but in which the tasks that need to be performed are less easy to monitor may rely to a greater extent on profit sharing, or partnership. When scale requirements are large, especially when the survival of the firm requires a rapid attainment of large scale, then there will be economic pressure to satisfy the consequent need for sizable equity capital by turning to a diffuse ownership structure so as to reduce the wealth that must be committed to this single enterprise by a typical investor. The greater monitoring cost that might arise from such an ownership structure may be more than offset by the reduction in risk-associated capital cost, so that maximization of the value of the assets of the firm actually requires a diffuse ownership structure.

The ownership structure likely to maximize the value of the firm's assets depends on the technology of the tasks required of the firm's labor force, on the desired scale of operation, and on the managerial ability of potential owners of the firm. No single ownership structure is suitable for all situations if the value of the firm's assets is to be maximized. In particular, from the viewpoint of the owner(s), the optimal distribution of profits is 100 percent to a single owner-manager only in special circumstances.

As the number of shareholders increases, the wealth of each will depend less on the success of the firm, and it will be more difficult to organize very diffuse ownership interests into an effective instrument for monitoring management. But this carries no implication of a resulting reduction in the value of the firm. As the prospective typical purchaser of ownership shares recognizes the minimal effect that small shareholders have on the control of the firm, there must be a compensating reduction in risk and in the annoyance of monitoring management if he is to provide equity capital. The terms on which he purchases his shares must be competitive with what he requires to concentrate his funds in a single enterprise that he would monitor. It is unreasonable to suppose that diffuse ownership has destroyed profit maximization as a guide to resource allocation. Indeed, profit maximization may require a diffuse ownership structure. But it is equally unreasonable to suppose that potentially valuable assets will not be controlled effectively by some groups of owners. In general, self-interest, functioning within the framework of private ownership of shares, surely propels effective control by owners into existing vacuums in control.

The Alleged Vacuum in Control by Owners

The issue of the alleged separation between ownership and control is based on an empirical presumption that ownership of the modern corporation is so diluted among the multitude of shareholders that their interests are essentially unrepresented when corporate management makes its decision. Sensible rejoinders to this charge have been made. Essentially these claim that when the need arises, dispersed ownership will become sufficiently concentrated to give proper guidance to, perhaps to "boot" out, an ineffective management. This congealing of ownership may take the form of a takeover, a rebellion by a group of cooperating shareholders, or the acquisition of large shareholdings by one or a few shareholders. These events, because they are possible, and, indeed, actually do take place, put a constraint on management even when they are not currently operative. In addition, of course, management does worry about the prices of the firm's stocks and bonds because these give the terms on which capital will be supplied to the corporation. Even shirking managers desire cheaper financing of amenities. Managerial personnel are also quite concerned about the value of their services to other firms that may seek to employ them. The many years of investment in human capital and reputation are not lightly put at risk in the pursuit of the advantages offered by shirking. Nonetheless, temptations arise, the cost of concentrating ownership is not negligible, and such concentration *after* a poor showing is at best a partial remedy. For these reasons there would seem to be a demand for an ongoing supervision of management or for a linking of the interests of management to those of shareholders. This is supplied partly from the board of directors, but the members of the board may themselves have little actual ownership interest in the firm. It is also supplied by correlating managerial wages and corporation performance.

The allegation of effective separation between ownership and control, if true, would pose a genuine puzzle. The alleged vacuum of control surely should not exist, for the self-interest of owners calls for avoiding the surrender of the control of valuable assets except to others who have similar interests. Not every owner of shares can or wishes to control management, but those who purchase shares do presume that in the typical case there will be some owners with enough at stake to oversee management.

There have been a few studies of the degree to which corporate share ownership is structured so as to assure a significant representation of ownership interests. Various standards are used to determine whether such representation is present. The fraction of shares owned by the largest single ownership unit, by the five largest ownership units, the ten

TABLE 1
OWNERSHIP INTEREST OF CORPORATE DIRECTORS AND MANAGEMENT

	UNWEIGHTED AVERAGE: 1973–82	
	% of Shares	Value of Shares ($ Thousands)
Manufacturing firms:		
Ten largest on 1975 Fortune 500	2.1	151,621
Middle ten on 1975 Fortune 500	19.3	124,560
Last ten on 1975 Fortune 500	20.4	27,134
Ten too small for 1975 Fortune 500 (randomly selected)	32.5	66,486
Ten public utility firms (randomly selected)	13.5	14,271
Average over all fifty firms	17.5	76,623

SOURCE.—Percentage of shares owned by management secured from Value Line Survey of Corporations.
NOTE.—Out of the total of 500 data points, four were secured by extrapolation from neighboring data. Extrapolations of data for 1973 and 1974 were also required in some instances.

largest, and the twenty largest are among the standards used to define minority ownership interests, while 5, 10, and 20 percent of outstanding shares are among the standards used to identify the ownership significance of these minorities. These alternatives tend to identify numerous firms as "owner controlled," although, of course, the number so identified varies inversely with the toughness of the criterion adopted. Nonetheless, roughly speaking, about 50 percent of large corporations fall into the owner-controlled category.

These studies underestimate the degree of ownership representation because they generally ignore the fact that corporate executives, while not often among the largest shareholders, receive incomes that are highly correlated with stock performance. This correlation derives not only from bonuses but also, to a surprising degree, from managers' ownership of stock. Ownership and control are not so separate as is often supposed.

Column 1 of Table 1 reveals that a substantial fraction of outstanding shares are owned by directors and management of corporations in all but the very largest firms. In the ten largest firms in the Fortune 500 (ranked in 1975), the average share of stock owned by management over a ten-year period was only slightly over 2 percent. But an average of twenty firms, ten in the middle and ten at the bottom of the 500 list, reveals that corporate managers owned about 20 percent of outstanding shares, and for ten firms too small to make the Fortune list, this share rises to 32 percent. If we suppose that regulation reduces the productivity of linking management interests to owner interests, the smaller fraction of shares owned by the managements of utilities makes sense.

Column 2 shows a much smaller variation in the value of the share holdings of corporate management. The fraction of shares owned by management in the ten largest corporations is roughly one-tenth the fraction owned in smaller corporations, but because of the difference in number and price of the shares the value of managers' holdings in the largest corporations is roughly twice the average of the thirty smaller manufacturing firms.

Assorted ambiguities are embedded in these data. For example, the variations in Table 1 may reflect differences in shares owned per corporate executive or differences in the relative size of the managerial components of these firms, but such interpretation problems cannot undercut the conclusion that managers' shareholdings create a substantial linkage between the financial interests of management and those of outside shareholders.

A Senate report[7] contains data for 1976 on stock holdings of 122 major corporations. A variety of industry sectors are covered, including manufacturing, finance, transportation, retail, and utilities. The average share of stock held by the twenty largest holdings is slightly more than 20 percent. From these data, it is possible to supplement the management shareholdings with outsider shareholdings for the ten largest firms shown in Table 1, for which management owned an average of slightly over 2 percent of outstanding shares. The twenty largest share owners owned an average of 18 percent of the shares of these firms, so that, when outsider ownership of shares is taken into account, all groups of firms in Table 1, including the largest firms, exhibit substantial sources of profit-motivated control.

How important to managers' income is the stock-based compensation received by management through its holdings of shares? Wilbur G. Lewellen[8] calculated the value of managers' remuneration received in the form of stock, dividend income, and capital gains for fifty of the nation's largest manufacturing firms for every year between 1940 and 1963. He also estimated the after-tax income that management derived from its nonstock wages. Lewellen found that stock-based compensation for the top executive, averaged over all firms in his sample, exceeded four times

[7] Voting Rights in Major Corporations, a staff study prepared by the Subcommittee on Reports, Accounting and Management of the Committee on Governmental Affairs, U.S. Senate (1978).

[8] Wilbur G. Lewellen, Management and Ownership in the Large Firms, 24 J. Finance 299 (1969).

the after-tax wages, and, for the top five executives, averaged over all firms, stock-based compensation was almost five times as great as wages.

The picture painted by management shareholdings, the importance of stock-based managerial income, and the size of minority shareholdings is that of a strong linkage between management and owner interests. While it cannot be argued on the basis of these data that there is a perfect correlation between these interests, it is clear that there is an ongoing considerable interest in profit-maximizing behavior. It is also clear that the problems of congealing diffuse outsider shareholdings, to discipline the management of the largest corporations when the need arises, is not so formidable, because these shareholdings are not so diffusely owned as is often supposed. How could it be otherwise? In a world in which self-interest plays a significant role in economic behavior, it is foolish to believe that owners of valuable resources systematically relinquish control to managers who are not guided to serve their interests.