MERGERS, ACQUISITIONS, AND LEVERAGED BUYOUTS: AN EFFICIENCY ASSESSMENT*

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Abstract

Economic organization is complex and responsive to many purposes. Given our primitive understanding of these issues, the study of these matters can benefit from adopting a "main case perspective." Among the several main case candidates, this paper holds that economic organization is principally to be understood in economizing terms. This point of view is successively brought to bear on mergers, acquisitions, and leveraged buyouts.

Whereas the cost savings, if any, from horizontal mergers often take the form of economies of scale, those associated with vertical mergers usually involve transaction cost economies. Conglomerate mergers are interpreted from an internal capital market perspective. The appearance of takeover in the 1960s is an outgrowth of earlier organizational developments of which the conglomerate is a part.

The more recent appearance of the leveraged buyout is examined with reference to the efficient use of financial instruments. If, as argued here, the rational use of debt and equity depends on the characteristics of the firm's assets, then the leveraged buyout is the source of efficiency gains in corporations where the use of equity financing has become "excessive."

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> ...men in general, and within limits, wish to behave economically, to make their activities <u>and their organization</u> "efficient" rather than wasteful. This fact does deserve the utmost emphasis; and an adequate definition of the science of economics...might well make it explicit that the main relevance of the discussion is found in its relation to social policy, assumed to be directed toward the end indicated, of increasing economic efficiency, of reducing waste.
>
> [Knight, 1941; emphasis added]

The implications of mergers, acquisitions, and leveraged buyouts are herein examined with reference to the efficiency purposes to which Frank Knight refers above. That Knight, or any other economist, should refer favorably to efficiency is hardly novel. But there is much more to the statement than a mere affirmation of efficiency. Contrary to the main tradition, Knight asserts that the manner in which economic activity is organized really matters. He furthermore treats organizational efficiency in very primitive terms: the reduction of waste.

The prevailing opinion -- at the time Knight advanced these views and over the next thirty years -- was that technology was largely determinative of economic organization. It was therefore customary to characterize business firms, whatever their size and configuration, as production functions. The considerable merits of this framework notwithstanding, it was also responsible for serious omissions: "How easy it is for an inefficient manager to dissipate the differentials on which profitability rests, and that it is possible, _with the same technical facilities_, to produce with a great variety of costs, are among the commonplaces of business experience which do not seem to be equally familiar in the study of the economist" (Hayek, 1945, p. 523; emphasis added).

The possiblity that the internal organization of the firm -- hierarchical structure; incentive and control apparatus -- had a significant bearing on economic efficiency was ignored or dismissed. Hybrid forms of organization (tie-ins, joint ventures, reciprocity, franchising, and the like) were regarded mainly as efforts to acquire and perfect monopoly. The alternative point of view to which Ronald Coase (1972) forcefully referred and that I adopt here is that the internal organization of firms and recourse to hybrid forms of organization can and often do have significant efficiency ramifications.

To be sure, economic organization is sometimes deflected from efficiency and/or serves other purposes. The study of complex systems is nonetheless facilitated by distinguishing primary or main purposes from secondary or ancillary purposes. Knight maintains that efficiency is the core purpose. This paper embraces that view.

Efficiency analysis can take several forms. Knight proposes that a very primitive form of efficiency be examined: the reduction of waste. This contemplates movement toward, rather than along, an efficiency frontier. Comparative analysis, rather than optimality analysis, thereby suffices. Coase's remarks on choice among alternative forms of organization are plainly in this spirit (1964, p. 195; emphasis added):

> Contemplation of an optimal system may suggest ways of improving the system, it may provide techniques of analysis that would otherwise have been missed, and, in special cases, it may go far to providing a solution. But in general its effect has been pernicious. It has directed economists' attention away from the main question, *which is how alternative arrangements will actually work in practice*. It has led economists to derive conclusions for economic policy from a study of an abstract model of a market situation.... Until we realize that we are choosing between social arrangements which are all more or less failures, we are not likely to make much headway.

Section 1 considers horizontal and vertical mergers from the efficiency perspective. Acquisition issues are addressed in the context of organization form in Section 2. The efficiency ramifications of leveraged buyouts are examined in Section 3. Leading organizational innovators in each of the above respects are briefly discussed in Section 4. Qualifications to the main case are sketched in Section 5. Concluding remarks follow.

1. Horizontal and Vertical Mergers

Possible efficiency benefits of horizontal and vertical mergers and some of the little noted bureaucratic costs of internal organization are discussed here. Conglomerate mergers are treated under the heading of acquisitions in Section 2.

1.1 horizontal mergers

The theory of the firm-as-production-function makes express provision for economies of scale. Orthodox analysis has thus always conceded the possibility that scale economies might be realized by combining two firms that are producing the same good or service. It was once widely believed, however, that mergers that simultaneously yielded economies and market power would preponderately lead to an adverse social outcomes. To suggest that economies might justify a merger of large firms was dismissed with the observation that even small adverse market power effects would normally swamp any possible efficiency benefits.

That intuition, when processed through the basic partial equilibrium apparatus of applied welfare economics,[1] turned out to be incorrect. What I have referred to as the "naive tradeoff model" disclosed that large market power effects were needed to offset the welfare benefits of small cost savings (Williamson, 1968; 1977).

To be sure, there are a number of qualifications to that result (Williamson, 1968, 1977; Fisher and Lande, 1983). The main point, however, to which I want to call attention is that a dramatic reversal in efficiency thinking has progressively developed over the past twenty years. Not only are real economies of all kinds now affirmatively valued by the antitrust enforcement agencies, but the possibility of using economies as an antitrust defense has actually been introduced into the Antitrust Merger Guidelines.[2] The earlier disdain[3] if not hostility for efficiency and efficiency reasoning has thus been reversed.

1.2 vertical mergers

That horizontal mergers might sometimes be justified by cost savings was granted reluctantly. But since no such economies of scale could be ascribed to vertical combinations, the prevailing antitrust skepticism for the merits of these was thought to be soundly based. Vertical mergers were thus widely regarded as overreaching and driven by monopoly purpose.[4]

To be sure, the applied price theory tradition made provision for exceptions. But these were narrow and limited. The principal exceptions were these: (1) vertical integration might be justified as a way by which to correct factor proportions distortions that occur when a monopolized input is sold to a downstream variable proportions production technology, and (2) vertical integration is sometimes a source of cost savings when successive production stages are tightly linked by a "physical or technical aspect." The first of these was argued by Lionel McKenzie (1951) and has been elaborated and qualified since (Blair and Kaserman, 1983). The second was argued by Joe Bain (1968, p. 381):

...the cases of clear economies of integration generally

> involve a physical or technical integration of the processes in a single plant. A classic case is that of integrating iron-making and steel-making to effect a saving in fuel costs by eliminating a reheating of iron before it is fed to a steel furnace. Where integration does not have this physical or technical aspect -- as it does not, for example, in integrating the production of assorted components with the assembly of those components -- the case for cost savings from integration is generally much less clear.

Vertical integration unattended by such special physical or technical conditions was thus thought to be of dubious merit (e.g., a device to evade sales taxes) if not outright anticompetitive.

Coase had long resisted an applied price theory approach to industrial organization in favor of a broader view. Rather than invoke a monopoly explanation upon observing a nonstandard organizational form or unfamiliar business practice, he counseled that scholars and others should "inquire whether it may not be the case whether the practice in question is a necessary element in bringing about a competitive situation. If this were done, I suspect that a good deal of supposed monopoly would disappear" (Coase, 1972, p. 68).

An effort to reformulate the vertical integration issue along the transaction cost lines that Coase had much earlier advanced (1937) was even then taking shape (Williamson, 1971). That technology was the proximate cause for vertical integration was disputed by adopting a comparative contracting approach to economic organization. Why not use autonomous contracting to replicate the very same efficient factor proportions that McKenzie associated with unified ownership? Bain's characterization of vertical integration in technological terms was likewise subjected to re-examination: Why not neutralize the "technical or physical aspects" on which Bain relied by locating successive autonomous stages in cheek-by-jowl relation to each other and thereafter mediating the supply of molten ingot by interfirm contract? The superiority, or not, of intrafirm as compared with interfirm contracting thus became the object of analysis.

Not only did this comparative contracting approach to economic organization go beyond the particulars to which McKenzie and Bain referred, but it had general application to backward, lateral, and forward integration. Subsequent research revealed, moreover, that the key features of economic organization -- in intermediate product markets, labor markets, capital markets, regulation, and the like -- were variations on the very same underlying transaction cost economizing theme. The basic strategy for deriving refutable implications was this: assign transactions (which differ in their attributes) to governance structures (the costs and competencies of which differ) in a discriminating (mainly transaction cost economizing) way. A very different rationale for vertical integration and other nonstandard or unfamiliar business practices emerged.

These matters are dealt with in detail elsewhere. Suffice it to observe here that:

(1) the most important single attribute that is responsible for bilateral dependency, which is the contracting condition that is fundamentally responsible for vertical integration, is the condition of asset specificity (Williamson, 1971, 1975, 1985; Klein, Crawford, and Alchian, 1978);

(2) the predictions of the transaction cost approach to firm and market organization are broadly consonant with the data;[5] and

(3) antitrust enforcement regarding vertical integration has been progressively reshaped and now reflects transaction cost economizing principles.[6]

That vertical and horizontal mergers are sometimes supported by a broader efficiency rationale than was previously admitted does not, however, imply that all such mergers are unproblematic. Vigilance with respect to the strategic purposes sometimes served by such mergers -- whereby actual and potential entrants are disadvantaged without redeeming social benefits -- is needed.[7] Strategic purposes are viable, however, only if severe structural preconditions (mainly high concentration coupled with high hurdles to entry) are satisfied. The upshot is that efficiency reasoning, of which transaction cost economics is a part, plays a much more prominent role in industrial organization than was the case ten or twenty years ago -- when the technology/monopoly predispositions were ruling. Regarding efficiency, rather than monopoly or technology, as the "main case" has played a major role in this transformation.

1.3 the costs of bureaucracy

Although it is widely agreed that vertical integration is sometimes mistaken, there is nevertheless a deep puzzle as to why integration should ever be the source of added costs. Thus if a buyer acquires a supplier, simply instruct the (now integrated) supply stage to repeat all of the good things that it had been doing in the pre-acquisition condition. Only on those few occasions when autonomous trading gives rise to conflict is the authority that inheres in unified ownership exercised to effect a superior outcome. The integrated firm can thus everywhere do as well as the nonintegrated (by replicating), and it sometimes does better (by selective intervention). According to this scenario, integrated firms can do everything that nonintegrated firms can do and more.

Unpacking the puzzle "Why is not all production carried out in one big firm?" (Coase, 1937, p. 340) requires that the added costs of internal organization be discovered. These added costs take several forms, of which the following are the most important:[8] (1) replicating market-like incentives within internal organization (a) gives rise to asset malutilization and (b) is incomplete because it is predictably degraded by accounting manipulation; (2) internal organization is subject to a series of bureaucratic distortions; and (3) internal organization supports politicking, especially at investment renewal intervals. The upshot is that "selective intervention" is a fiction. The coordination benefits of internal organization are unavoidably attended by offsetting costs. Only, therefore, in circumstances where nontrivial benefits from integration are in prospect is a decision to take a transaction out of the market and organize it internally warranted.

Transaction cost reasoning is thus symmetrical in that it serves to display the leading costs as well as the leading benefits that accrue to vertical integration. Although much more needs to be done before the bureaucratic failure literature can be thought to operate on a parity with the market failure literature, where the latter has been in progress for thirty and more years, a start has been made to redress this condition.

2. Acquisitions

Albeit arbitrary, I treat mergers as voluntary and reserve the term acquisitions for efforts to secure control over a corporation that have an imposed or involuntary character.[9] What are the instruments for bringing about involuntary transfers of control? In order of historical appearance, these are (1) the proxy contest, (2) the takeover contest, and (3) the leveraged buyout. The first two will be examined here. Section 3 deals with leveraged buyouts.[10]

Although, in principle, all three of these techniques for effecting a change of control were continuously available -- in that there were no legal impediments to any, and none required any technological innovation -- the last two appeared only in the past quarter of a century. Prior to the appearance of these, the proxy contest was the only instrument for challenging incumbent managements.

The proxy contest is akin to a political campaign. The incumbents have their slate of candidates for the board of directors. The insurgents offer a rival slate. The insurgents claim that the incumbents have botched the job and "promise" to do better. The incumbents claim that they have done well, especially in view of trying economic circumstances, and state that the insurgents' promises are not to be believed.

Proxy contests are costly. Given the difficulties of evaluating claims of incompetence and the fact that promises of superior performance upon award of control are not backed by credible commitments, few proxy contests were ever waged and, of these, few were won.[11] In the colorful language of Oswald Knauth, incumbent managements had to "fail obviously and even ignominiously before the dispersed forces of criticism [became] mobilized for action" (1948, p. 45). The Berle and Means query "have we any justification for assuming that those in control of a modern corporation will also choose to operate it in the interests of the stockholders?" (1932, p. 121) was thus poignant.

Many economists evidently believe, however, that it is unrewarding to entertain the hypothesis of managerial discretion.[12] If investors part with their money voluntarily, then wherein can it ever be said that they are "victimized" by abuses of managerial discretion?[13] To maintain, however, that "pricing out" supports unrestrained laissez faire is a "triumph of [free market] ideology over theory and fact" (Stiglitz, 1985, p. 134).

A curious schizophrenia characterizes much of the anti-managerialist literature. Focusing on any given time, enthusiasts of laissez-faire capitalism deny that managerial discretion is a problem. Over time, however, they point with pride to the development of new techniques that have brought managerial discretion under more effective control.[14]

To be sure, the earlier condition may have been irremediable: The corrective instruments to which investors earlier had access could have been, indeed arguably were, fully deployed. But it is inconsistent to employ the <u>very same</u> neoclassical model -- whereby the firm is characterized as a production function to which unrestricted profit maximization is continuously ascribed -- at both the earlier and later dates. A conception of the firm in which opportunities for managerial discretion are expressed as a function of the control instruments is needed instead. Such a conception leads to greater respect for successive organizational innovations that have superior control properties and that attenuate managerial discretion.

Managerial discretion can take numerous forms, some very subtle. Individual managers may run slack operations; they may pursue subgoals that are at variance with corporate purposes; they can engage in self-dealing. Such distortions become more severe where there is logrolling. These and other manifestations of managerial discretion were well-known to Berle and Means, Edward Mason (1959), and other observers of the corporate scene. What went unnoticed, however, was the vast transformation of the corporate form between 1930 and 1960 and the consequences that had on managerial discretion. The earlier, centralized, functionally organized, unitary (or U-form) structure of the corporation was progressively supplanted by the multidivisional (or M-form) structure.

The M-form innovation had several effects on corporate performance (Williamson, 1985, chap. 11). For one thing, the shift from a functional to a divisional form served to rationalize decision-making. The confusion of purposes that characterized the U-form firm, where causality and responsibility were difficult to trace, was supplanted by a divisionalized structure where separability among quasi-autonomous parts was emphasized. Sharper definition of purpose and economies of informational cost resulted.

Disengaging the general office from operating affairs also improved incentives. What had been short-run, partisan involvements by the top executives who had previously been heads of functional activities (e.g. manufacturing, marketing, finance) gave way to longer-run, strategic decision-making. Not only did the general office give greater weight to overall enterprise objectives in relation to functional subgoals, but a competence to monitor the performance of the divisions, allocate resources to higher-valued uses, and use internal incentives and controls in a more discriminating way was successively perfected. The M-form organization thereby attenuated managerial discretion in what had previously been U-form firms.

These internal checks on managerial discretion do not, however, imply its elimination. Rather, the argument is comparative. Albeit in reduced and deflected, managerial discretion can be expected to continue. Interestingly, however, the M-form innovation had unanticipated systems consequences that served further to attenuate managerial discretion. These additional checks on managerial discretion operated through competition in the capital market.[15]

It has often been noted that tender offers increasingly replaced proxy contests as a takeover technique beginning in the late 1950s.[16] What explains this? Gregg Jarrell and Michael Bradley contend that the costs of proxy contests were increased by new regulations.[17] Takeovers are thus explained as the response to a regulation-induced change in the relative price of the methods for gaining control.

That is an interesting hypothesis, but it would be more compelling if proxy contests actually had been widely and successfully used to challenge incumbent managements before those rule changes. As noted above, however, proxy contests were never numerous and were usually unsuccessful. Moreover, although the regulation of proxy contests could encourage greater reliance on a takeover, why should a switch to this (previously inferior) device be associated with a larger number of contests for corporate control and a greater degree of success?

In principle, takeover by tender offer was always feasible. I submit that the reason why it was not employed earlier is that a corporate structure conducive to takeover was not yet in place. Specifically, reorganization of the corporation from a functionally departmentalized to a divisionalized structure had profound consequences for corporate control. Conceiving of the firm as a governance structure rather than as a production function is the key to understanding the phenomenon of takeover by tender offer.

The main advantage of an M-form firm over a U-form enterprise in takeover respects is the ability of an M-form acquirer to "digest" its acquisition. The acquired firm is normally assigned profit center status and thereafter becomes subject to the corporation's internal incentive, control, and resource allocation processes. The firm does not attempt to integrate comprehensively the new assets with the old. Inasmuch as M-form firms separate operating from strategic decision-making, the general office neither seeks nor requires the same familiarity with the operating parts that managers in U-form firms must have. The greater competence of the large M-form firm to manage extant assets thus applies to the management of acquired assets as well.

Activating the market for corporate control, thereby better to check managerial discretion, is an outcome that most economists regard favorably. These benefits, however, need to be evaluated in relation to the costs of takeover -- which some students of the corporation believe have been very high. Some of these concerns are addressed in Section 5. Suffice it to observe here that:

(1) Although some takeovers turn out to be "mistaken," in that the winner thereafter has ex post regrets, this does not necessarily imply ex ante error. The overall process, rather than individual outcomes, needs to be assessed.

(2) Subsequent divestment of an earlier acquired activity does not necessarily signal failure. There may have been an initial period during which net gains are realized. After the benefits have been exhausted and the net gains turn negative, however, divestment is a rational course of action.

(3) An uncounted or "invisible" benefit of takeover is that potential targets are induced to take self-corrective actions, thereby to deter the likelihood of takeover.

(4) Whereas continuous scrutiny and concern over the workings of the market for corporate control are warranted, public policy should intervene only upon a showing of remediable failure -- where remediability

implies expected net gains.[18]

The upshot is that managerial discretion has arguably been brought under more effective control as the proxy contest has given way to takeover as the principal capital market control device.

3. Leveraged Buyouts

Leveraged buyouts are a particular form of transfer of control for which grave skepticism has recently been expressed. To be sure, owners have sold their businesses and accepted secured debt as partial payment for centuries. It was not until the early 1970s, however, that publicly held firms were taken private in significant numbers. Louis Lowenstein associates this development with the precipitous stock market decline (by almost one-half) that occurred in 1974. Since the stocks of a "substantial number of small public companies...sold at particularly depressed prices..., [many managements] decided to reverse the public offering of a few years earlier" and take the company private (Lowenstein, 1985, p. 733). Although a premium over current market price was being paid in these going-private transactions, the way in which management orchestrated the deal was troublesome: "The management of the firm used the resources of the firm, the credit of the firm, and, when necessary, the proxy machinery of the firm to eliminate the public ownership of the firm -- an ownership that the management had only recently offered to the public, often at much higher [offering] prices" (Lowenstein, 1985, p. 734).

As it turned out, this was the tip of the iceberg: "The $3 million [declining market] buyout of the mid-1970s has been replaced by the $1 billion buyout [in the rising market] of the mid-1980s" (Lowenstein, 1985, p. 735). It is widely believed that something radically wrong is going on here.

Without disputing that leveraged buyouts can and sometimes do pose public policy problems, I submit that many leveraged buyouts satisfy an underlying transaction cost economics rationale. The resulting economies, if any, are appropriately taken into account in reaching a net social assessment.

3.1 the rational uses of debt and equity

The Modigliani-Miller theorem that the cost of capital in a firm was independent of the proportion of debt and equity revolutionized modern corporate finance. It gave rise to an extensive literature in which a special rationale for debt in an otherwise equity-financed firm was sought. The first of these, unsurprisingly, was that debt had tax advantages over equity. But this was scarcely adequate. Further and more subtle reasons why debt would be used in preference to equity even in a tax-neutral world were also advanced. The leading rationales were: (1) debt could be used as a signal of differential business prospects (Ross, 1977); (2) debt could be used by entrepreneurs with limited resources who were faced with new investment opportunities and did not want to dilute their equity position, thereby to avoid sacrifice of incentive intensity (Stiglitz, 1974; Jensen and Meckling, 1976); and (3) debt could serve as an incentive bonding device (Grossman and Hart, 1982).

I have examined each of these elsewhere and advance a different explanation for the rational use of debt and equity based on transaction cost considerations (Williamson, 1986b). Rather than regard the firm as a production function, which is the framework out of which Modigliani-Miller and each of the aforementioned operate, I employ the firm-as-governance=structure approach instead. I maintain that the investment attributes of projects and the governance structure features of debt and equity need to be aligned in a discriminating way. The key governance structure differences between debt and equity are these:

	Financial Instrument	
Governance Feature	Debt	Equity
Contractual Constraints	Numerous	Nil
Security	Pre-emptive	Residual Claimant
Intrusion	Nil	Extensive

The transaction cost approach maintains that some projects are easy to finance by debt and ought to be financed by debt. These are projects for which physical asset specificity is low to moderate. As asset specificity becomes great, however, the pre-emptive claims of the bondholders against the investment afford limited protection -- because the assets in question have limited redeployability. Not only does the cost of debt financing therefore increase, but the benefits of closer oversight also grow. The upshot is that equity finance, which affords more intrusive oversight and involvement through the board of directors (and, in publicly held firms, permits share ownership to be concentrated), is the preferred financial instrument for projects where asset specificity is great.

Although this sketch oversimplifies greatly,[19] it nevertheless captures the flavor of the transaction cost approach to corporate finance and discloses that the capital structure of the firm ought to reflect rational transaction cost economizing principles.[20] Assuming, arguendo, that the approach has merit, what are the ramifications, if any, for leveraged buyouts?

3.2 applications to LBO

Suppose, as an evolutionary matter, that a firm is originally financed along lines that are consistent with the debt and equity financing principles set out above. Suppose further that the firm is successful and grows through retained earnings. The initial debt-equity ratio thus progressively falls. And suppose finally that many of the assets in this now expanded enterprise are of a kind that could have been financed by debt.

Added value, in such a firm, can be realized by substituting debt for equity. This argument applies, however, selectively. It only applies to firms where the efficient mix of debt and equity has gotten seriously out of alignment. These will be firms that combine (1) a very high ratio of equity to debt with (2) a very high ratio of redeployable to nonredeployable assets.

Interestingly, many of the large leveraged buyouts in the 1980s displayed precisely these qualities. Thus Robert Colman's examination of leveraged buyouts disclosed that "only an existing firm with a small amount of debt is able to support" a leveraged buyout and that a "frequent characteristic of the leveraged buyout company is that the firm has a high proportion of its total assets in tangible property" (1981, p. 531). Although the tangible-intangible distinction is not identical to the redeployability test that I employ, there is plainly a correlation. Lowenstein's observation that many of these firms are in "prosaic businesses -- retailing, textiles and soft drink bottling" (1985, p. 749) is also consonant with the view that many of the assets in question have a stable, long term value and hence would afford redeployable security.

Colman furthermore observes that leveraged buyouts are put together with a view toward providing managers with high-powered incentives. This may or may not involve equity investment by the management, but it always involves a significant contingent compensation arrangement (Colman, 1981, pp. 532, 537, 539). The management, moreover, is usually on a tight leash. It ordinarily owns a minority (often less than fifteen percent) of the equity, the remainder being concentrated in the hands of the banks, insurance companies, and the investment bankers who package the deal (Mason, 1984). According to Nicholas Wallner, moreover, "The management never gets more than 50 percent of the equity unless the secured lenders are the only other participants in the deal" (1980, p. 20), in which event those outsiders who supply finance are little concerned over inept management because their pre-emptive claims against redeployable assets provide them with adequate protection.

As earlier remarked, the most interesting feature of leveraged buyouts is the substitution of debt for equity. The following points are pertinent:

(1) The major lenders are finance companies and banks and insurance companies. The finance companies specialize in shorter term inventory and receivable financing, where they have an advantage over the banks in policing the collateral, and will lend up to 85 percent of the liquidation value.

Banks and insurance companies specialize in intermediate and longer term financing, usually at a lower lending percentage of liquidation value (Colman, 1981, p. 539).

(2) The cash flow and asset-based financing approaches are distinguished by the fact that under "the conventional approach, the lender wanted protection primarily via cash flow" whereas under "the asset-based approach...the lender ties all or at least part of his loan to the liquid value of the borrower's assets..., [and realizes protection by] taking a security interest in the assets..., [establishing] a lending formula on the basis of the liquid value, and...[obtaining] periodic information on the nature and size of those assets" (Colman, 1981, p. 542).

Plainly, the shift from cash-flow to asset-based financing lines up rather closely with the transaction cost economics rationale for secure transactions.

The transaction cost approach to economic organization also has ramifications for whether the incumbent management will participate extensively in a buyout refinancing (thereafter to hold a substantial equity position in the restructured organization) or should be displaced instead. The argument is this: since employment continuity is the source of added value wherever firm-specific human capital is great, a management buyout is favored by high human asset specificity, _ceteris paribus_. Thus whereas a substitution of debt for equity is warranted in any firm where redeployable physical assets are equity financed, an informed choice between an outside buyout (attended often by incumbent displacement) and a management buyout (incumbent continuity) requires that the human assets of the managers be assessed. The buyout-transaction is therefore influenced by both physical and human asset specificity conditions.

3.3 the free cash flow hypothesis

Michael Jensen offers a related, albeit distinguishable, hypothesis on the appearance of leveraged buyouts. His explanation relates to the existence of "cash flow in excess of that required to fund all projects that have positive net present values when discounted at the relevant cost of capital" (1986, p. 323). One possibility would be to pay this excess out as dividends. But since promises to make a "permament" increase in common stock dividends lack credibility, the exchange of debt for equity (which substitutes nondiscretionary interest for discretionary dividends) "enables managers to effectively bond their promise to pay out future cash flows" (Jensen, 1986, p. 324).

The argument is akin to that advanced by Sanford Grossman and Oliver Hart (1982) on the use of debt to bond the management, but Jensen specifically relates it to free cash flows. Both the Grossman and Hart analysis, which works out of composite (undifferentiated) capital, and Jensen's treatment (which deals with cash flows rather than with assets) are different, however, from that advanced here. My argument is that the characteristics of the assets are fundamentally implicated in the choice of financial instrument.

In fact, of course, the condition of asset specificity is only one important attribute of an investment project. Among other things, the time profile of expected cash flows also matters. Thus redeployable assets with deferred cash flows require greater equity funding at the outset than those with earlier cash flows, *ceteris paribus*. More generally, the investment attribute approach to project financing stands in need of elaboration and refinement. I nevertheless conjecture that redeployability will remain the key feature of an extended asset attribute approach to corporate finance.

4. The Innovators

The main organizational innovations that I examine here are those associated with vertical integration, multidivisionalization, and leveraged buyouts.

4.1 vertical integration

Many manufacturing firms had integrated forward from manufacturing into wholesaling or retailing at the turn of the century. The earlier appearance of the railroads (Porter and Livesay, 1971, p. 107), and of telegraph, continuous processing machines, and interchangeable parts manufacture were evidently instrumental (Chandler, 1977). Firms that integrated forward out of manufacturing into distribution include some of the great names of American industry.

Although it is sometimes argued that capitalist corporations seek to extend vertical integration at every opportunity, in the belief that more integration is always better than less (Horvat, 1982, pp. 15-16), transaction cost economics holds otherwise. It maintains that vertical integration will be selective rather than comprehensive. The data support the selective integration hypothesis.

Four types of forward integration are usefully distinguished: none; forward integration into wholesaling; additional integration into retailing; and mistaken integration. Vertical integration is unneeded where -- both presently and prospectively -- markets work well. (Indeed, to integrate in these circumstances will commonly entail a sacrifice in the aggregation economies that markets afford, to say nothing of the added bureaucratic costs that internal organization, as compared with markets, incurs.) Some goods and services, however, require careful inventory management. And some require specialized investments at the wholesale stage that independent wholesalers are loath to make.

Inventory management is a special concern for branded goods that can go stale. James Dukes's decision to integrate forward into the wholesaling of cigarettes and Whitman's in candy were evidently undertaken in response to the problems of contract that attended the sale of branded perishables.[22] Gustavus Swift faced similar problems in selling branded meat. The problems of quality control were here compounded, moreover, by the need to build refrigerator cars to transport cattle that had been slaughtered and dressed in the Midwest to markets in the east. Faced with boycotts by local wholesalers, Swift was pressed further to construct a network of branch houses that provided "refrigerated storage space, a sales office, and a sales staff to sell and deliver meat to the retail butchers, grocers, and other food shops" (Chandler, 1977, p. 300). Swift, therefore, not only had to recognize the opportunity but needed to make specialized investments (in refrigeration) and to orchestrate local distribution. This entailed organizational innovation on a grand scale.

Integration into final sales and service represents an even more comprehensive variety of forward integration. Three classes of product can be distinguished: specialized consumer nondurables for which perishability concerns again arise;

consumer durables requiring information aids, credit, and follow-on service; and producer durables requiring the same.

George Eastman explained his decision to eliminate independent wholesalers and sell photographic film directly as follows:

> The wholesaler or jobber is a detriment to our business because a large proportion of it is in sensitized goods which are perishable.... We have organized our distribution facilities so as to get the goods into the hands of the consumer as quickly as possible. Our sensitized goods carry an expiration date. Our own retail houses...have been educated to control their stocks very accurately so that the goods are kept moving. [Porter and Livesay, 1971, p. 178]

Upon resolution of the legal contests over sewing machine patents in 1854, patents were released to twenty-four manufacturers. Three integrated forward into retail. Interestingly, only those three firms that integrated thereafter thrived. Firm-specific customer information, credit, and follow-on service were arguably responsible. Isaac Singer was a leading force here.

Producer durables were distributed through two networks. Small, standardized machinery was sold through commission merchants and jobbers. For products that were of special design, technologically complex, and quite expensive and for which installation and repair required special expertise, however, integrated marketing systems were developed (Porter and Livesay, 1971, pp. 183-84). Examples include Cyrus McCormick, who pioneered the development of integrated distribution for farm equipment and set the stage for others thereafter to imitate (Livesay, 1979, chap. 3). Office machines were another case where demonstration, sales, and service required specialized expertise for which franchised dealers were instrumental to success (Porter and Livesay, 1971, pp. 193-94).

That integration is no organizational panacea is revealed by integration mistakes. Unless the objective properties of the product will support added value through integration, the bureaucratic costs of integration counsel against such an effort.[23] Integration mistakes are sometimes attributable to the "wish" to realize strategic advantage, unsupported by objective factors (Williamson, 1985, p. 111).

4.2 multidivisionalization

Chandler identifies nine large firms as ones that (more or less) independently discovered that the multidivisional structure offered prospective organizational economies over the functional or holding company forms of organization. These companies were E.I. duPont de Nemours & Co., General Motors, Standard Oil (New Jersey), Sears, B.F. Goodrich, Union Carbide, Westinghouse, and The Great Atlantic and Pacific Tea Company (Chandler, 1966, pp. 2-3). Of these, duPont and General Motors seemed to have worked through the conceptual merits of multidivisionalization most carefully. The two key entrepreneurial figures here were Pierre S. duPont and Alfred P. Sloan, Jr. Their organizational genius notwithstanding, other executives -- in these two companies and in others -- were also instrumental in perfecting the M-form structure (Chandler, 1966).

As I have argued elsewhere, the M-form structure became the basis for two subsequent organizational developments. One of these was to use this structure to support diversification. More and less successful conglomerates appear to be distinguished by the organizational structure employed by each. Royal Little (Textron) was among the innovators that employed M-form organization principles to effect diversification.

The use of the M-form structure to support multinational business organization is a second extension. Effecting technology transfer by contract (licensing) or by ownership (direct foreign investment) is among the key issues here. M-form multinationalization is commonly associated with the successful transfer of leading edge technologies, whereas more mundane technologies can be successfully transferred by contract. The need to support transfer with specialized human assets is what distinguishes the former.

4.3 leveraged buyouts

As Lowenstein observes, most of the early management buyouts involved taking small public firms private. Although these occasioned concern within the Securities and Exchange Commission, it was widely believed that small firms constituted the relevant universe for such transactions.

That changed in 1979 when Kohlberg, Kravis, Roberts & Co. put together the first leveraged buyout to exceed $100 million. This was the Houdaille transaction, which was a $390 million deal.[24] Colman observes that large leveraged buyouts were pioneered by new firms "started by people who sensed early what was happening and moved while the big investment houses had their attention engaged elsewhere" (1981, p. 534). Although the more established investment banking firms have since become involved, the newcomers who first perceived the opportunity were Kohlberg, Kravis, Roberts & Co. and Gibbons, Green & Rice.

The real innovation here was to recognize the merits of asset financing and to put together an internally consistent "contract" for debt and equity that provided for the financing needs of the transaction in a discriminating way. As discussed above, this is what the LBO accomplishes.

5. Some Caveats

Mergers, acquisitions, and leveraged buyouts often elicit expressions of dismay and sometimes give rise to alarm. Transaction cost economics is more sanguine, in large measure because economizing is held to be the main case. Economizing does not, however, exhaust the possibilities. Some of the leading alternative views are briefly examined here, after which I focus on unresolved concerns.

5.1 organizational innovation

Whereas technological innovation enjoys a generally favorable reputation, organizational innovation is commonly viewed with deep suspicion. Possibly this is because new forms are believed to be "the adventitious result of legal, social, or political forces" (Granovetter, 1985, p. 488). More reprehensibly, the inhospitality tradition in antitrust viewed nonstandard or unfamiliar forms of organization as having pernicious design and effect.[25]

As discussed earlier, vertical integration operated under a cloud. That the conglomerate form of organization was believed to be even more problematic is no surprise. Thus Robert Solo characterized the conglomerate as "a truly dangerous phenomenon...produced by financial manipulators making grist for their security mills" (1972, p. 47). And Harlan Blake described the anticompetitive potential of the conglomerate as "so widespread that it might appropriately be described as having an effect upon the economic system as a whole -- in every line of commerce in every section of the country" (1975, p. 585).

The leveraged buyouts of the 1980s have elicited similar concern. Thus although Louis Lowenstein concedes "a tendency for lawyers to see devils in the boardroom and in the executive suite" (1985, p. 740), he regards the abuse potential of leveraged buyouts as intensely real (1985, pp. 740, 749).

5.2 troublesome concerns

As Friedrick Hayek observed, markets are "marvels" (1945, p. 527). Albeit perhaps in less profound degree, the same is true of many internal and hybrid forms of economic organization. But both markets and other forms of economic organization are also subject to "failures." Although much of what is sometimes thought to be a failure turns out, upon examination, to be irremediable -- in that no superior alternative can be crafted -- this is not true of all.

I have discussed some of the comparative limitations of horizontal, vertical, and conglomerate mergers elsewhere (Williamson, 1968; 1977; 1985). I merely incorporate these by reference and turn my attention to purported capital market failures.

Victor Brudney's recent examination of the puzzles, if not failures, of capital markets is instructive. Among the more troublesome conditions to which he refers are: (1) disequilibrium contracting, (2) antitakeover defenses, (3) other self-dealing, and (4) the losses recorded by the shareholders of acquiring firms in a takeover contest.

Brudney expresses dissatisfaction with the "neutral" nexus of contract view advanced by Michael Jensen, Eugene Fama, and other scholars working out of this tradition. One concern is that so-called "independent directors" and management may form a coalition to the disadvantage of the stockholders (Brudney, 1985, pp. 1433-35). A separate concern with the neutrality of contracting hypothesis -- to which I have referred elsewhere, though Brudney does not -- is the possibility of contrived inconsistency among contracts. Implicated as they are in all of the contracts, management is in a position to strike deals that expose some constituencies (labor; customers) to undisclosed and unwanted hazards (Williamson, 1985, pp. 318-19). To dismiss such coalition and multilateral contracting concerns as imaginary because ex post settling up processes will reliably penalize offenders is to assign inordinate and unwarranted weight to the efficacy of reputation effects (Williamson, 1985, pp. 395-96, 406-7).

As Brudney notes, the elaborate defenses that incumbent managements have devised to forestall takeover smack of protectionism. He further observes that "even dedicated contractarians advocate occasional intervention to curtail management's freedom by imposing a rule of passivity on target management faced with a tender offer" (Brudney, 1985, p. 1432, n. 74). But he goes on to characterize this as schizophrenic: "If it is proper for government to impose a rule of passivity on a target's management, then 'contract' [comprehensive ex post settling up] is not an adequate constrainer of managerial discretion" (Brudney, 1985, p. 1432, n. 74).

Mark Hirschey has since argued that whereas the "strong-form theory of managerial labor market efficiency" ignores important information asymmetries and thus exaggerates the efficacy of _ex post_ settling up (1986, p. 318), a semi-strong form version of this theory has merit and indeed justifies the use of takeover defenses (Hirschey, 1986, p. 321):

> When the cost of takeover defense covenants falls short of the...[uncompensated] value of the management's firm-specific human capital, they will be adopted by the stockholders.... [Otherwise] they will be rejected by the stockholders ... Therefore, [takeover defenses] can be thought of as market mechanisms that permit incumbent managements to obtain a greater share of the rentals accruing to their firm-specific human capital.

Albeit imaginative, Hirschey evidently assumes that stockholders have unbiased estimates of managerial asset specificity. If, however, managers "enjoy valuable inside information concerning managerial performance" (Hirschey, 1986, p. 318), it is difficult to understand why this information advantage does not extend to the display of human asset values. Since Hirshey gives no hint, much less an explicit statement, of the valuation mechanics by which stockholders discriminate between meritorious and protectionist takeover covenants, the deeply troubling and possibly self-serving quality of takeover defenses cannot, without more, be so easily dispelled.

Related self-dealing concerns are posed when management participates significantly in a leveraged buyout. Lowenstein's suggestion that open-bidding be mandated to assure stockholders that a "fair" price has been realized (1985, pp. 779-84) runs into the obvious objection that search will thereby be deterred (Schwartz, 1986). Whatever the force of this concern in the context of takeovers, which has been disputed (Bebchuk, 1986), it is presumably less in the case of management buyouts. Thus whereas outsiders have to expend real resources to discover takeover candidates, managers merely self-disclose recapitalization values. To invite outside offers is a deterrent to disclosure nonetheless.[26]

A final puzzle in the corporate control area is that stockholders in acquiring firms experience negative expected returns. The observation that overall returns (to both acquired and acquiring firm stockholders) are positive is reassuring. But it does not explain why a process would be continued when those who initiate it experience expected negative returns. What kinds of biases/myopia are operative here?

Merely to record these concerns does not imply that a remedy can be fashioned. But to dismiss these concerns with a shrug is hardly satisfactory. Confidence in and an appreciation for the marvels of markets is one thing. What Kenneth Arrow has referred to as the "worship of the market" (1974, p. 16) is another.

6. Concluding Remarks

The leading hypotheses for assessing mergers, acquisitions, and leveraged buyouts (and, more generally, nonstandard or unfamiliar forms of economic activity) are (1) monopoly, (2) efficiency, (3) adventitiousness, and (4) financial manipulation. The monopoly hypothesis is plausible only if the structural preconditions for market power are satisfied -- which conditions obtain only for a small fraction of the mergers and acquisitions that are observed. The monopoly hypothesis makes no contact whatsoever with the leveraged buyout. The hypothesis that economic organization is the resultant of a series of historic accidents is instructive -- in that many organizational innovations appear to be the result of trial and error. But the adventitious hypothesis has no power to sort among those innovations that have merit and those which are misguided or mistaken. Without more, the adventitious hypothesis invites *ex post* rationalization.

The financial manipulation hypothesis is similarly elastic. Any transaction in which the promoters and participants in a deal gain is held to be suspect.[27] But that is not an adequate criterion. Who are the losers in these manipulation exercises? What are the unanticipated events which give rise to manipulative abuses? (Since far-sighted investors will make allowance for statistically foreseeable events in striking *ex ante* bargains, presumably only genuine surprises qualify as manipulative opportunities.)[28] If, moreover, it is only the organizational innovators who realize the big gains, in that afterwards these are "handed on" through the competitive process (which is the Schumpeterian view of innovation (1947, p. 155)), then time will restore (more or less) fair returns. Manipulation, according to this view, is a transient phenomenon. Persistent manipulation is presumably explained, therefore, as disequilibrium contracting. Our understanding of this condition is very primitive.

The efficiency approach to mergers, acquisitions, and leveraged buyouts adopts Knight's view that economic organization is largely driven by economizing purposes. Scale and scope economies are obvious candidates. Less obvious, but plainly central to the economics of organization, are economies of contracting. Vertical integration is an organizational response to the contracting difficulties that attend intermediate product markets where trades that are supported by transaction specific assets are exposed to hazard.

The conglomerate form of enterprise is associated not with intermediate product markets but with capital markets. The M-form structure is thus regarded as an internal capital market in which depth is traded off against breadth (Alchian and Demsetz, 1972; Williamson, 1970). Takeover, according to this view, supplants the proxy contest as a corporate control device. The M-form needed to be invented and the conglomerate variant perfected before this became feasible. Whether efficiency gains accrue is, however, disputed (Magenheim and Mueller, 1987; Ravenscraft and Scherer, 1987).

Finally, the leveraged buyout is interpreted as an effort to align financial instruments with the attributes of assets in a discriminating (transaction cost economizing) way. The preliminary data on this appear to be corroborative.

Although there is more to the story of complex organization than efficiency, no alternative hypothesis remotely qualifies for "main case" standing. Nonefficiency theories of economic organization nevertheless flourish in the face of the cumulative evidence that the increase of economic efficiency through the reduction of waste to which Knight referred goes to core issues.[29]

To be sure, excesses of efficiency reasoning need to be checked. Over-reaching is not merely a hypothetical possibility but can be documented. But an antiefficiency predisposition -- with or without "good intentions" -- does not, without more, constitute a viable contender. Those who would register major and minor qualifications to the economizing approach need first to engage in main case reasoning.

Footnotes

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1. The basic postulates of partial equilibrium welfare economics are set out in Arnold Harberger (1971, p. 785). Also see Williamson (1977, pp. 703-4).

2. The 1984 Merger Guidelines of the Department of Justice state that "some mergers that the Department otherwise might challenge may be reasonably necessary to achieve significant net efficiencies. If the parties to the merger establish by clear and convincing evidence that a merger will achieve such efficiencies, the Department will consider those efficiencies in deciding to challenge the merger" (U.S. Department of Justice 1984 Merger Guidelines, Sec. 3.5). I think this appropriate at an administrative level but have grave reservations that a full-blown economies defense should be permitted in a court if the Department decides to challenge a merger and the case is brought to trial. (Permitting the respondent to present economies to the court as a part of its rationale for a merger could, however, have salutary effects (Williamson, 1968, pp. 113-14; 1977, pp. 727-29).)

3. For pertinent statements of the earlier tradition, see Williamson (1985, pp. 286-87, 366-69).

4. See Williamson (1986a) for references to the ruling opinions.

5. See Williamson (1985, chap. 5) for a review of the evidence. Also see David Levy (1985). The evidence supports the following:

(a) vertical integration out of manufacturing into distribution is selective and reflects transaction cost economizing principles;

(b) the same is true of backward vertical integration into raw materials and lateral integration into components;

(c) the premise that more integration is always superior to less is mistaken.

6. Both the Merger Guidelines and merger enforcement have been reshaped during the past twenty years. Thus whereas the 1968 Vertical Merger Guidelines were very restrictive, the current Guidelines have been relaxed and substantially reflect transaction cost reasoning (Williamson, 1986a). Also, whereas there were 441 preliminary investigations of vertical mergers in 1968 (and only 51 horizontal merger investigations) under the then prevailing inhospitality orientation, in 1984 there were but seven preliminary investigations of vertical mergers (and 108 horizontal) (Johnson and Smith, 1968, p. 16).

7. See Williamson (1985, chap. 14) for a discussion.

8. These are elaborated in Williamson (1985, chap. 6). For a discussion in which ownership differences are more strongly featured, see Sanford Grossman and Oliver Hart (1986).

9. To be sure, some mergers are agreed to "voluntarily" only because target managements perceive that a refusal to merge will result in a contest for control that they wish to avoid (often because they expect to lose it). Accordingly, the target firm management strikes a deal and decides to "cooperate." Many acquisitions that are not publicly contested are more appropriately assigned to the involuntary category as a result.

10. The leveraged buyout need not be used as a takeover technique. It may merely be a form of changing (rationalizing) the capital structure -- by substituting debt for equity and concentrating control in the process. With or without a challenge to incumbent management, the leveraged buyout is a recent financial innovation.

11. During the period 1956-60, only nine out of twenty-eight proxy contests for control were fully successful (Hayes and Taussig, 1967, p. 137).

12. Many of the main papers in the 1982 conference "Corporations and Private Property," which papers are published in the June 1983 issue of the Journal of Law and Economics, view the Berle and Means query as misguided if not incredulous.

13. This appears to be Robert Hessen's criterion (1983, p. 288).

14. This material is taken from Williamson (1985, pp. 320-321).

15. Henry Manne's classic treatment (1965) of the market for corporate control is germane.

16. As Greg Jarrell and Michael Bradley observe, "Cash takeover bids were very rare in the United States prior to the 1960's, but they burst onto the financial scene in the mid-1960's, a period of much corporate conglomeration" (1980, p. 371, n. 1).

17. They cite the work of Peter Dodd, who:

> ...associated the sudden emergence of cash tender offers as a takeover device with the successive expansions in 1955 and 1964 (Securities Acts Amendment) by the SEC of its rules governing proxy contests.... [T]hese changes in proxy rules increased insurgents' costs of assuming corporate control via the proxy and, therefore, increased usage of the cash

tender offer to achieve a change in management. [Jarrell and Bradley, 1980, p. 371, n. 1].

18. See the quotation to Coase in the introduction, infra.

19. For an elaboration, see Williamson (1986b).

20. The recent paper on financial leverage by Michael Long and Ileen Malitz uses a financial rationale akin to but nonetheless distinguishable from that advanced here. Thus they rely on Steward Myers (1977) treatment of finance which emphasized debt convenants and unobservables. Specifically, Long and Malitz contend that (1985, p. 326)

> ...because intangible, firm-specific, and therefore unobservable growth opportunities reduce the effectiveness of bond covenants, the only way in which owners of firms can [finance such projects is through equity]....
>
> The same arguments apply to the asset substitution problem.... With intangible investments, it is a relatively easy matter for owners to increase firm risk without bondholders' [knowledge].

Note, however, that my discussion of asset financing does not assume that firm-specific investments are unobservable. To the contrary, the critical feature on which I rely is whether the assets afford security or not. This goes to redeployability not observability issues. Intangible investments, such as research and development and advertising, which Long and Malitz use as proxies for intangibles more generally (1985, pp. 334-35, 345), are apt to be nonredeployable, but the redeployability of many tangible investments is limited also.

Moreover, Long and Malitz make no distinctins of a governance structure kind, while the crafting of governance structures to support equity is fundamental to the transaction cost economics approach. Be that as it may, Long and Malitz' treatment of finance and that advanced here are closer to each other than to the conventional finance approach, which works out of composite capital.

Their examination of the evidence supports the proposition that "corporations which invest heavily in intangibles, such as R&D and advertising, have a tighter capital market imposed debt capacity than those investing in tangible assets. Our findings provide direct empirical evidence that the moral hazard problem is important and that investment and financing decisions are not independent" (Long and Malitz, 1985, p. 345). I agree with this conclusion but would emphasize again that the straight-forward way to examine transactions and their governance is through redeployability.

21. This subsection is based on Williamson (1986b).

22. Whitman's response to this is especially noteworthy. Whitman sold inexpensive bar and packaged candies through the usual jobber and wholesale grocer network. High-grade branded candy, however, was "sold directly to retailers so that the company could regulate the flow of the perishable items and avoid alienating customers" (Porter and Livesay, 1977, p. 220).

23. See Section 1.3, infra.

24. This transaction is described in Colman (1981).

25. Donald Turner thus remarked "I approach customer and

territorial restrictions not hospitably in the common law tradition, but inhospitably in the tradition of antitrust." (The quotation is attributed to Turner by Stanley Robinson, 1968, N.Y. State Bar Association, Antitrust Symposium, p. 29.)

26. For managers to disclose that recapitalization potentially adds value does not necessarily imply that the firm was poorly managed previously -- although it may have been and this is the "natural" interpretation. The contracting process needs to be examined, however, in its entirety. Thus at least two things happen with a leveraged buyout: the firm is recapitalized and the management is exposed to closer oversight. This is another illustration of simultaneity: corporate capitalization and management compensation cannot be determined independently; and both have a bearing on corporate performance (Grossman and Hart, 1982).

27. Lowenstein, who has deep suspicions of management buyouts, nonetheless observes that "all of the immediate participants have been winning" (1985, p. 751) -- where this includes shareholders, managers, investment bankers, and commercial bankers. He nonetheless expresses "doubts as to whether the gains are sufficient social utility" (1985, p. 751, n. 77). The sufficiency test is obscure. What threshold needs to be crossed? Who are the social losers (expressed in comparative institutional terms)?

28. The extensive literature on decision process biases (much of it associated with Daniel Kahneman and Amos Tversky) to which Brudney refers (1985, p. 1418, n. 35) documents individual decision process distortions. But this literature does not

address the question of organizational responses to these distortions. Plainly, however, systematic losses present opportunities for gain to those who perceive the distortion condition. Why do these potential gain opportunities go unrealized? One leading purpose of "organization" is to concentrate decisionmaking on more informed and less biased parties.

29. I would go further and urge that <u>microanalytic</u> efficiency reasoning is needed to reach the core issues of economic organization. This is not a unanimous opinion. Other economists who are persuaded that the study of microanalytics has benefits pull up short: "if one wishes to model the behavior of organizations such as firms, then study of the firm as an organization ought to be high on one's agenda. This study is not, strictly speaking, necessary: one can <u>hope to divine</u> the correct 'reduced form' for the behavior of the organization without considering the micro-forces within the organization. But the study of organization is likely to help in the design of reduced forms that stress the important variables" (Kreps and Spence, 1985, pp. 374-75; emphasis added). My own view is that the study of organization is absolutely essential. History records that previous efforts to "divine" appropriate reduced forms uninformed by an examination of the underlying microanalytics have often foundered.

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