A THEORY OF THE EFFICIENCY OF JURISDICTIONAL CHOICE: THE CASE OF CORPORATE FEDERALISM

by

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CHAPTER 1

THE CONTROVERSY OVER CORPORATE FEDERALISM

American corporation law is presently structured along the lines of what might be called regulatory federalism. The large, publicly held business corporation is comprised of a number of contractual relationships, which have evolved to facilitate economic specialization. Among all productive organizations, the corporation is distinguished by a particular set of contracts which define an ongoing relationship between owners of pooled financial resources and those who manage these resources. Within this set of contracts, the Federal government, through the administration of the Securities Exchange Act, regulates those involving the manner in which the ownership identity of the enterprise is changed.[1] Whenever stocks and bonds are issued, purchased, or otherwise transferred, the Securities and Exchange Commission stands ready to intervene into otherwise private exchange behavior to guarantee the integrity of such transactions. To the several states is reserved the authority to regulate the internal affairs of the corporation which, as usual in a federal system, are not specifically regulated by Federal law. Thus, the enforcement of corporation by-laws, dividend policy, corporate voting policy, and other similar matters are of

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[1] Securities Exchange Act of 1934, 15 U.S.C. Section 78 (1970). 17 C.F.R. Section 240.106-5 (1972).

concern to the several states. This particular separation of powers is what is meant by the term "corporate federalism."

An interesting feature of this institutional arrangement is that it permits the creation of a variety of constitutional frameworks applicable to the governance of intra-corporate affairs. In order to conduct business as a corporation and enjoy the several advantages of that status, organizers must file a charter with one of the fifty states or the District of Columbia. Briefly, the corporate charter specifies the nature of business to be conducted by the enterprise, its duration of existence, minimum capital requirements, and the rules of conduct to be followed by incorporating individuals.[1] With respect to stockholders and hired management, the charter is thus the corporate constitution which specifies the rights and obligations of members in their subsequent private interaction. The several states have been free to enact incorporation codes of their own choosing. These statutes state the requirements of a legal charter and, hence, regulate the conduct of the corporations chartered within their political boundaries. Moreover, the enforcement of charter provisions by the state courts is also a matter of individual state's rights. These institutional features serve to permit constitutional variety within the larger system of American corporation law.

The freedom of the states to draft and enforce incorporation statutes of their own choosing is matched by a freedom of corporations

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[1] See Harry G. Henn, The Law of Corporations. (St. Paul, Minn.: West Publishing Co., 1970), pp. 192-197.

to choose the jurisdiction within which to file their charters. In 1868 the Supreme Court established a precedent which allowed "foreign" (i.e., out of state) corporations to charter in any state, regardless of the amount of business transacted within its political boundaries or the location of its headquarters.[1] Consequently, as Henn notes, ". . . interstate enterprises could shop around for the most favorable state of incorporation."[2] Stockholders and managers could henceforth choose the property rights environment that they preferred from a potential menu of fifty-one legal jurisdictions. While the actual choice of a jurisdiction was in the hands of management as a practical matter, stockholder preferences could be expressed either through political pressure or through the simple expedient of purchasing the securities of companies chartered in preferred jurisdictions.[3] The opportunities for gain opened up by Paul vs. Virginia were not lost on the legislators of the several states.

The immediate consequence of the High Court's 1868 decision was to create a market for corporate constitutions. State legislatures, predictably, came to devote part of their energies to the production of incorporation codes which would attract the chartering trade, and it is

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[1]Paul vs. Virginia, 75 U.S. (8 Wall) 168, 19 L. Ed. 357 (1868).

[2]Harry G. Henn, Law of Corporations, p. 19.

[3]All states require that stockholders be given the right to ratify the incorporating decision of management. See F. G. Kempen and J. L. Wieson, Legal Aspects of the Management Process (St. Paul, MN: West Publishing Co., 1976), p. 319.

common to cite the ability to generate revenues through franchise fees and taxes as the rationalization of this activity.[1]

Evolution of State Incorporation Law

Corporate federalism has provoked the criticism of legal commentators. A number of academic lawyers have, over the years, engaged in an effort to convince the U.S. Congress that state incorporation codes fail to provide the stringent controls on corporate management necessary to protect the legal interests of stockholders.[2] In addition to the equity issues involved, at least one of these advocates has argued that an additional consequence of corporate federalism has been, and will continue to be, an undercapitalization of American corporations due to low stockholder confidence.[3] This view has been challenged by a number of writers primarily drawn from the ranks of economists and a group of legal scholars who have become familiar with the logic of the market process.[4] They argue that the evolutionary process which has produced the current system of corporate jurisprudence has provided stockholders

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[1]Harry G. Henn, Law of Corporations, pp. 19-20.

[2]William L. Cary, "Federalism and Corporate Law: Reflections Upon Delaware," Yale Law Journal 83 (March (1974): 663-705; Ralph Nader, Mark Green and E. Joel Seligman, Taming the Giant Corporation. (New York: W. W. Norton and Co., 1976); and Donald E. Schwartz, "A Case for Federal Chartering of Corporations," Business Lawyer 31 (1976): 1125-1159.

[3]William L. Cary, "Federalism and Corporate Law," p. 671.

[4]Thorough surveys of this literature are presented in The Attack on Corporate America, ed. M. Bruce Johnson. (New York: McGraw-Hill, 1977), Section III; and Ralph K. Winter, "State Law, Shareholder Protection, and the Theory of the Corporation," Journal of Legal Studies 6 (June 1977): 251-292.

with adequate institutional protection from managerial discretion, if they choose to use it. Opinion, therefore, divides not on the question of whether state incorporation laws generally impose market discipline upon intra-corporate affairs, but whether this is the proper way to rationalize the conflicts which inevitably arise among the owners of stock and the professional managers of large corporations.

Support for strict Federal regulation of high standards of managerial conduct rests upon a purely juridical conception of the corporate organization. Imposing market discipline in matters of intra-corporate conduct is viewed as wholly contrary to the essence of the corporate form of contracting. As stated in a legal text,

> A director of a corporation occupies a fiduciary relationship to the corporation (i.e., stockholders). This relationship has been described as analogous to that of an agent to his principal or a trustee to his beneficiary. Therefore, it is logical that a director (or officer) cannot deal with his corporation at arms-length, but is bound by the rules of good faith . . . .[1]

While this may appear to be empty rhetoric, it is based upon a functional description of the corporation which has been characterized by a "separation of ownership from control" which is made inevitable by the technical aspects of jointly financed, large scale production.[2] The relative power positions of central management and

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[1]Howard L. Oleck, Modern Corporation Law. (New York: Bobbs-Merrill 1959), p. 15.

[2]The *locus classicus* for this idea is the work of Adolph Berle and Gardner Means, The Modern Corporation and Private Property, revised edition. (New York: Harcourt Brace Jovanovich, 1968).

dispersed owners of stock create monitoring difficulties which alledgedly produce market failure. As in all such cases of genuine market failure, a role for the coercive power of the state is deemed the appropriate mechanism for conflict resolution within the business corporation.

Calls for Federal incorporation statutes stem from the hypothesis that the institutional structure allowing states to enforce intra-corporate equity must necessarily operate to the advantage of hired management, and, therefore, to the disadvantage of stockholders. The syllogism leading to this conclusion has a familiar structure. The first premise states that the hired management of any nominal corporation has ultimate authority over the place where the corporate charter will be filed. The second premise is that hired management will charter in that state jurisdiction most favorable to its personal welfare. The third premise asserts that the welfare of the hired management is a monotone increasing function of their freedom from stockholder control.

Based upon these premises and the unquestioned fact that states may receive pecuniary benefits (taxes and fees) from corporations which charter within their jurisdictions, reform advocates deduce that in order to maximize their benefits, states may be expected to compete among themselves for corporation charters. The form this competition is presumed to take is the enactment of pro-management corporation laws. Thus, the replacement of corporate federalism by a Federal incorporation law is deemed desirable because interstate competition for charters

and its effects on stockholder welfare would automatically be rendered impossible.

Support for the current structure of corporation law rests upon the presumed ability of general rules of conduct to provide the necessary and sufficient conditions within which management and stockholder interests may be harmonized at arms length. According to the advocates of the status quo, the invisible hand mechanism, operating through the capital markets and the market for corporate control, is able to resolve the natural conflicts of interest arising within corporations between legal owners of productive assets and those who manage these resources.[1] Managerial decisions adverse to the interests of stockholders are, through efficient capital markets, immediately capitalized into the prices at which investors are willing to hold the current capital stock of the corporate sector. The organized exchanges provide for the easy alienation of ownership necessary for the mechanism to work. As managers pursue policies favorable to their own interests which deviate from the maximization of shareholder wealth, share prices will fall. Eventually the price will become so low that 1) insufficient capital for internal investment will be forthcoming or 2) takeover threats will become a reality.[2] In either

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[1]Henry G. Manne, "Mergers and the Market for Corporate Control," Journal of Political Economy 73 (April, 1965): 110-120.

[2]Henry Manne, "Mergers and the Market for Corporate Control," and Robin L. Marris, The Economic Theory of Managerial Capitalism. (New York: Basic Books, 1968), Chapter 1. The take-over constraint works effectively as long as shares possess voting rights which raiders use to overthrow management via the proxy system.

case, managerial behavior will be constrained by the forces of a freely operating market for corporate control.

Conflict resolution reduces to a simple process which differs little from ordinary market interaction. As two economists have argued,

> Any shareholder can remove his wealth from control by those with whom he has a difference of opinion. Rather than try to control the decisions of the management, which is harder to do with many stockholders than with only a few, unrestricted salability provides a more acceptable escape to each stockholder from continued policies with which he disagrees.[1]

The circle is completed as voting with one's feet reduces share prices and increases the probability of take over. The evolution of liberal state corporation laws is deemed merely to reflect the fact that the corporation is essentially a market order rather than a trust.

Arguments in favor of the current system of corporation law are based upon an understanding of legal evolution which is wholly contrary to that held by reform advocates. According to this view, charter competition among the states is at worst neutral to shareholder interests and most likely provides an institutional setting which is actually conducive to their welfare. The record of corporate activity seems to speak for itself. For example, according to Michael Dooley, "if the course of corporate law has been as consistently anti-shareholder for as long as the critics claim, one

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[1]Armen A. Alchian and Harold Demsetz, "Production, Information Costs and Economic Organization," American Economic Review, LXII (December, 1972) pp. 788.

would suppose that there would no longer be interest in corporate investments, and that the entire system would have collapsed years ago."[1] Gordon Tullock has applied a similar form of logic. He notes that the

> theory of management control of corporations . . . is subject to one very obvious difficulty. It offers no explanation of how managements are changed, and changes are an everyday occurrence as any reader of the Wall Street Journal can appreciate.[2]

It is the opinion of Ralph Winter that corporate federalism and charter competition actually promote the well-being of stockholders. Corporate critics point to the fact that Delaware is the most popular state of incorporation as evidence of its pro-management bias.[3] This follows from their conception of the evolutionary process under regulatory federalism following the Paul Decision. Commenting on the same observation concerning the popularity of Delaware, Winter makes the following points:

> (1) If Delaware permits corporate management to profit at the expense of the shareholder and other states do not, then earnings of Delaware corporations must be less than earnings of comparable corporations chartered in other states and shares in the Delaware corporation must trade at lower prices. (2) Corporations with lower earnings will be at a disadvantage in raising debt or

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[1] Michael P. Dooley, "Delaware and the Trend Toward Uniformity in State Corporation Laws in The Attack on Corporate America, ed. M. Bruce Johnson, p. 116.

[2] Gordon Tullock, "The New Theory of Corporation," in Roads to Freedom: Essays in Honor of Friedrich A. von Hayek, ed. Eric Streissler. (Clifton, N.J.: Augustus M. Kelly, 1970); p. 288.

[3] William L. Cary, "Federalism and Corporate Law," p. 663.

> equity capital. (3) Corporations at a disadvantage in the capital market will be at a disadvantage in the product market and their share price will decline, thereby creating a threat of a takeover which may replace management. To avoid this result, corporations must seek out legal systems more attractive to capital. (4) States seeking corporate charters will thus try to provide legal systems which optimize the shareholder corporation relationship.[1]

It appears that both the critics and supporters of the current system of corporate regulation agree that corporate federalism and charter competition have resulted in the evolution of an optimal legal structure. They simply disagree over which group, stockholders or managers, the term "optimal" applies.

Evidence and Paradox

In order to provide empirical support for their contention that corporate federalism leads to institutional degeneration, those calling for Federal incorporation laws point to the "Delaware Syndrome." As noted above, approximately half of all U.S. corporations are chartered in the state of Delaware. The reason for this exceptional showing by one state has been attributed to the pro-management bias found in the Delaware General Corporation Law. Managers who are separated from the control of ownership will choose either to move to Delaware or stay there because 1) the Delaware General Corporation Law provides a favorable environment for their activities, and 2) the market does not discount the resulting behavior in any significant way.

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[1] Ralph K. Winter, "State Law, Shareholder Protection, and the Theory of the Corporation," p. 256.

It is interesting that the same casual empiricism serves as support for the opposition view. Because stockholders do discount the activities of their management, the preponderance of Delaware incorporations is clear evidence that the Delaware General Corporation Law is favorable to the interests of stockholders. If Delaware law favored management, stockholders would refuse to participate in Delaware corporations, and capital market pressure would produce an exodus from the state. Thus, there exists the paradox of two opposing and mutually exclusive hypotheses finding scientific verification in the same data.

These difficulties are perhaps inevitable in discussions based upon rhetoric rather than formal analysis. To date there has been no credible evidence presented to indicate that either stockholders or managers are better (or worse) off in Delaware vis-a-vis other jurisdictions; or whether, if all jurisdictions are uniform in effect, they are worse or better off today than they were some time in the past.[1] Moreover, without such evidence the only logical conclusion to be reached on the basis of the "Delaware Syndrome" is no conclusion at all. This is the Delaware Paradox.

Purpose and Scope

However interesting the discovery of either pro-management or pro-investor bias in the Delaware General Corporation Law might be,

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[1]However, there is some evidence that stockholders, or the stockmarket, believe Delaware incorporation to be beneficial. See Allan Hyman, "Do Lenient State Incorporation Laws Injure Minority

such questions of equity are not the primary focus of this dissertation. There is a larger issue stemming from corporate reform proposals which will be the subject for this enquiry.

As discussed above, those calling for federally enforced standards of management conduct do so primarily because such uniformity in the law would, by definition, eliminate jurisdictional variety. With no variety in legal environments possible, states could not compete for corporations (i.e., their managements) and stockholder protection could not be sacrificed to the revenue interests of state governments. Where ownership is presumed to be effectively separated from control, the only way to avoid the consequences of legal competition is to eliminate that competition.

Advocates of corporate federalism, of course, hold the opposite view. As noted above, where the market is presumed to discount the effects of managerial discretion, legal competition actually promotes the general interests of both investors and management. Thus, Winter suggests that,

> The competition between states for charters is generally a competition as to which legal system provides an optimal return to both interests. Only when that competition between legal systems exists can we perceive which legal rules are most appropriate for the capital market.[1]

Stockholders?" in The Attack on Corporate America, ed. M. Bruce Johnson, pp. 166-172.

[1]Ralph K. Winter, "State Law, Shareholder Protection, and the Theory of the Corporation," p. 276.

This, however, is not so much an argument against uniformity, as it is an argument against federal intervention; Winter favors the current system of state regulation because it has promoted liberality, not primarily because it offers jurisdictional choice.

This theme is developed elsewhere in the literature of corporate federalism in more explicit terms:

> The development of corporate legislation is part of a general trend toward uniformity in American law which has produced a number of uniform codes dealing with diverse subjects . . . One would hardly expect a contrary trend in an increasingly interdependent and mobile society. Indeed, the failure of states to achieve some measure of uniformity in corporate regulation would undoubtedly produce pressure for federal legislation, but, in that event the pressure would come from the business community, not its critics.[1]

Unfortunately, there is no credible evidence available to support either the notion that the real effects of American corporation law are uniform or that it would be desirable if they were. Yet these certainly are issues open to serious question. While there is doubt, because of the Delaware Paradox, over whether corporate federalism promotes the unilateral interests of either management or stockholders, there is certainty that the enactment of federal incorporation statutes would eliminate jurisdictional variety. Such an elimination of choice is not without its possible consequences. With respect to the argument in favor of minimum federal standards of fiduciary care, one author has suggested that "such an analysis

[1]Michael P. Dooley, "Delaware and the Trend Toward Uniformity in State Corporation Laws," in <u>The Attack on Corporate America</u>, ed. M. Bruce Johnson, p. 146.

ignores the inherent advantages of a range of possible corporate laws with different kinds of 'protection' or lack of it. A responsible business planner will select the state of incorporation best suited to the client's needs."[1]

This range of legal opinion concerning the efficiency of legal uniformity versus choice of jurisdiction suggests the need for a more rigorous analysis of the system of corporate federalism than currently exists. Since the issue of choice versus uniformity does not directly deal with matters of intra-corporate equity, but with the question of the overall efficiency of the corporate system, economic analysis may make a contribution to the understanding of the trade-offs in such a case.

The purpose of this dissertation, therefore, is to investigate the efficiency of corporate federalism as a general regulatory institution. Stated more concisely, the purpose is to deduce the superiority of corporate federalism over federal incorporation laws and management standards from the nature of corporate organization, and the argument presented is that relative to federal incorporation, corporate federalism is a preferred general system of regulation because it alone features the possibility of jurisdictional diversity in the overall regulatory environment. Obviously then, the desirability of corporate federalism rests on the proposition that managers

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[1] Thomas D. Morgan, "Federal Chartering of Corporations," in The Attack in Corporate America, ed. M. Bruce Johnson, p. 160.

and stockholders will be able to maximize the value of their participation in corporate enterprise only if they have a <u>range</u> of legal restraints on their private behavior from which to choose.

<u>Prospectus</u>

In Chapter 2, a review of related economic enquiry is presented which reveals a failure to deal with the issues to be investigated in this dissertation. The literature on the economic theory of property rights is shown to have failed to deal rigorously with the effects of <u>legislated</u> property rights on economic behavior, while devoting great efforts to related topics. In Chapter 3, a theory of corporate enterprise is presented which demonstrates the feasibility of a variety of contractual relationships existing within the corporate sector. This finding is combined with a general discussion of the feasibility of trade-offs between government intervention and private enforcement of contracts to establish the optimality of a variety of jurisdictions within the corporate sector. In Chapter 4, the question of the existence of uniformity or variety in the current structure of corporation law is subjected to a positive analysis. A stock pricing and valuation model is tested in the tradition of the empirical property rights approach, but with jurisdictional variety substituting for organizational variety as an explanatory variable. In a concluding chapter, implications for the liberal conception of the evolution of social and legal institutions, resulting from the analysis presented in Chapters 3 and 4, are discussed.

CHAPTER 2

THE IRRELEVANCE OF THE PROPERTY RIGHTS LITERATURE

Discussions concerning the optimality of the current structure of corporation law have been conducted, to date, with a nearly total lack of analytical and empirical support. As a result, the defense of corporate federalism has been reduced to a question of faith in the ability of market discipline 1) to promote and protect the interests of stockholders, and 2) to maintain an optimal flow of investment resources into the corporate sector. The purpose of this chapter is to document the failure of the property rights literature to provide the scientific analysis required to establish an analytical framework for dealing with the types of issues raised by corporate federalism and its efficiency relative to other legal environments governing corporate behavior.

Law and Economics

In any economic system the production and exchange of economic goods never takes place in a social vacuum. In a Crusoe economy where there is an absence of social codes of conduct due to the absence of a society, the value of production and intertemporal exchange is simply given by the resource endowments and technology applied in production. But once the social element is added, the value of production and exchange may take on a range of values for any given endowment of natural resources, including the brain mass of human agents. Even in

complete anarchy, the absence of all norms of conduct is itself an institutional environment which will alter the level of utility derivable from the resource base relative to other institutional arrangements.[1] This functional relationship between the rules governing economic behavior and the ultimate economic performance of the social economy has long been recognized and has been formalized into the field of political economy. Knight, in fact, has gone so far as to drop the adjective "political" by delimiting economic science proper to the study of "the social organization of economic activity," relegating the more conventional topics of the field to engineering and home economics.[2] What has resulted is the realization that law, like money, matters. This treatment of the rules constraining economic behavior as a real factor of production has resulted in the development of a separate, scientifically rigorous, branch of economic enquiry--the property rights approach to the theory of the firm.[3]

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[1] William Craig Stubblebine, "On Property Rights and Institutions," in Explorations in the Theory of Anarchy, ed. Gordon Tullock (Blacksburg, Virginia: Center for the Study of Public Choice, 1972), p. 39.

[2] Frank H. Knight, The Economic Organization (New York: Harper and Row, 1933), p. 5.

[3] For a general survey of this literature through 1971 see Eirik Furubotn and Sevtozar Pejovich, "Property Rights and Economic Theory: A Survey of Recent Literature," Journal of Economic Literature, X (December, 1973): 1137-1163. That legal structure "matters" is something which need not be taken on faith. Lord Robbins, for example, notes that, "It is not certain that on every possible occasion the mechanism of markets will function satisfactorily. But experience suggests that most cases where it does not, investigation shows that there is some deficiency in the law. It is only necessary to compare the radically different evolution of industrial structure in England and in Germany to realize how important apparently

Property Rights Theory

The stated objective of this area of economic research is "to achieve a generalization of the standard theory of production and exchange by considering the interconnectedness of ownership rights, incentives, and economic behavior."[1] In practice, the property rights approach proceeds by recognizing that all economic activity can be reduced to the exchange of bundles of rights in valuable assets. In other words, the essence of economic interaction is contractual in nature. A basic assumption of this approach is that the costs of contractual exchange are positive. Economic interaction involves significant costs associated with defining, policing, negotiating, and enforcing the contracts which define exchange in its essential aspects. The predictive content of the property rights literature is derived from applying the standard utility maximizing paradigm to choice, where the opportunity set has been enriched by including the effects of transaction costs and alternative penalty-reward structures as choice constraints. This procedure has led to interesting applications, ranging from providing an economic explanation of land ownership patterns among North American hunting tribes to rationalizing product liability laws.[2]

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unimportant differences in the law may be. Political Economy Past and Present. (New York: Columbia University Press, 1976), p. 8.

[1] E. Furubotn and S. Pejovich, "Property Rights and Economic Theory," p. 1137.

[2] See Harold Demsetz, "Toward a Theory of Property Rights," American Economic Review, LVII (May, 1967): 11-26; Harold Demsetz,

The basis of this property rights or institutional approach to the theory of the firm is the simple proposition that enterprise performance is systematically affected by the property rights to certain streams of returns within firms which influence managerial decision making. Theoretical application of this notion has generated a plethora of testable hypotheses. The resulting empirical work has sought to verify the suggested effects of a wide variety of institutional curcumstances on managerial behavior, as reflected in the performance of cost, profits, growth, sales, and executive compensation and tenure.[1] Popular specific targets of this program of research have been the comparative performance of management versus owner-controlled corporations, public versus private enterprises, and profits in regulated versus unregulated firms. On the surface this diversity of investigation would seem to promote thoroughness.

"When Does the Rule of Liability Matter?" Journal of Legal Studies, 1 (1972): 13-28; Roland N. McKean, "Products Liability: Implications of Some Changing Property Rights," Quarterly Journal of Economics 84 (November, 1970): 611-627; and James M. Buchanan, "In Defense of Caveat Emptor," University of Chicago Law Review 38 (Fall, 1970): 64-73.

[1]This is extensive literature. Representative are the studies of M. Crew, M. Jones-Lee, and C. Rowley, "X-Theory Versus Management Discretion," Southern Economic Journal 38 (1971): 173-84; Wilbur G. Lewellen, The Ownership Income of Management, (New York: National Bureau of Economic Research, 1968); Louis DeAlessi, "Managerial Tenure Under Private Government Ownership in the Electric Power Industry," Journal of Political Economy 82 (May/June, 1974): 645-653; Franklin R. Edwards, "Managerial Objectives in Regulated Industries: Expense Preference Behavior in Banking," Journal of Political Economy 86 (1977): 147-162; and R. J. Monsen, J.S.Y. Chiu, and D.C. Cooley, "The Effect of Separation of Ownership and Control on the Performance of the Large Firm," Quarterly Journal of Economics 83 (August, 1968): 435-451.

Yet perhaps a more realistic view is that the property rights approach, both in its a priori foundations and empirical validation aspects, is more replicative than broadening.

The basis for this criticism of the property rights literature is that from the broad view of economic science, this research is but one variation on the basic theme of the pure logic of (economic) choice. James M. Buchanan puts the matter forthrightly:

> In its normative variant, the logical theory of choice involves the simple principle of economizing, nothing more . . . By modifying the formal properties of the objective function and the constraints, interesting exercises in locating and in stating the required conditions for insuring satisfaction of the norms can be produced.[1]

The property rights theory of the firm reduces to little more than a specification of the common neo-classical constraints and maximanda for the purpose of generating "interesting exercises" in the traditional manner. Of course, it is perhaps natural that new and interesting ideas be subjected to empirical testing. Yet the property rights literature is not all that new.

The roots of the non-traditional approach to industrial organization theory may be traced as far back as the planning debates of the 1930's.[2] The need to consider the impact of alternative property

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[1]James M. Buchanan, "Is Economics the Science of Choice?" in Roads to Freedom: Essays in Honor of Friedrich A. von Hayek, ed. Eric Streissler (Clifton, N.J.: Augustus M. Kelley, 1970) p. 49.

[2]Of special significance are the essays of F. A. Hayek and Ludwig von Mises. Hayek's contribution is summarized in the collection of essays, Individualism and Economic Order. (Chicago: The University of Chicago Press, 1947). Some of Mises' contribution to the planning debates is reflected in his Socialism, new edition (New Haven: Yale University Press, 1951).

rights structures when analyzing the internal workings of the firm were important elements of the Austrian position in those debates, especially as developed by Mises and Hayek. In more recent times the works of Alchian, Kessell, Demsetz, and Becker, among others, follow the tradition laid down by earlier Austrian scholars.[1] The product of these *a priori* investigations was an enrichment of this standard neo-classical theory of the business enterprise. The descriptive accuracy of these property rights theories soon became evident as empirical testing proceeded. The objective functions relevant to managerial decision making, especially in large, dispersed-owner firms, were enhanced by the expansion of choice sets to include elements other than simple pecuniary profits. Profit-maximizing firms were replaced by utility-maximizing managers as the appropriate agents of the firm. The logic of property rights allowed specification of predictable allocative and distributive outcomes across enterprises differing in the location of responsibility and reward. The set of technological constraints relied upon by neo-classical analysis to generate economic behavior was augmented by institutional constraints to perform the same analytic task.

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[1]See Armen A. Alchian, "The Basis of Some Advances in the Theory of the Management of the Firm," *Journal of Industrial Economics* 14 (November, 1965): 30-41; Armen A. Alchian and Reuben A. Kessel, "Competition, Monopoly and the Pursuit of Pecuniary Gain," in *Aspects of Labor Economics*, ed. H. B. Lewis et. al. (Princeton: Princeton University Press, 1962) pp. 156-162; Armen A. Alchian and Harold Demsetz, "Production, Information Costs, and Economic Organization," *American Economic Review*, LXII (December, 1972): 777-795; and Gary Becker, *The Economics of Discrimination*. (Chicago: University of Chicago Press, 1957).

The Record of Empirical Contributions

Clearly the property rights approach to enterprise behavior follows conventional modus operandi. But it is not clear that increasing the elements of the constraint set or expanding the objects of interest to utility maximizing managers will generate truly novel implications. There is a danger that this literature is rapidly approaching the intensive margin. As stated by Buchanan, "Whether or not such exercises command too much of the professional investment of modern economists remains an open question."[1] The failure of the property rights approach to deal effectively with an on-going policy issue concerning the efficiency of an economy dominated by so-called "managerial" enterprise provides an example.

The modern corporate economy is said to be subject to levels of allocative inefficiency and pure waste not possible in the entrepreneurial-owner capitalism of neo-classical orthodoxy. The fundamental premise of the syllogism which presents this unpleasantness as its major conclusion is that corporate managers are isolated from both the control of normal market forces and the control of the legal owners of the corporate economy--the shareholders.[2] Consequently, the hired hands of the corporate economy are able to ride roughshod over the

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[1] James M. Buchanan, "Is Economics the Science of Choice?" in Roads to Freedom, ed. Eric Streissler, p. 51.

[2] Implicit in this assertion is that shareholders, if able to control the allocation of corporate resources, would act so as to promote efficiency. This should take the form of a testable hypothesis rather than a premise of such a theory.

interests of owners of the corporate free-enterprise system.[1] The challenge to this indictment of modern "managerial" capitalism erected by the empirical property rights program has to date been less than effective.

As discussed above, the major implications of the managerial theory have formed the basis of numerous empirical tests. Since managers are hired by the legal owners of corporations as their agents, they owe a fiduciary duty to serve their principals' interest, at least under the law. Clearly, the interest of the owners of corporate wealth lies in the maximization (of the utility) of that wealth. Therefore, it would seem to follow that if management interest was separated from the interest of owners, this would be reflected in certain well-known parameters of corporate performance. Specifically, one would expect to see lower profits and higher costs in manager controlled corporations versus other types of enterprises. The empirical work in this area has generally attempted to explore these implications.

Apparently in an effort to enhance the robustness of any possible findings, these implications have been tested over a wide range of _organizational_ settings. For example, Kamerschen and Qualls, among others, have investigated the correlation between the rate of return on shareholder equity and degree of dispersion of stock ownership across corporations.[2] Edwards, in a recent article, tested for

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[1]See Fritz Machlup, "Theories of the Firm: Marginalist, Behavioral, Managerial," _American Economic Review_, LVII (March, 1967): 1-33.

[2]David Kamerschen, "The Influence of Ownership and Control on Profit Rates," _American Economic Review_ LVII (June, 1968): 432-447;

evidence of expense preference behavior on the part of the management in regulated versus non-regulated industries.[1] The results of these investigations, among many others, have often been contradictory. But more important than mixed results, a careful review of this literature indicates that much of the testing is based on a false notion of institutional variety.

These empirical studies are all founded on the logical arguments which were developed in the theoretical property rights literature. Two themes are developed here. The first is that all decision making involves the maximization of constrained utility functions which contain pecuniary elements (profits, wealth, income, etc.) as but one of many possible arguments. The second is that in managerial enterprise the degree of substitution between non-pecuniary and pecuniary rewards is a simple function of the institutionally determined costs of doing so. Hence, we find the profit maximizing goal for firms replaced by a utility maximizing goal for the decision makers controlling firms. Further, it is reasoned that institutional arrangements which make the cost of monitoring managerial behavior higher (e.g. greater dispersion of ownership) or the individualized value of the gains from detection

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P. David Qualls, "Market Structure and Managerial Behavior, in Essays on Industrial Organization in Honor of Joe S. Bain, eds. R. Masson and P. David Qualls (New York: Ballinger, 1976), Chapter 5; and John Palmer, "The Profit Performance Effects of the Separation of Ownership and Control in Large U.S. Industrial Corporations," Bell Journal of Economics and Management Science 4 (Spring, 1973): 293-303.

[1] Franklin Edwards, "Managerial Objectives in Regulated Industries," p. 147.

of discretion lower (e.g., public or collective ownership) would evidence greater diversion of corporate wealth into the pockets of management at the expense of the stockholders. Let us call the first assertion the Principle of Non-satiation; the second might be called the First Law of Demand. Much of the empirical work in the area of the interaction of institutional arrangements and economic performance seem to be testing these basic economic propositions.

For example, testing corporate profit performance under differing dispersions of ownership is nothing more than testing whether the cost of discretion (probability of detection) determines the level of discretion exercised. Testing manager's expense preference behavior in regulated versus unregulated firms is more of the same since the (opportunity) cost of discretion is higher in the latter. Similarly, tenure patterns in government versus private enterprise may be reduced to the fundamental principles of choice theory. Tenure and income combine as wealth to management--a cost of production to be netted from owner income. One would expect to see this "cost" vary directly with the cost of detection. Finally, government (collective) ownership is simply more dispersed ownership, and detection of managerial discretion exhibits more publicness in this environment than in the private sector.

A review of the empirical literature thus reveals that the variables used in testing the managerial hypothesis are such that the relation among variables is algebraic, not conceptual. The course of empirical work in this area, it seems, has been to verify certain

a priorisms concerning the internecine distribution of the corporate pie. The relevance of much of the property rights literature is attentuated by the simple truth that many of the organizational forms generating the well noted divergencies from the efficiency norms exist either because they offer other economic advantages or that they simply represent the best available alternative. The natural monopoly-public utility "problem" comes immediately to mind. What is the relevance of the finding that managers in this institutional form are less diligent at cost reduction than their private sector counterparts? We have no answer, since non-convexity cannot be legislated away.

Failure to be General

One of the major stated goals of the property rights approach to economic theory is to employ the traditional logic of choice in providing an explanation of the development of property rights over time. On the basis of the empirical work discussed above, success has been partial at best. While providing interesting descriptive insights into the effects of alternative organizational constraints on enterprise behavior, this body of research has failed to treat institutional variety in the most general way possible. Of all the constraint effects which could be hypothesized and tested, one of obvious importance is systematically ignored. The legal structure contained in the explicit regulations applied by the various political jurisdictions on enterprise behavior also affect that behavior. Of course, that is their purpose. These are property rights assignments, but they have been virtually ignored in the empirical property rights literature.

These regulations do not include rate of return limits, but they do involve state intervention into the private exchange behavior of the participants of general business enterprise, particularly the general incorporated business which accounts for the bulk of economic production in the U.S. economy. By ignoring the effects of corporation law in their general program of economic research, the property rights approach has partially failed in its mission to generalize the standard theory of production and exchange.[1]

Conclusions

Reviewing the contributions of the property rights approach to the theory of enterprise behavior indicates a need for a new program of research. Specifically the economic effects of those man-made property rights assignments which take the form of state incorporation statutes must also be included in the general theory of production and exchange. The purpose of the next chapter is to embark on that program with the development of a model of jurisdictional choice. The development of

[1]The sole exception to this record is a study conducted by Allan Hyman. He found that the stock market performance of corporate securities improved significantly, on average, when corporate managers announced that they were rechartering the state of Delaware. The conclusion reached by the author was that stockholders apparently expected that the Delaware law will provide an environment conducive to better corporate performance. Implicit, but not stated by Hyman, is the presumption that the product of enhanced performance will be shared with stockholders under the constraints of the Delaware code. The question of the long-run effect of legal structure still remains to be explored. See Allan Hyman, "Do Lenient State Incorporation Laws Injure Minority Shareholders?" in The Attack on Corporate America, ed. M. Bruce Johnson (New York: McGraw-Hill, 1977), pp. 166-172.

this model will provide the analytical framework necessary for the study of the efficiency of corporate Federalism which has not been developed in the property rights literature to date.

CHAPTER 3

A MODEL OF JURISDICTIONAL CHOICE

It was suggested in Chapter 1 that corporate federalism was a superior legal institution relative to any Federal alternative because only a federalist system bore the potential for jurisdictional variety within the corporate sector.[1] The question of whether or not the current pattern of American corporation law conforms to this norm will be the concern of Chapter 4.

A brief review of legal and economic theories of business organization is first presented. These theories assume a unified approach to the issue of contracting within firms and hence preclude consideration of jurisdictional variety. In the second section this problem is rectified by establishing the range of contractual interactions that are possible within the large business corporation. Following, in the third section, is the presentation of a general theory of economic organization which establishes a trade-off function between private (market) and government monitoring of contractual integrity. When this theory is generalized to the business corporation, the result is established, in a final section of this chapter, that the value of investor and management participation in corporate enterprise will

[1]The term "corporate sector" is used in the text as a shorthand expression for those economic relationships occurring among corporate managers and stockholders. It necessarily abstracts from the numerous other economic associations which exist in business corporations.

attain a maximum only where these two parties may choose from a range of legal restraints on their private contracting behavior. This chapter will therefore serve as the logical foundation for the positive analysis of American corporation law which follows in Chapter 4.

The Corporation: Competing Abstractions

Recent advances in the theory of the firm, particularly as they have been applied to the large business corporation, have gradually placed economic science into direct conflict with ancient legal norms of conflict resolutions within economic organizations.[1] Prior to the recent upsurge of interest in the economic implications of property rights assignments, the theory of the firm was really a theory of market interaction among firms which behaved like single-minded individuals.[2] Once the inevitable balance between the conveniences of abstraction and requirements of descriptive reality tipped toward the

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[1]See Ronald H. Coase, "The Problem of Social Cost," Journal of Law & Economics 3 (October, 1960): 1-44; Armen A. Alchian, "The Basis of Some Recent Advances in the Theory of Management of the Firm," Journal of Industrial Economics 14 (November, 1965): 30-44; Harold Demsetz, "Toward a Theory of Property Rights," American Economic Review LVII (May, 1967): 347-359; Armen A. Alchian and Harold Demsetz, "Production, Information Costs, and Economic Organization," American Economic Review LXII (December, 1965): 777-792; R. J. Monsen and Anthony Downs, "A Theory of Large Managerial Firms," Journal of Political Economy 73 (June, 1965): 221-236; and M. C. Jensen and W. H. Meckling, "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure," Journal of Financial Economics 3 (1976): 305-360.

[2]M. C. Jensen and W. H. Meckling, "Agency Costs and the Theory of the Firm," p. 306.

latter, the theory of the firm was made part of a more general theory of economic organization.[1] It became important to deal explicitly with the fact that the single-minded firm, which supposedly maximized a one-argument objective function, was better treated as a collection of individuals which maximized their own utility.[2] Property rights assignments, which are specified through either explicit or implicit contract negotiation, became the crucial external constraints on behavior and, hence, the determinants of performance. As long as economic interest in the effects of various rights assignments remained descriptive, it did not encroach upon the protected domain of legal enquiry. But once economists endeavored to discuss notions of optimal property rights assignments, i.e., the norms of conflict resolution, they placed their own traditions and logic into general conflict with the logic and traditions of the law. The subject matter of this thesis provides but one example of this increasing intellectual competition.

Perhaps this competition is inevitable since the professional interests of lawyers and economists seem to intersect over a set of

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[1]For a review of the arguments against the adequacy of profit maximization as a methodological abstraction see Fritz Machlup, "Theories of the Firm: Marginalist, Behavioral, Managerial," American Economic Review LVII (March, 1967): 1-33; and Eirik Furubotn and Svetozer Pejovich, "Property Rights and Economic Theory: A Survey of Recent Literature," Review of Economic Literature X (December, 1972), pp. 1137-39.

[2]Fundamental works in this line of enquiry are Edith Penrose, The Theory of the Growth of the Firm. (New York: J. Wiley and Sons, 1958); William Baumol, Business Behavior, Value, and Growth. (New York: MacMillan, 1959); R.M. Cyert and J. G. March, A Behavioral Theory of the Firm. (Englewood Cliffs N.J.: Prentice Hall, 1963); and Oliver E. Williamson, Corporate Control and Business Behavior: Managerial objectives in a Theory of the Firm (Englewood Cliffs, NJ: Prentice Hall, 1964).

questions dealing with conflict resolution within productive organizations.[1] This is especially true in the case of the ultimate productive organization within the entire economic system, the large business corporation. Since decision making must necessarily be delegated to groups of small size, conflicts are inevitable. Both economic and legal theory have been concerned with understanding and prescribing mechanisms whereby these conflicts may be effectively rationalized. Both recognize the crucial role that contract negotiation plays in this process. In fact, the corporate form may be defined in terms of contractual interaction:

> The private corporation or firm is simply one form of legal fiction which serves as a nexus for contracting relationships and which is also characterized by the existence of divisible residual claims on the assets and cash flows of the organization which can generally be sold without permission of the other contracting individuals.[2]

While written by economists, there is little in this definition which would be ojbectionable to a lawyer. Nor would there be any professional disagreement over the nature of property rights, the subject matter of contract negotiation within the general economic organization:

> Property rights are understood as the sanctioned behavioral relations among men that arise from the existence of goods

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[1]Productive organizations come in many sizes, including the entire economic system at the extreme. Conflict resolution within entire systems has, consequently, also provided the subject matter for competing intellectual discussion among lawyers and economists. For a brief review of some typical issues see Richard Posner, Economic Analysis of Law. (Boston: Little, Brown, 1972).

[2]M. C. Jensen and W. H. Meckling, "Agency Costs and the Theory of the Firm," p. 311.

> and pertain to their use. These relations specify the norms of behavior with respect to goods that each and every person must observe in his daily interactions with other persons, or bear the cost of non-observance.[1]

Where agreement seems to end is on the issues of contract enforcement, policing, and the nature of the costs to be born in cases of non-observance. Crucial here is the question of the role of government as a potential equilibrating device.

Within productive organizations, many contracts are either implicit or concern subject matter of a subjective, or not easily quantified, nature. The contracts negotiated between the owners of corporate stock and professional management are of this kind. In terms of the legal definition of the corporation, these contracts are quite straightforward. The management contracts with the owners of stock to maximize the value of the corporation, and, hence, the stockholders' wealth.[2] Failure to do so in any way involves a breach of contract. The remedy, or equilibrating mechanism, is outside government intervention in the form of demands for specific performance. If the owners of stock could freely enforce the implicit conditions of their contract with management themselves, there could be no breach of trust in the first place.[3] Hence,

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[1]Eirik Furubotn and Svetozer Pejovich, The Economics of Property Rights (Cambridge, Mass.: Ballinger, 1974), p. 3.

[2]This, of course, defines the trust relationship or the principal agent contract of legal theory.

[3]The inability to engage in self-policing, monitoring, and contract enforcement owes here to the so-called separation of ownership and control which is a technical feature of dispersed ownership of pooled assets. See Adolph Berele and Gardner Means, The Modern Corporation and Private Property, revised edition (New York: Harcourt Brace Jovanovich, 1968).

the coercive power of the state is required to internalize the costs of managerial behavior, where managers breach the legal duties of wealth maximization. In this legal abstraction, interests within the corporate organization are equilibrated by the threat of punishment by the state. Costs take the form of fines, embarrassment, incarceration, or removal from office.

Economic logic generates a different form for the intracorporate mechanism of conflict resolution, one based on a different conception of the contractual nature of the firm. Adding to their definition of the corporation as a contracting nexus, Jensen and Meckling proceed to make the observation that this form of organization is actually

> a legal fiction which serves as a focus for a complex process in which the conflicting objectives of individuals . . . are brought into equilibrium within a framework of contractual relations. In this sense, the 'behavior' of the firm is like the behavior of a market; i.e., the outcome of a complex equilibrium process.[1]

The general application of the market analogue to various forms of human activity, evidenced by this definition of the corporate form of production, has become a common practice in economic discourse. With respect to the firm, however, this was not always the case.

Over its long development the theory of economic organization has fixed the attention of scholarship on providing an explanation for the evolution of D.H. Robertson's "islands of conscious power" within the

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[1]M. C. Jensen and W. H. Meckling, "Agency Costs and the Theory of the Firm," p. 311.

context of the market system, or, "ocean of unconscious cooperation."[1] This issue emerges and re-emerges in each of the significant works on economic organization. For example, Coase asks:

> Why are these these 'islands of conscious power'? Outside the firm, price movements direct production, which is coordinated through a series of exchange transactions on the market. Within a firm, these market transactions are eliminated and in place of the complicated market structure with exchange transactions is substituted the entrepreneur-coordinator, who directs production. It is clear that these are alternative methods of coordinating production. Yet, having regard to the fact that if production is regulated by price movements, production could be carried on without any organization at all, well might we ask, why is there an organization?[2]

Knight's earlier and more fundamental approach is organized along similar lines. In the introduction to his thesis chapter dealing with organized production he observes:

> Hitherto our society has been arbitrarily restricted to the unorganized or individual creation of goods; there has been only 'primary' division of labor, through the exchange of products. We now turn to consider 'secondary' division of labor, or division of occupations within the separate industries, the cooperation of a large number of persons in the making of a single product. This added element in the situation gives us two serious new problems, though closely related; first, the mechanism of the actual organization of product groups through free contract alone, and, second, the division of a joint product among the individuals making different kinds of contributions to its production.[3]

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[1] Dennis H. Robertson, Control of Industry. (London: Nisbet, 1928) p. 85.

[2] Ronald H. Coase, "The Nature of the Firm," Economica 4 (November, 1937) p. 388.

[3] Frank H. Knight, Risk, Uncertainty, and Profit, New Edition (Chicago: University of Chicago Press, 1971), pp. 94-95.

Finally, in a significant modern contribution to the theory of economic organization, Alchian and Demsetz state their purpose in now familiar terms:

> Resources owners increase productivity through cooperative specialization and this leads to the demand for economic organization to explain the conditions that determine whether the gains from specialization and cooperative production can better be obtained within an organization like the firm, or across markets, and to explain the structure of the organization.[1]

Common to each of the abstractions is the dichotomization of the production phenomena into distinct categories. Firms on one hand and markets on the other are clearly proposed to be alternative methods available to individuals as modes of organizing production.

The modern development of economic organization theory has begun to move away from this dichotomy through application. Thus, even Alchian and Demsetz, who introduce their theory with the dichotomy, quickly blunt its importance through criticism of Coase's abstraction. In the "Nature of the Firm" Coase bases his theory of organization on the idea that in markets, price is the sole disciplinary and control device. However, the price mechanism is replaced wherever the cost of forming short-run contracts exceeds the cost of command coordination. This distinction among organizational structures fails to capture the essence of intra-firm behavior. As Alchian and Demsetz observe,

> It is common to see the firm characterized by the power to settle issues by fiat, by authority, or by disciplinary action superior to that available in the conventional

[1] Armen A. Alchian and Harold Demsetz, "Production, Information Costs, and Economic Organization," p. 777.

> market. This is delusion . . . I can punish you only by withholding future business or by seeking redress in the courts for any failure to honor our exchange agreement. That is all any employer can do.[1]

Here the firm is characterized as a market place, though an unconventional one. Instead of price adjustments, discipline is seen to occur through the rather blunt measures of contract termination or court action. Price adjustment is not explicitly included by Alchian and Demsetz in the disciplinary devices open to the contracting parties. Perhaps this owes to their focus on the manager-laborer nexus, rather than between managers and financial input suppliers.

In an effort to extend the analysis of Alchian and Demsetz, Jensen and Meckling develop a theory of corporate organization which specifically deals with the contractual interactions between managers and investors, including bondholders.[2] They focus their analysis on an abstraction in which the original owner-manager of a firm decides to issue common equity shares and bonds for the purpose of expansion. This act of incorporation creates a principal-agent relationship between the investors and management, and the problems of shirking and monitoring common to this form of interaction ensue. The stated purpose of their analysis is to provide an economic explanation of the ownership structure of corporate enterprise. To accomplish this task, they develop a behavioral model of the corporation in which conflicts of interest between the manager and investors are equilibrated by price discipline.

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[1] _Ibid_., p. 777.

[2] M. C. Jensen and W. H. Meckling, "Agency Costs and the Theory of the Firm."

Recognizing that the corporate form requires the delegation of authority to a central manager, Jensen-Meckling note the crucial fact that if both managers and investors are utility maximizers,

> there is good reason to believe that the agent (manager) will not always act in the best interests of the principal (investors). The principal can limit divergencies from his interest by extablishing the appropriate incentives and by incurring monitoring costs designed to limit the aberrant activities of the agent.[1]

The incentive which serves to restrict management behavior is the market value of the firm which the manager trades off against non-pecuniary income in a standard process of utility maximization.

Thus, in some of the most recent developments in the theory of the firm, the sole device invoked by economic analysts to rationalize intra-corporate conflicts of interest remains the self-adjusting market mechanism. This is to be expected since one of the fundamental truths of economic science is the dogged ability of market forces to capitalize the value consequences of individual behavior into objectively measurable prices. When individuals fail to observe the contracted rights they have negotiated, it is reflected in the subsequent value of their contracts. Conflict resolution reduces to a matter of market (price) discipline. In the case of corporate affairs, behavior contrary to the interests of stockholders reduces the price they will be willing to pay for stock, the market value falls, and managers will be forced to internalize the consequences of their behavior automatically.

[1] Ibid., p. 308.

The role of government derived from this understanding does not involve protecting the interests of stockholders from the competing interests of management. The role of an outside coercive force is to stand ready to enforce those property rights which have evolved to promote effective market capitalization of managerial behavior. Examples of these property rights are the ability to sell stock without consent of all other stockholders, the anti-fraud provisions of the federal securities laws which foster easy alienability of stock, and limited liability.[1] As long as the government validates these devices, the interplay of market forces will suffice for the protection of stockholder interests.

With respect to the question of conflict resolution, both legal and economic discussion has been based, therefore, upon conflicting uniform notions of the corporation as a contracting nexus. The implications for the rationalization of conflicts, especially as concerns the role of outside government intervention, have been, as a result, at great variance. Significantly, neither approach holds out the possibility that a mixture of governmental and free-market equilibrating mechanisms may be the appropriate institutional environment. Both abstractions of intra-corporate affairs appear to be intellectually hostile to the notion of jurisdictional variety. The purpose of the next section is to expose the limitations of such hostility through the presentation of an alternative conception of the corporation.

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[1]Harold Demsetz, "Toward a Theory of Property Rights," p. 358.

A Mixed Contracts Approach

The economist's notion of the firm or business corporation, treating the internal affairs of these organizations as if they were wheat markets or grocery stores, is not a universally useful mode of analysis. Implicit in the market analogy is a contractual interaction between managers and investors, which may not totally reflect reality. Stated somewhat differently, the contracts implicit in the new economic theories of the firm may characterize only a subset of the relationships which normally exist between all investors and the central managers of corporate enterprise. As Victor Goldberg has observed,

> The paradigmatic contract of economic theory . . . involves the contemporaneous exchange of claims or rights between the contracting parties and the social milieu within which the contract is consummated are irrelevant. The exchange is cloaked in anonymity with one party selling to the market and the other buying from the market.[1]

Again, this convenient abstraction of economic science must be weighed against the analytic requirements of descriptive accuracy. The form of contracting implied by the market conception of intra-corporate affairs is but one of a possible range of formal or informal contracts: "Contract typically involves the projection of exchange into the future, with contemporaneous exchange as a special case."[2]

Using this concept of the variable nature of contracts, the legal notion on intra-corporate affairs may be interpreted as implying the

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[1] Victor P. Goldberg, "Regulation and Administered Contracts," Bell Journal of Economics and Management Science 7 (Autumn, 1976), p. 426.

[2] Ibid., p. 428.

opposite extreme. The trust nature of the corporation is consistent with what Goldberg calls highly relational contracts, those which bind the parties in such a way, and for an indeterminant future, that it is difficult to expect price negotiations to rationalize adequately the effects of future contrary behavior. Where these contracts are in effect, there may be a role for replacing the market mechanism with some external method of conflict resolution or equilibration. Such a method would be governmental intervention into guaranteeing the substance of contracts, rather than simply their performance.[1]

These highly polarized and polemic conceptions, each strongly held by their respective adherents, suggest the possible superiority of an alternative hypothesis. That hypothesis, to be formally discussed in the following section, suggests that within an economic organization, such as the corporation, a variety of contractual relationships may exist simultaneously. Whether all contracts are discrete <u>or</u> relational is clearly not a useful question. For some individuals and situations, all within the otherwise homogeneous category of manager-stockholder relations, the ruling contracts may be quite like the discrete ideal of economic analysis; for others, it may be closer to reality to apply the highly relational norm. What will be demonstrated directly is that the question is ultimately an empirical one which reduces to the <u>relative</u> ability of market discipline and government regulation to

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[1]Goldberg uses this logic as the basis for an appraisal of the regulatory process, especially in the agency regulation of natural monopolies. The concept of a range of contracts is general enough to find application elsewhere, such as the present effort.

satisfy the requirements of conflict resolution within organizations, as perceived by their members.

The general approach to be followed is based upon the truism that within human populations, abilities differ. Thus, within the pool or corporate stockholders, the ability to monitor, police, and enforce the contracts implicitly negotiated with management (upon their investment in corporate securities) varies. For example, the trust department of large insurance companies may be far better equipped for such tasks than the typical odd-lot buyer. Recognizing that detailed government regulation of managerial conduct is not free (part of managerial discretion involves risk-taking which often leads to increased wealth for stockholders), each of these investor types may have a different net demand for government interference with the internal affairs of the firm. Ultimately, these differences in preferences are subject to analytical measurement.

What will be argued below is that there exists for each investor in the economy a trade-off function between private and government enforcement of managerial conduct. Because of this trade-off function, which is taken to be continuous, management will have an incentive to limit voluntarily, through the use outside, coercive constraints, its ability to conduct the corporation in a manner contrary to the interests of stockholders. From the point of view of management, the ideal jurisdiction is, therefore, not the one most "lax," but the one optimally restrictive. This theory constitutes a rigorous demonstration of what others have simply asserted. While this is a necessary exercise in

itself, especially given the Delaware Paradox, its importance rests upon the fact that it provides the logical foundation for the efficiency of jurisdictional choice. Given that investors 1) have a trade-off function between government and private conflict resolution and 2) are not all expected to exhibit the same trade-off parameters for these arguments, it follows that the optimal overall pattern of a corporate regulation is one which features a variety of jurisdictions defined over levels of investor protection. Fundamental to this demonstration is the existence of the trade-off between government and private constraints on contractual conduct, which is the subject of the following section.

Government in the Context of "Private" Exchange Behavior

As we have seen, the role of government intervention into the private exchange behavior of individuals, whether in the context of market or firm production, is quite limited in the arguments set forth in opposition to Federal incorporation laws. This is due to the faith placed in the free-market mechanism as a control device for conflict resolution within the corporation or any other type of productive organization. Thus, Coase, in his 1937 article quotes Sir Arthur Salter's dictum that "the normal economic system works itself. For its current operation it is under no central control, it needs no central survey."[1] Similarly, Knight states that the purpose of his enquiry is to understand how and why individuals form themselves into productive organizations

[1] Ronald H. Coase, "The Nature of the Firm," p. 387.

"through free-contract alone."[1] The modern contributions of Alchian and Demsetz and Jensen and Meckling reduce the function of government intervention by implication. Their theories rely on private monitoring of contractual relationships and on the capitalization of monitoring costs into bilateral exchange rates by which economic agents associate. However, the demand for economic organizations need not be a sufficient condition for their occurrence; without some form of outside government restraint on the private economic behavior of individuals, economic organization may be technically infeasible.[2]

As an alternative to home production, individuals may form voluntary economic associations among themselves in order to increase the value of the resources that they command. With the exception of the most rude state of nature, the common mode of association has been the contractual exchange of property rights in owned resources. At this level of generalization the exchange of deer and beaver, wage contracts, and the purchase of common equity shares in large public corporations may be treated, for the purpose of theoretical classification, as like

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[1] Frank H. Knight, Risk, Uncertainty, and Profit, p. 95.

[2] The absolute demand for organizations is based upon their Pareto superiority over unorganized production. This superiority is attributable to the well known advantages accruing to a division of labor and specialization of function. These are gross advantages from which the costs of monitoring viable shirking must be netted out. For another original and interesting attempt to find a place for government in the Arrow-Debreu world, see Earl Thompson, "The Optimal Role of Government in a Competitive Equilibrium with Transactions Costs," in American Re-evolution, Papers and Proceedings, Richard Auster and B. Sears, eds. (Dallas; Chetnan Studies, 1974).

phenomena. Because each involves the exchange of promises rather than goods, the force which makes the exchange desirable also makes economic association technically infeasible. Because it is in each individual's immediate interest to form contracts in which quid pro quo will be only the worst possible outcome, without a legal structure of prior restraint the advantage of economic organization will generally fail to materialize. Thus, any economic association which exists is a mixture of economic and legal attributes, and an economic theory of organized production which includes legal structure at a fundamental level thus has some potential usefulness. This is especially true if the eventual object of inquiry is the modern public corporation, the ultimate contractual association.

Due to the assumption that utility functions are unbounded, all rational individuals will endeavor to increase the value of their initial resource endowments. If an activity results in an increase in utility, then the activity is said to be productive. Productivity is thus an individual, subjective concept, which may only be inferred by an outside observer. However, if a particular activity is voluntarily engaged in by an individual on some finite number of occasions, then its net productivity is inferred as being existent. (Voluntariness means simply the existence of feasible alternatives to the activity engaged in.) Production which is limited to the exercise of effort over resources will be called home production. Home production may involve more than one individual, such as a family, but cannot involve modification of property rights in resources. Production which augments

effort with the modification of property rights will be referred to as economic production; as such, it must involve economic association, since a property right is a null concept for individual and filial production. An economic organization is said to exist whenever an economic association may be declared productive by an outside observer. Hence, individuals engaged in voluntary, ongoing association for the sole purpose of increasing the subjective, individual utility derivable from endowed resources have formed an economic organization.

While the existence of an economic organization is proof of its productivity, there is nothing in the definition of such an activity to indicate its technical feasibility. To be feasible, a potential economic organization must represent, to any individual considering the formation of such an activity, an increase in production value over home production. Since all economic organizations must begin with an initial economic association, the feasibility of the organization relies on the ability to negotiate an initial contract (association). Only in pure barter is the feasibility of economic association unequivocal. Only this form of economic association involves modifications of property rights which are not subject to unilateral mistakes or misrepresentations. Fraud is impossible. If association is potentially productive, a finite exchange rate effecting the bilateral modification of property rights through exchange will be negotiable and reflect true values. Gains from exchange are a necessary and sufficient condition for barter associations to occur and, hence, for barter

organizations to exist. The following is a form of proof for this association.

In pure barter, the ability to misrepresent or be mistaken about the exchangeable value of a claim to the service flows accompanying goods and services is nil. Here exchangeable value only refers to a correspondence between what is claimed _ex ante_ by the offeror and what is performed after the negotiation of the contract. Since barter involves property rights modifications over present and specific objects, the productivity of the association cannot be defeated by misrepresentation or mistake (mistake may defeat productivity only in the sense that the increased utility did not occur for reasons other than that the represented quality of the claim exchanged was inconsistent with the _ex post_ realization). Once the nature of economic association cannot be described as pure barter, gains from exchange revert to being a necessary, but not sufficient, condition of economic association. The sufficient condition involves the feasibility of a finite contract price.

Doctrinal Aspects of Feasibility

One may recognize in the feasibility issue a question of central concern to the 18th century British moral philosophers. In the case of Adam Smith, of course, the issue is explicitly brought to the forefront. Summarized by Mizuta, the general question raised and addressed by such thinkers as Shaftesbury, Hutcheson, Hobbes, Mandeville, Hume, and Smith concerned the following: "How is it possible to construct a peaceful social order from a number of individuals acting on the principle of

self-love?"[1] The naked fact that social interaction may benefit each individual relative to the solitary existence of the natural order does not suffice to explain an end of man's "state of war." In a clear example of ex post rationalization, the feasibility of civil society was explained by a few, notably Shaftesbury and Smith's mentor Hutcheson, by the philosophy of benevolence.[2] Economic organization was feasible because the general order of men were not radically self-interested. Others were quick to point out that the spirit of fairness and sympathy was more useful as a way to differentiate men rather than define man. When dealing with the possibility of cohesion in commercial society, as did Hume and Smith, the robustness of the philosophy of benevolence rapidly declined as an equilibrating device. Quoting once again from Mizuta:

> Shifting the focus from the wise to the vulgar multitude, Smith brings the greater and selfish part of mankind to the foreground of his picture of that form of civil society which he calls also the commercial society. Since this is a great society in which the multitude go beyond narrow circles of friendship and kinship even in their daily life, nobody can expect excellent virtues of sympathy and benevolence among them. They are not wise enough to see a great society or the society is too great for their understanding.[3]

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[1] A. Mizuta, "Moral Philosophy and Civil Society," in Essays on Adam Smith, eds. A. S. Skinner and Thomas Wilson. (Oxford: Clarendon Press, 1975), p. 25.

[2] Earl of Shaftsbury, Characteristics of Men, Manners, Opinions, Times, 3 volumes, 3rd edition (N.p., 1723); and Francis Hutcheson, A Short Introduction to Moral Philosophy, (N.p., 1747).

[3] See A. Mizuta in Essays on Adam Smith, 1975.

While the moral sentiments may enter an abstract and general evaluation of how individuals are able to interact in mutually beneficial society, it breaks down as soon as interest is focused on anything approaching economic associations in a non-filial context.

Hume, however, in the Treatise of Human Nature, predates Smith in focusing attention on the particular problems posed by economic interaction.[1] The beginnings of a general theory of economic organization are clearly evident in Hume, where attention is directed to both the supply and demand side aspects of productive interaction. The desire to associate with other (self-interested) individuals is simply a necessary part of the frailty of human existence:

> Of all the animals, with which this globe is peopled, there is none towards whom nature seems, at first sight, to have exercis'd more cruelty than towards man, in the numberless wants and necessities, with which she has loaded him, and in the slender means, which she affords to the relieving these necessities . . . 'Tis by society alone he is able to supply his defects . . . By the conjunction of forces, our ability increases: And by mutual succour we are less expos'd to fortune and accidents.[2]

Yet the demand for economic association may effectively be limited to the exchange of specialized objects, if the control of self-interest is not effected. The same logical difficulty facing the earlier moral philosophers in explaining cohesion in general civil society must be faced in explaining commercial society, only the difficulty is more severe.

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[1]David Hume, A Treatise of Human Nature, ed. L. A. Selby-Bigge, (Oxford: Clarendon Press, 1951).

[2]Ibid., p. 484.

Assuming that one may perceive the Pareto-inferiority of pure barter association, the desire to engage productively in more generalized (contractual) association will be thwarted by the universal self-interest of the human species. Acknowledging the essence of commercial interaction, Hume observes that men "are not easily induced to perform any action for the interest of strangers, except with a view to some reciprocal advantage, which they had no hope of obtaining but by such performance."[1] If the action is a simple bilateral exchange of objects, performance is not something one must worry about or otherwise react to. Once barter is not descriptive of an economic association, a fundamental difficulty arises; one must necessarily trust that contractual performance, which must necessarily be delayed relative to barter, will actually occur. Hume is dubious as to the efficacy of trust since

> so much corruption is there among men, that generally speaking, this becomes but a slender security; and as the benefactor is here suppos'd to bestow his favors with a view to self-interest, this both takes off from the obligation, and sets an example of selfishness, which is the true mother of ingratitude. Were we, therefore, to follow the natural course of our passions and inclinations, we should perform but few actions for the advantage of others.[2]

In other words, the trust mechanism is not the sufficiency condition sought after above.

If commercial association were limited to barter, an outside observer such as Adam Smith would be quick to point out the inefficiency

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[1]David Hume, A Treatise of Human Nature, p. 519.

[2]Ibid.

of the resulting allocation of resources. What Hume describes is, in modern terms, an example of market failure of the most primitive form. Mutually beneficial associations through markets or other more formal organizations fail to appear in an unadorned state of nature. In Hume's words, "here then is the mutual commerce of good offices in a manner lost among mankind, and everyone reduc'd to his own skill and industry for his well-being and subsistence."[1]

To resolve the dilemma of primitive market failure, Smith and Hume employ significantly different *ex post* rationalizations of the undeniable empirical fact that voluntary contractual associations do exist. Smith, persisting somewhat in his reliance on the principle of benevolence as a check, argues that morality and reason lead men to form economic associations with minimal outside enforcement of contractual integrity. This provides the basis of his attraction to the notion of self-regulation and natural liberty as generally adequate feasibility conditions for productive economic associations.

Hume has little faith in morality, believing other mechanisms comprise a superior substitute. It is important to note that Hume does not make the error of imposing upon man reason in the purely rationalistic sense. That is to say, he does not picture someone observing the social opportunity cost of pure barter and then taking corrective steps. Hume's mechanism is much less elevated, though much more convincing, than a natural order of benevolence among traders.

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[1] *Ibid*., p. 520.

Recall the nature of what has been referred to here as primitive market failure. Individuals are negligent in their contractual performance because

> the consequences of every breach of equity seem to lie very remote, and are not able to counter balance any immediate advantage, that may be reap'd from it; and as all men are, in some degree, subject to the same weakness, it necessarily happens, that the violations of equity must become very frequent in society, and the commerce of men, by that means, be render'd very dangerous and uncertain.[1]

But this does not turn men toward some planned-out development of corrective institutions. In fact, Hume holds that the cause of primitive market failure contains the seeds of its own rectification. The failure to discount properly the remote consequences of current, self-interested actions precludes the feasibility of economic association. But this is a universal attribute of human conduct not limited to commercial intercourse:

> When we consider any objects at a distance, all their minute distinctions vanish, and we always give the preference to whatever is in itself preferable, without considering its situation and circumstances. This gives rise to what in an improper sense we call reason, which is a principle, that is often contradictory to those propensities that display themselves upon the approach of the object.[2]

Because of this, men prefer the immediate fruits of expeditious action without fully discounting the effects of that action in the future. Hume applies this regularity to the development of institutions of _prior_ restraint. Through experience, men come to recognize their weakness

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[1] David Hume, _A Treatise of Human Nature_, p. 535.

[2] _Ibid_., p. 536.

and their inability to prevent its adverse consequences through reflection, resolution, meditation and friendly advice. Thus

> having experienced how ineffectual all these are I may embrace with pleasure any other expedient, by which I may impose a restraint upon myself, and guard against this weakness.[1]

From this insight, Hume develops what may be called a "tying-oneself-to-the-mast" theory of the economic function of government.

To avoid the social cost of primitive market failure, men will voluntarily restrict their freedom of action through the "hiring" of coercive, regulatory agents. This action is surely an expedient (and clearly contrary to long-run individual benefit if it is misused or runs amok), but it is chosen simply because it provides a mechanism to increase the extent and value of economic association through the ability to employ contractual promises. If the observance of statutory laws of fair dealing were automatic (the natural order approach) and universal (philosophy of benevolence) then no recourse to coercive prior restraint would be required. Yet, "'tis impossible to change or correct anything material in our nature, the utmost we can do is to change our circumstances and situation, and render the observance of the laws of justice our nearest interest, and their violation our most remove."[2] At the level of execution, the economic function of government arises as if men hired outside agents to enforce the integrity of voluntarily negotiated contracts. These individuals, being retained

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[1] _Ibid_., p. 537.

[2] David Hume, _A Treatise of Human Nature_, p. 537.

to enforce "justice," find its enforcement in their immediate interest and "are not only induced to observe those rules in their own conduct, but also to constrain others to a like regularity, and inforce the dictates of equity thro' the whole society."[1,2] If scale economies exist in the evolution of public government *qua* economic regulator is adequately explained.

Important to note here is the point, implicit in Hume's analysis, that government regulation of private economic association 1) arises endogenously from the technical attributes of contractual exchange, and 2) satisfies the sufficiency condition for economic association. But Hume's discussion does not demonstrate the possibility that the *level* of government intervention, defined over enforcement levels, may also be endogenous to particular contractual associations. A modern analysis of contractual association will serve to make this point explicitly.

Original Market Failure As Adverse Selection

In order to demonstrate the desirability of a range of government intervention levels, it is first necessary to model contractual association, market failure, and feasibility in modern terms. By so

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[1]A natural parallel may be drawn here between Hume's government agents and Alchian and Demsetz monitors. Methods for monitoring the monitors have been the subject of recent economic enquiry. See Gary Becker and George Stigler, "Law Enforcement, Corruption, and Compensation of Enforcers," *Journal of Legal Studies* 3 (January, 1974): 1-18; and Robert J. Barro, "The Control of Politicians: An Economic Model," *Public Choice XIV* (Spring, 1973): 19-42.

[2]David Hume, *A Treatise of Human Nature*, p. 537.

doing, the tradeoffs between private and public mechanisms for intra-corporate conflict resolution may be explicated in familiar language. A useful analogy may be found between the concept of original market failure and the principle of adverse selection common in the theory of insurance.[1] In this subsection, adverse selection will be incorporated into a general theory of economic organization.

The primary resource owned by individuals is their productive power which, combined with their accumulated wealth, forms the basis for exchange. The nature of most economic interaction is, therefore, the exchange of claims to service flows to objects or human capital, rather than objects themselves (human capital transactions are, of course, illegal). Thus, the singular feature of contractual exchange, distinguishing it from primitive barter, is that the claims exchanged and the service flows which they represent need not be equivalent. Moreover, the imposition of the rationality condition on transactors implies that as a first approximation, equality of claims and actual service is not rational; individuals seek to maximize utility, not exchange equivalent values. Thus, in contractual exchange the desire to misrepresent the value of exchangeable claims is assumed to be everywhere present. This may be taken as a natural, or at least inevitable, attribute of economic interaction.

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[1]The original economic investigations of this principle are found in Kenneth Arrow, "Uncertainty and Medical Care," American Economic Review LIII (December, 1963): 941-174; and, George Akerlof, "The Market for 'Lemons': Quality and Uncertainty and the Market Mechanism," Quarterly Journal of Economics 84 (August, 1970): 488-500.

The desire to misrepresent can only be translated into actual misrepresentation in associations which are not economic organizations. An economic organization, it will be recalled, exists when a contractual exchange (association) occurs between two rational individuals concerning the same type of property claim more than once, is not coerced. Thus, government organizations and slavery are not economic, because they are not voluntary. Primitive barter is not an economic organization, because such exchange involves goods whose properties are known, not misrepresentable claims. Finally, one-shot exchanges are not economic organizations here, by definition. Thus, the question of protecting against "rip-offs" is never an issue in the present discussion. Where transactors must deal with one another over more than a single exchange, the value consequences of misrepresentative behavior will be capitalized into exchange rates which rule all subsequent exchanges. This does not imply that the effect of misrepresentation is the immediate termination of subsequent exchanges. An inifinite exchange rate (i.e., termination of exchange) is only the extreme of a variety of adjustments which may occur and govern transactions after the initial exchange.

By defining an economic organization over at least two exchanges of like claims, the efficiency of the information market was indirectly imposed in these associations. Given rational transactors, each individual must bear the value consequences of his actions. Misrepresentation will thus lower the exchangeable value of the claims of the fraudulent party by an amount sufficient to facilitate ongoing interaction among those who would join with the individual to reap the gains

from cooperative specialization. Since the gains from such activity cannot be enjoyed without exchange, price adjustment and not exchange termination is the first logical reaction to fraud. This may be contrasted with Hume's analysis: "When a man says he promises anything, he in effect expresses a resolution of performing it; and along with that, by making use of this form of words, subjects himself to the penalty of never being trusted again in case of failure."[1] Also consider the mechanism implied by Alchian and Demsetz: "The firm . . . has no power of fiat, no authority, no disciplinary action any different in the slightest degree from ordinary market contracting between any two people. I can 'punish' you by withholding future business or by seeking redress in the courts for any failure to honor our exchange agreement."[2] The corner solution is only sensible where the value of the fraud exceeds the lost gains from specialized cooperation, at the new exchange rate, in subsequent transactions. For most cases, the exchange rate adjustment might be the only rational course of action. This is especially true when transactions are numerous and of relatively small value.

Recalling the precise definition of economic organization, it is clear that such an entity cannot occur without a first, blind transaction. Once one such transaction occurs, subsequent transactions will occur at exchange rates which adjust for fraudulent misrepresentation.

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[1]David Hume, A Treatise of Human Nature, p. 510.

[2]Armen A. Alchian and Harold Demsetz, "Production, Information Costs, and Economic Organization," p. 777.

The market failure which may characterize exchange without external government enforcement of contracts stems from the anticipatory discounting of fraud, prior to the first transaction in any potential economic organization. The problem has been defined as adverse selection and provides the basis of a new economic explanation for the demand for government regulation.

Adverse selection is a phenomenon which only occurs when individuals interact through contractual exchange. The problem arises from an asymmetry of information concerning the quality of exchangeable claims among potential transactors. For the types of transactions of concern here, the most important attribute of an exchangeable claim is the probability of its accuracy. Thus, the market value of an exchangeable claim will <u>differ</u> between the offeror, who knows for certain the claim's quality, and the offeree, who simply cannot, as a practical matter, have the same knowledge.[1] Informational asymmetry is not a problem common to primitive barter, by definition. The importance of this observation lies in the fact that it is difficult to generate information about the quality or value of contractual exchange. Since such exchange is fundamentally concerned with exchanges in claims to service flows, at the time of any contractual transaction there simply does not exist anything to gather information about. This is particularly true in service contracts and investments, as shall be illustrated in a subsequent section.

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[1] George Akerlof, "The Market for 'Lemons,'" p. 489.

While each individual who may participate in economic organization has the desire to misrepresent his contractual claims, the working of efficient information markets (recall that efficiency is synonymous in this context with organization) causes the potential value consequences of such activity to be included in the decision calculus of potential participants. Therefore, each individual has the incentive to not engage in mispresentation unless one-shot exchanges, and not economic organizations, are the economic association of interest. But no individual knows that any potential trading partner is interested in one-shot exchanges or in the formation of a genuine economic organization. Therefore, a rational expectation will be formed which is manifested in a prior discount of the value of all first-time transactions. Information asymmetry leads to exchange rate asymmetry; supply prices will be higher than demand prices, independently of the true, but unknown, quality of exchangeable claims.

Adverse selection occurs when individuals recognize that claims which are offered under these conditions are only those of the poorest quality. Only these would be offered at prices which reflect the impact of information asymmetry. Therefore, no exchanges will occur since no one will trade a claim of known value, his own, for one which is necessarily less valuable by virtue of the fact that it is offered in the first place. The market process will fail to generate any associations which could lead to economic organization, despite the fact that individuals are willing to do so because of the mutual benefits

from specialized cooperation which exist. This is the meaning of primitive market failure, stated in modern terms.

The external effects of this form of legitimate market failure are measured by the lost incremental value of production over home production. Each individual would be better off if all individuals would not misrepresent, but no individual can afford to act alone. Eventually non-rational behavior will result in an exhaustion of endowed resources, and home production would be clearly superior to economic specialization. Only home production and barter would occur. An individual with valuable claims would stand to gain if he could provide warranties of quality with his claims, but warranties are but claims themselves and, hence, they will be subject to adverse selection as well. Given the losses in production value, it pays "society" to devote some portion of the gains from specialized cooperation to hiring an outside coercive agent to somehow regulate the self-interested conduct of rational individuals. By voluntarily agreeing to limit their freedom to misrepresent the value of their claims, all who would stand to gain from specialized association would be able to realize an improvement in the net value of their resources. Hence, the rationale for government regulation of the private affairs of individuals 1) is endogenous to economic exchange, 2) is partially due to information asymmetry, and 3) is individually demanded by contracting agents in their own self-interest.

An individual's demand for prior, coercive restraints on contractual exchange is decidedly not a demand for protection against the

misrepresentations of others. An individual seeks a regulated contractual environment in order to be protected from the over-discounting of his own promises by the market. Fraud may be dealt with in ongoing associations through price adjustments, as has been demonstrated. Government regulation of the content of contracts, i.e., their performance probability, is a technical substitute for defensive discounting, one which provides the sufficiency condition for the feasibility of economic organizations.

Optimizing the Value of Contractual Economic Organizations

Since economic organizations predominate the voluntary associations of people, it must be the case that some mechanism(s) exist which reduces the problem of information asymmetry in general. In fact, several devices are potentially useful. First, the lost value of production which results from original market failure is a social cost which may provide a source of funds whereby individuals might employ outside agents to provide information which will balance both sides of the market and facilitate finite exchange rates. One such agent is, of course, the disinterested government representative which guarantees the integrity of promises made in the course of business. But it is best to think of government enforcement as but one alternative source of market information. With the value of such services evident it is reasonable to expect that some form of private enterprise will also seek to provide this function. In fact this function is regularly fulfilled by such private agents as department stores and securities analysts. But government enforcement of contracts may

provide simply the most efficient source of information symmetry; clearly, it is becoming more widely used.

While the economic function of government may be abstracted as providing the solution to original market failure, this does not exhaust its usefulness. Individuals may use government enforcement to substitute for their own production of information concerning the quality of their exchangeable service flow claims. The goal of any individual who engages in economic organization is to maximize the value of his participation. This involves maximizing the value of his contractual claims. Given efficient information markets an individual may choose to misrepresent his claims and suffer a drop in their value. Or he may accurately represent them and enjoy a higher exchange rate. If an individual's utility function is defined over both pecuniary and non-pecuniary benefits, he will not be indifferent to these possible courses of action. In fact, he will choose that combination which maximizes his utility in the conventional manner.

Since the costs of contractual misrepresentation fall upon each individual conveying valuable claims, the choice of enforcement environment falls to him. However, it is also true that the tastes of the offeree determine the value consequences of various degrees of enforcement effort. Therefore, while the optimal enforcement level is a matter of joint determination by all members of voluntary economic associations, it is dominated by the "buyer" side of the organization. This matter requires elaboration.

Economic organization has been characterized as the bilateral exchange of contractual claims. Yet the discussion of information asymmetry implied that in particular associations different roles were distinguishable. In any economic organization there may be differences in the degree of quality uncertainty associated with the various exchangeable claims. The claims whose value is relatively more susceptible to be misrepresented may be said to belong to the seller, or offeror. As an example, consider an organization comprised of a stream of wage labor contracts. If one of the parties to the organization supplies claims to the service of his labor resources in exchange for claims to future product, then there may be no useful distinction between "buyer" and "seller" roles in the association. However, if instead of this type of trade, actual goods are exchanged for promised labor service flows over the contract period, then information asymmetry occurs. The supplier of labor service provides contractual claims whose value is relatively less certain. Of course, the goods may be defective, since it is the nature of contractual exchange that misrepresentation is always possible. But the relative differences make the wage-receiver the seller whose actions will be discounted in the exchange rate. Thus, it is the labor service supplier who would seek an optimal legal structure. Of course, it is the preference function of the employer which ultimately determines this choice. His subjective trade-off between government enforcement and his own discounting will determine the value of government regulation, in terms of marginal wage offered, to the laborer.

Individuals will engage in misrepresentation to the point where their subjective value of association is maximized, and this does not necessarily imply that this point will be zero. If purposeful misrepresentation reduces the exchangeable value of claims less than the cost of perfect representation, then some positive level of misrepresentation will characterize the organized production entity. This becomes increasingly true as the nature of the organization becomes more contractual. There is little to be gained in misrepresenting the value of promises which, due to the technical characteristic of the claims involved, are difficult to misrepresent in the first place. Hence, the trade-off is most commonly limited to highly contractual organizations which involve the performance of services rather than the exchange of claims to service flows in objects.

Clearly, the value of a contractual promise will rise as the probability of its performance approaches unity. The offeree's estimate of the probability of performance is raised either through his own production of relevant information (e.g., bonding), through the offeror's production (e.g., monitoring), or through government certification (i.e., regulation). That is, in economic organizations, associates may substitute among 1) the degree of misrepresentation of contractual promises, 2) the use of self-produced information concerning the probability of performing negotiated promises, and 3) the exposure to government enforcement of contractual integrity. These provide the arguments of a technical tradeoff function which, when optimized, will maximize the value of any given economic organization, i.e., its productivity.

Clearly individuals may choose to represent perfectly the value of their exchangeable claims. Eventually, over a small number of transactions, this choice will maximize the exchangeable value of their claims, *ceteris paribus*. Information is efficiently transmitted and capitalized into exchange rates in economic organizations because they are voluntary and ongoing. Likewise, any misrepresentation will be capitalized into exchange value. The case of exculpatory clauses in contracts provides an example.

Assuming the economic organization in question is feasible, it is clear that the value of a contract will be lower if an exculpatory clause is included in the contract. But it may be that the decreased value of such contracts to buyers is less than the increased cost to sellers of having to honor contractual promises, which is the case when contracts are with exculpatory clauses. If this reflection of diverse preferences exists, the inclusion of the clauses in a Pareto-superior move and should be undertaken. This illustrates the potential tradeoffs which exist between price adjustment and self-enforcement of contractual claims. Regardless of the choice of contract type, the exchange rate between claims will fully reflect the nature of the contract; decision makers cannot escape the value consequences of their actions in economic organization. But because of differences in tastes and abilities, the choice between letting prices, or terms, equilibrate the exchange relationship is not necessarily neutral.

Recall that firms and markets both require economic association. Also recall that firms are whole systems of economic associations,

which have been negotiated into a variety of contractual organizations (multiple contract associations). Within any firm so characterized, there will be clusters of homogeneous organizations characterized by their contractualness. Thus, labor-wage associations, land-rent associations, bond-currency and share-currency organizations may be distinguished within the firm by the temporal displacement of performance from negotiation. But each ongoing association is, perforce, at least a quid pro quo from the point of view of those involved. But, each contractual association will feature a different trade-off among control mechanisms to optimize production value.

Some will produce a maximum value of production through little outside coercive regulation and relatively more discounting and private information gathering. These will be commonly those associations most like bilateral barter exchange; because the lag between negotiation and full performance is short, discounting is most effective in controlling misrepresentation. Exemplary is the ongoing exchange of currency for goods used in production within the firm. But as the association becomes more contractual, i.e., as the technical ability of potential associates to produce information relevant to estimating accurately the probability of promises being performed rises, the ability of government regulation to affect the level of discount rises.

Economic associations which are highly contractual are those where, due to the long lag between opportunities to re-negotiate, the technical feasibility of misrepresentation is high. These are otherwise known as long-term contractual associations. With this type of interaction

1) anticipatory discounting will be high, 2) the technical ability of outside restraint of misrepresentation to prevent deep discounting will be greatest. Another way of characterizing long-term contracts is to recognize that as performance is delayed from negotiation (and the committing of valuable consideration), there enters an element of trust in the association. There is always some element of trust in one's expectation of contractual performance which calls for defensive discounting. As a consequence, large gains accrue to the provision of guarantees of represented value as joint products accompanying exchangeable claims. If government regulation may be secured as a means of providing such guarantees, then they will be used. Once again the purpose of such prior restraint through outside regulation is to optimize the productivity of ongoing economic association rather than protect individuals from misrepresentation.

As an example, consider two types of contractual association which may occur in a business firm. Consider the wage-labor contract (again) and the provision of fire insurance services. Assume laborers offer their services to the personnel manager-foreman of firm on a weekly basis. On Monday the laborer and foreman agree to associate at some negotiated wage to be paid on Friday afternoon in good currency. Because there is a five-day lag, the foreman may initially discount the value of the laborer's claim to the service flows of his human resources quite heavily. After a week's observation, the contractual association becomes bilaterally alienable. On the next Monday morning the foreman and laborer 1) may terminate the association, 2) may renew

the association intact, or 3) renegotiate the terms of the association based upon experience. Of note is the fact that the exchange rate (wage) will fully reflect the cost of monitoring the laborer's performance; that is, the discount invoked by the foreman will never be zero. But because of the nature of the association, the private gathering of information concerning the value of laborer's claims (monitoring ala Alchian and Demsetz), and subsequent capitalization of these costs into the negotiated exchange rate serves adequately as a disciplinary device. The value of the laborer's resources is maximized by optimal shirking and discounting without external regulation. What of the insurance-premium association?

There is clearly a vast difference between the wage-labor association, and contracting for fire insurance. The lag between negotiation and performance may be infinite. Further, this example highlights the ease with which the roles of offeror and offeree may be confused. Someone wants to form an association to reduce the costs associated with fire hazard, and so negotiates with another individual dealing in such services. The contractual association which may result is the extreme of contractualness, i.e., heavily agency laden. To negotiate a premium, two value discounts must be formed. First, the insurant must estimate the probability that the insuror will perform in case of fire. Second, the insuror must estimate the probability that the insuree will not alter the probability of experiencing a fire (moral hazard). Heavy anticipatory discount will predictably result, since the period between negotiation and the earliest opportunity to

renegotiate is so long. There is, however, a private technology available to aid the estimation of performance probabilities. The insuror may gather information on the safety measures taken by the insurant through on-site inspections. Similarly, the insuror may gather information on the performance of the insuror, as fires occur among his other associates. But these are likely to be costly, particularly if they are to be effective. Thus, in case of such contractual association, government regulation may readily substitute for private measures. Licensing of the insuror and legal sanctions against arson may be able to reduce anticipatory discounting greatly vis-a-vis private information gathering and discounting. The imposition of prior legal constraints may raise the value of the association for all its members.

The technical substitutability of government for private quality assurance determines the optimal level of enforcement for any given economic organization. The role of individual preferences and tradeoff functions becomes paramount when it is recalled that economic organizations are defined over voluntary bilateral exchanges among natural individuals. Thus, the choice of legal structure is a matter of optimization no less than the choice of exchange rates or trading partners. The value of government enforcement will be greatest where the ability of the offeree to generate information relevant to the probability of performance is most limited. Thus, where the offeree is able to generate such information (the cost which, of course, is capitalized into the discount rate) readily, the technical substitutability of government is low. Hence, the level of enforcement required

to maximize the value of production will be correspondingly low. As for the contractual nature of the organization, the less contractual the entity, the less will government enforcement impact on exchangeable value. Once again, where the ability to misrepresent the value of a contractual claim is low, there is little to be gained by invoking coercive constraints on misrepresentation. Exchange ratio adjustments perform the task of maintaining quid pro quo efficiently.

Before proceeding, one point must be reiterated. The concept of technical substitutability is deceptive. The ability of government to substitute productively for private sources of information and prior discounting is ultimately a mixture of objective and subjective elements. It is the offeree's tastes for protection which determine the marginal impact of regulation on the exchangeable value of the offeror's claims. If the offeror could choose the level of outside restraint on his ability to misrepresent in a continuous fashion, the value of his claims may be observed to rise, objectively, in the market. But this trade-off between legal structures and exchange value is ultimately a function of the tradeoff between governmental guarantees of performance and prior discounting. The whole system is interconnected and determinant. There is no difference in effect whether government regulation is viewed as protection against misrepresentation or the discounted consequences of the adverse selection phenomenon. In either case, there will be for each economic association a value maximizing level of outside interference which depends upon the underlying tradeoff function relevant to that particular association.

The theory of government intervention into private economic organization may now be summarized. Such organizations will be feasible only if the associates are able to gain membership at finite exchange rates. The economic function of government enforcement of contractual integrity is to reduce the disparity between offeror and offeree evaluations of the exchangeable value of contractual claims. Prior to government intervention into private economic association, each associate could protect himself from the value consequences of misrepresentation through negotiating down the price of membership. Without government such private behavior was seen to produce exchange ratios for some types of associations which precluded formation of contracts through voluntary bilateral exchange. Once associations became feasible through government, they could be strung together to form economic organizations.

Economic organizations maintain viability, once again, through negotiated membership price, or exchange ratios. Because they are voluntary and ongoing, such entities are characterized by efficient information transmission; the value consequences of individual behavior, defined over various levels of misrepresentation, are capitalized into exchange ratios and, thus, born by the responsible individuals. There exist internal technical tradeoffs between 1) misrepresentation and the discounted value of claims, 2) the intensity of prior government restraints on misrepresentation, and 3) the value of exchangeable claims operating through offeree discounting. Further,

individuals within organizations differ in their ability to generate information privately about the probability of contractual performance.

Thus, the value of an economic organization will be optimized by some combination of misrepresentation of value, private information gathering concerning the probability of such misrepresentation, and level of government enforcement of contractual integrity. The important point to emphasize is that the optimal level of enforcement is functionally related to the nature and preference patterns of associating members. Therefore, unless it may be assumed that all individuals within economic organizations are uniform in their preferences for various levels of government protection, a monolithic regulatory environment is non-optimal. That is, individuals will be able to increase their value of economic production if they are able to arrange themselves among jurisdictions which afford a variety of protection levels. The corporate organization will now be discussed within this general framework.

The Corporation As Economic Organization

Summarizing the discussion to this point, economic and legal commentators have been observed to differ greatly in their professional attitudes toward government interference with the internal affairs of corporate enterprises. Arguments for and against a larger role for government protection of stockholders imply a different marginal technical rate of substitution of government for private methods of internal conflict resolution. These attitudes are based upon differing notions of the type of contractual relationships existing among stockholders

and managers. It has been suggested that these evaluations fail to recognize that within the corporate sector a range of contracts is possible depending upon the relative abilities of the contracting parties to substitute their private methods of protection for external methods. In the last section, it was demonstrated that this technical trade-off was, indeed, feasible within the context of a general theory of economic association and organization. Voluntary membership in on-going economic associations presented to all members the option of protecting themselves from misrepresented claims through prior discounting. Because of the adverse selection phenomenon, it was demonstrated that a demand for legal restraint of private economic behavior would be generated by those offerors who stood to avoid deep discounting by such prior restraint. This demand was seen to be derived from the preferences of corresponding offerees defined over private and government sources of information about performance probabilities as reflected in the discount they applied to contracts. The conclusion reached from this process was that offerors would choose levels of prior restraint on their behavior which optimized the value of their contracts, taking the costs of limited discretion into account. <u>Thus, the demand for government regulation of the substance of contracts was not based upon protection from fraud by those who stood to be defrauded, but protection from the value consequences of adverse selection by those who offered contracts in an environment where fraud was possible.</u> The purpose of this section is to generalize these results to the corporation and the demand for corporate regulation.

The corporate organization has already been defined as a contracting nexus. That the contracts formed between management and stockholders are voluntary, ongoing, and productive seem hardly questionable. Despite the implications of the term "stockholder democracy," the corporation does not exhibit the coercive characteristics of political organizations. In the latter, the demand for explicit protection, by those governed, from the discretionary consequences of those in control, is a different problem. The ability of the voters to discipline their "managers" through private devices such as voting with one's feet is limited, especially where the compass of the political jurisdiction is great.[1] The telephone, newspapers and the stock exchanges provide the institutional arrangements which give mobility to corporate investors and, hence, make corporate organization voluntary. Moreover, since the decision to hold a stock is the same act as actively deciding not to sell, corporate organization is essentially a sequence of on-going, economic associations between the owners of stock and professional management. Finally, the corporation must be viewed as being mutually productive to all its members. This may be deduced from the fact of its voluntariness or from the definition of productivity used in the previous section. The corporate form of production offers advantages to all its members relative to the next best alternative--the single owner firm or the partnership. Without this form of economic organization, the value of owned resources would be less than with it. The

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[1]See Charles M. Tiebout, "A Pure Theory of Local Expenditure," Journal of Political Economy, 64 (December, 1956): 416-424.

advantages of large scale production are well known; yet, these are not significant to the typical purchaser of common stock. More important is the fact that without the corporation, the owner of excess liquidity would have one less vehicle from which to choose as he attempts to build an asset portfolio.

The contractual relationship between the owners of stock and the managers of the corporation which have, in the past, issued that stock is such that it is only reasonable to identify the stockholder as offerees and the managers as offerors. With the exception of periods of hyperinflation or other forms of monetary uncertainty, the contractualness of the manager's exchangeable claims is the greater. Therefore, in keeping with previously developed terminology, it is the stockholder who will exercise defensive prior discounting of the value of association with management. Naturally, this will be reflected in the clearing price of corporate shares, or their market value. It follows that the managers of corporate enterprises will choose levels of prior legal restraint on their ability to defeat the expected value or quality of their contracts through misrepresentation. Once again, the demand for outside coercive restraint on management discretion is derived from the relative ability of the investors dealing in any particular corporation's stock to substitute private information and discounting for the information provided by a public agency.

To the manager, this trade-off is manifested simply by the impact of various levels of enforcement, defined again over stockholder protection, on the value of his corporation's shares. He selects the

legal environment which maximizes the utility of the value of the corporation to himself, net of the consequent loss of utility a limitation of discretion involves. Whether he gains utility from the value of the corporation's stock directly (e.g., stock options) or indirectly (e.g., prestige or reduced fear of take-over) does not matter here. The implication being pursued in this discussion is simply that managers will seek those jurisdictions which provide restraint necessary to optimize defensive discounting by their stockholder clients. At this point, the overall optimal structure of the legal restraint environment may be deduced from the population characteristics of the entire investment community.

Stockholders have two methods open to them by which they may affect the value of their stockholdings. They may employ the political machinery at their command (voting, derivative suits, and disrupting stockholder meetings), or they may simply sell out their interest in any particular corporation with whose management they disagree. When aggregated over the entire investment community, the latter avenue of protection manifests itself in what has been referred to as private value discounting, or market discipline. (The act of voting with one's feet by individuals depresses the value of stock to the market. Since one cannot cast a negative vote without someone else casting an affirmative vote, the effect of alienation by dissatisfied current stockholder is exactly the same thing as discounting by suspicious would-be stockholders. Focusing on the preferences, abilities, and behavior of this latter group thus causes no difficulty.) Others have contended,

reasonably, that over the years the cost of using political control mechanisms to protect investment values has risen relative to private or market measures.[1] While true in general, the cost differential is not necessarily uniform across investors. That is, the change in the marginal rate of substitution between political and catallactic control mechanisms need not have been uniform. The cost of using private discipline may have fallen more rapidly for some types of investors than for others. This bears elaboration.

A standard result of portfolio theory states that a rational or utility maximizing portfolio will under reasonable circumstances be composed of a variety of earning assets. Another way of stating this result is that investors may protect themselves from the disappointing performance of any one asset by holding many assets in smaller amounts. If an investor holds only equity shares in his portfolio (an example of limited rationality used for expositional purposes only), then he may protect hemself from the unanticipated performance of any one management by "forming contracts" with many. Because his portfolio is diversified, the discount required on any one stock contract may be less than if he held just that one stock. Therefore, as portfolio diversification rises, the relative ability of political control to substitute for market discipline falls. That is, investors who are able to engage in extensive portfolio diversification will place less

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[1] Allan Hyman, "Do Lenient State Incorporation Laws Injure Majority Stockholders?" in Corporate Issues Sourcebook; ed. M. Bruce Johnson (New York: McGraw-Hill, 1977), p. 170.

value on the protection offered to them by outside, coercive restraints on management conduct than those who cannot. For these non-diversifiers, the slope of the price line between political and market mechanisms of conflict resolution has changed less than for those who are able to engage in more diversification.

The various strands of the discussion may now be gathered together. The voluntarily nature of the corporation is adequate proof that stockholders do not need government protection from the self-interested behavior of management. Defensive discounting is open to any investor five days a week from 10 o'clock a.m. to 4 o'clock p.m. eastern time. But some investors may need a strict enforcement environment vis-a-vis management conduct to prevent them from subjecting corporate management to the value consequences of adverse selection. This need is reflected in the ability of management to substitute strict prior constraints on their behavior for low stock prices. For some of their clients, this trade-off is more pronounced than others depending upon their (the clients') personal ability to protect themselves against unanticipated performance (misrepresentation). One method of protection is to include small proportionate amounts of the stocks of many firms in their asset portfolios. The other method, for those who cannot pursue this option is to choose the stocks of corporations that are chartered in strict jurisdictions.

From these premises the hypothesis may be stated that the optimal pattern of jurisdictions within an overall system of corporation law will reflect the various preferences of management for prior restraints

on their conduct vis-a-vis stockholders. These preferences will be based upon the management utility derived from discretion and stock prices. The optimal trade-off among these arguments will vary with the mix of investor types owning the corporation. A mix which is weighted toward those able to diversify their portfolios, or who simply place greater confidence in their ability to select managements favorable to their interests, will lead managers to substitute freedom for constraint.[1] Otherwise, with a mix weighted by those unable to diversify or who are more severe in their defensive discounting, the price of freedom (reduced value of stock and, hence, utility) will be high relative to the benefits of discretion.

The several alternative concepts of the contracting nature of the firm are illustrated in Figure 1.

Along the abscissa and moving from the origin, the level of outside government regulation, or the enforcement of specific performance, increases. Along the ordinate, the level of market discipline relied upon by managers and stockholders to produce a concurrence of interest rises as movement proceeds from the origin. The economic ideal is

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[1]Recall that the problem of adverse selection was one in which those on the buyer (offeree) side of the market could not distinguish the "lemons" from the accurately represented claims. Those with confidence in their ability to find a deal in the market will be less likely to discount below the market clearing price. From the perspective of the manager, the "choice" of a strict jurisdiction is similar to the self-selection phenomenon which has been modeled with respect to job, insurance and credit markets. The purpose of self-selection is to reveal the true value of one's contracts in order to avoid the value consequences of being included with those who will misrepresent theirs. See, in general, the contributors to "Symposium: The Economics of Information," Quarterly Journal of Economics 90 (November 1976): 591-666.

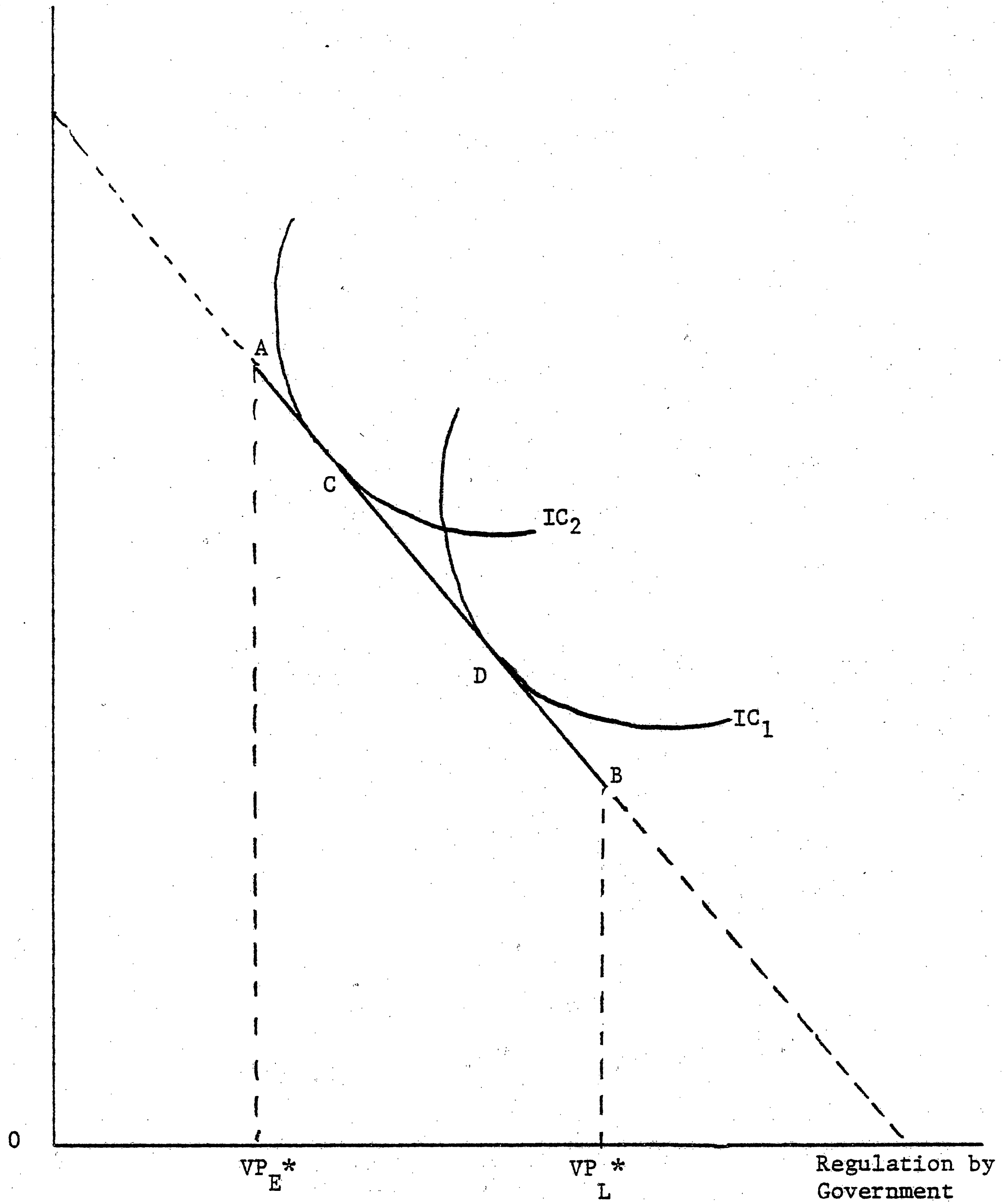

FIGURE 1

MARKET AND GOVERNMENT REGULATION TRADE-OFFS

plotted at A, where the level of government is at the minimum consistent with the prevention of theft, fraud, and other forms of undesirable private coercion.[1] The legal ideal is plotted at point B, where a high level of government interference rules the private exchange behavior of individuals. Point B falls short of some maximum level of interference, because at some point the preclusion of managerial discretion would suppress the profitable behavior of management and would not be worth the safety it produced. The value of corporate participation is maximized at either A or B, depending upon one's concept of the true uniform nature of corporate contracting. At point A, maximum managerial discretion leads to maximum joint utility, since it provides for the freedom necessary for individuals to strike the bargains they prefer, including trade-offs between total profits and that portion going to management. At point B, maximum shareholder protection leads to maximum confidence, investment, and hence, optimal capitalization of the corporate sector.

The alternate conception is illustrated by the 45° line connecting points A and B. The negative unit slope indicates a feasible trade-off between mechanisms of conflict resolution. Each individual

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[1]Fraud here refers to the transaction of securities, not the disappointment of expectations. The government role in enforcing the integrity is not at issue here; clearly, an expectation cannot be formed on the basis of lies. However, for a market counter to even this role of government, see Armen A. Alchian, "Corporate Management and Property Rights," in Economic Policy and the Regulation of Corporate Securities, ed. Henry Manne, (Washington, DC: American Enterprise Institute, 1969), pp. 337-360.

investor will, by the nature of his particular ability to monitor management, have a preferred point along AB. Indifference curves 1 and 2 depict the utility functions of two investors. Investor 1 maximizes the value of corporate participation if he can choose the indicated mix of protection at point C; Investor 2 might prefer the mix at point D. The measurable difference between Investor 1 and Investor 2 is a matter of size.[1] Given the fee structure and practice of securities brokers, the ability to diversify is a monotone increasing function of the amount of assets available for investment. The same is true for the ability of investors to form rational evaluations of future managerial conduct. The service of security analysts is available to virtually anybody, but this is only true to a limit. The availability of good information, like all goods, is governed by a downward sloping demand curve. Therefore, a reasonable approximation is to assume that the trade-off between marginal evaluations of strict government regulation will break on asset size. The total value of corporate participation is maximized only under an overall system of law which permits both 1 and 2 to choose his preferred mix. Where points C and D are feasible, the reward required (real pecuniary rate of yield on stock) will be minimized, since protection from both managerial discretion and the structures of government interference is optimal. This will maximize corporate investment, cet. par., as

[1]Investor 1 is the stockholder who is able, because of a larger average portfolio, to diversify; Investor 2 is the non-diversifier.

required. Therefore, it may be deduced that where the investment community displays a range of investor types, differentiated with respect to their preference for methods of protecting the value of their investments, an optimal legal structure is one which provides jurisdictional variety.

Ownership Structure of the American Corporate Sector

The purpose of this section is not to prove that jurisdictional variety is an efficient institution. Rather, it is to present evidence that the ownership structure of the corporate sector clearly displays the range of investor types suggestive of that conclusion. More rigorous analysis is reserved for the following chapter.

The New York Stock Exchange periodically since 1952 has conducted a survey of share ownership in the United States.[1] These surveys give the distribution of ownership of corporate securities by institutions and individuals. The most recent data available is for the year 1975 and indicate that the market value of all New York Stock Exchange securities was $685.1 billion. Of this aggregate, 67.1 percent ($459.8 billion) was held by individuals, and 32.9 percent ($225.3 billion) was in the portfolios of large institutional investors. Table 1 presents a breakdown of this latter group by type of institution. Each of these investors command millions of dollars of disposable

[1] New York Stock Exchange, The 1977 Fact Book of the New York Stock Exchange.

TABLE 1

INSTITUTIONAL HOLDINGS OF AMERICAN CORPORATION STOCK

1975

Type of Institution	Portfolio Value (bils.)
Insurance Companies	$ 33.2
Investment Companies	37.6
Noninsured Pension Funds	105.0
Nonprofit Institutions	38.0
Common Trust Funds	6.1
Mutual Savings Banks	2.3
Total	$225.2

Source: New York Stock Exchange 1977 Fact Book

assets which are professionally managed and presumably diversified in some manner consistent with the ruling conventional wisdom.

Table 2 presents summary statistics for the approximately 25 million individual shareholders in the American corporate sector. It is clear that the ownership of corporate securities is a fairly widespread phenomenon, with approximately one of six American adults holding at least some stock in their asset portfolios. The low median income of these individuals ($19,000) indicates that a wide range of income groups choose to contract with the managers of the corporate sector. At least half of these 25 million have annual incomes below $19,000 and present a sharp contrast to the disposable wealth available to the typical institutional investor.

The lower part of Table 2 indicates that there are 7,968,000 individual stockholders with annual total incomes below $15,000. How much diversification is possible for these individuals is unknown, but it would seem to be limited. An estimate is given by calculating disposable income on $15,000 at $11,250 (25 percent tax rate). Using this figure and an above average (10 percent) rate of saving out of disposable income, it is likely that at most $1125 is available as yearly investable income. Since it is not likely that all of this would be placed into equity shares, it seems that the ability of the average individual stockholder to diversify his portfolio is rather limited. This is especially true in comparison with the institutional investor's ability to engage in this form of "protection."

TABLE 2

INDIVIDUAL STOCK OWNERSHIP IN THE UNITED STATES

1975

No. of Individuals	25,270,000
Adult Incidence	1 in 6
Median Hhd Income	$19,000

Income Distribution:

	Number
Under $5,000	700,000
$5,000-$9,999	2,636,000
$10,000-$14,999	4,552,000
$15,000-$24,999	8,778,000
$25,000 & over	6,542,000

Source: New York Stock Exchange 1977 Fact Book

These data do not conclusively prove that American stockholders place different marginal evaluations on government protection or strict codes of managerial conduct. However, they do indicate that if such differences are a function of portfolio size or wealth, these differential evaluations are a distinct possibility. The population characteristics of the American investing public seems to display a wide range of types which are suggestive of the efficiency of jurisdiction choice, as outlined above.

Conclusion

In this chapter it was demonstrated that under certain assumptions concerning the preferences of the investing public, corporate federalism is a superior legal institution relative to suggested Federal alternatives. The advantage of regulatory federalism owes to the fact that it is the only legal structure which offers the possibility of jurisdictional choice. While the existence of fifty-one independent jurisdictions capable of drafting incorporation laws is not a guarantee that the resulting structure will display a variety of enforcement levels, a Federal incorporation statute is a certain guarantee that such variety will be absent.

The purpose of the present chapter has been to demonstrate that jurisdictional choice is consistent with efficiency where the population parameters of the investment community take the form of a statistical distribution. A casual observation of the range of stockholders currently participating in corporate production suggests the

reasonability of this assumption and, hence, the efficiency of corporate federalism as a system of economic regulation.

The question of the current structure of American corporation law is the subject of the following chapter. The positive analysis presented there is designed to provide empirical evidence concerning the existence of jurisdictional variety and the impact of corporation law on corporate performance and investor behavior.

CHAPTER 4

CONFIRMATIONS AND CONTRADICTIONS

The argument developed to this point in support of the potential efficiency of jurisdictional variety in the overall structure of corporate regulation rests upon the validity of a particular theory of stockholder behavior. The central hypothesis of the theory, developed from a general theory of government intervention into private economic organizations, concerns the existence of differential marginal evaluations of government regulation of managerial conduct within the investment community. The purpose of this chapter is to derive testable implications from this theory of stockholder behavior and subject them to a process of empirical verification. Based upon the casual evidence presented in the preceding chapter, it appeared that a range of investor-types does exist. Legal commentary on both sides of the issue of reforming corporate law agree that substantial differences exist among the several state incorporations laws, though they differ over whether these differences are important for stockholder welfare.

The first section will present a simple model of corporate behavior, which will recapitulate the central points of the primarily logical discussion in Chapter 3. The second section will develop several testable implications from this model and contrast them with other hypotheses concerning the corporate sector. These competitive

hypotheses will then be subjected to the empirical record of corporate behavior in the third and fourth sections. Finally, in a concluding section, the empirical results will be incorporated into a final analysis of the efficiency of corporate federalism.

Behavior in the Corporate Sector

The several key points of the discussion presented in Chapter 3 may be briefly summarized.

Because of the adverse selection phenomenon, outside government interference into the private affairs of stockholders and managers was seen to be productive. The adverse selection pathology occurred as a result of an information asymmetry. In terms of the behavior of the corporate sector, the managers who were willing to act in a manner consistent with profit maximizing norms were subject to adverse selection in the market, because stockholders discounted stocks on the basis of the worst possible behavior of managers. Without guarantees on behavior, managers faced low stock prices and hence, low capitalization, profits, sales, salaries, and whatever goods are funded by an efficient, fully capitalized enterprise. The manager who wanted to increase the value of his corporation's shares could impose strict regulations on his behavior to avoid the consequences of information asymmetry. In effect, the government reduced the gap between what the manager _knew_ to be his behavior and what potential stockholders _estimated_ it to be. Since the typical manager was willing to perform

in a conventional manner,[1] the effect of his loss of discretion was, up to a certain point, irrelevant. The gross benefits of regulation were equal to net benefits.

From the point of view of the stockholder, the effect of enforcement is, of course, symmetrical. The intrusion of strict management controls provides information and protection which substitutes for defensive discounting. The stockholder may now avoid the costs of maintaining a diversified portfolio, of keeping a close political relationship with management, or of investing in high quality securities analysis. The effect of government regulation is to prevent surprises by management, where consistency is more crucial than maximization.

Finally, the effect of regulation on the value of the corporation was seen to differ, depending upon the type of investors forming the clientele of the firm. The value placed upon government regulation of corporate affairs by those large, active investors was shown to be less than for small, less active ones. The model may be summarized by Figure 2.

Along the abscissa and moving from the origin, government interference increases. Along the ordinate, the utility of regulation and, hence, the market value of the corporate stock (the inverse of defensive discounting), rises as movement proceeds from the origin. The dotted line traces the discounting-regulation trade-off for small investors;

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[1] I.e., would not engage in one-shot transactions or stockholder "rip-offs."

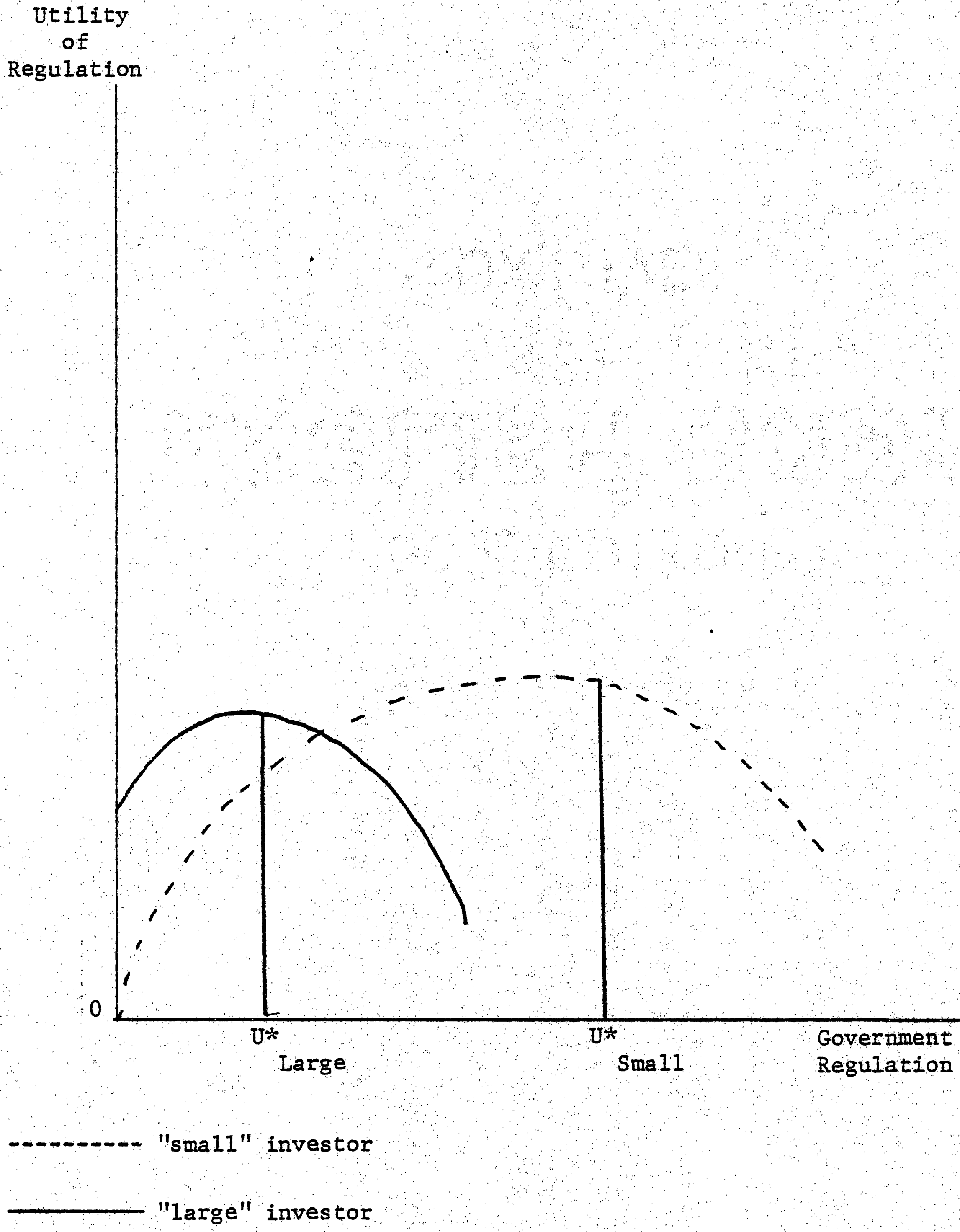

FIGURE 2

UTILITY - OF - REGULATION FUNCTIONS

the solid line traces the same function for large investors. At the origin there is corporate anarchy. Managers and stockholders are in a state of nature with control a matter of economic force. As illustrated, small stockholders, being without economic power, simply discount the value of corporate membership to zero, while large investors place some value on corporate production because their movements in and out of stock may have devastating effects on the utility of management. The value of the corporation to large investors is not maximized, however, because of the simple fact that such market exposure makes it difficult to move out of a corporation's stock without suffering a great reduction in price in the process.

As government intervention is laid on, both large and small investors increase the price they are willing to pay for expected dividends.[1] At some level of interference even large investors can profitably forego wide diversification. But as government control is increased, the value of this control levels off for the large stockholders more rapidly and earlier than for the small holders. At a certain level government becomes a relatively poor substitute for private protection and market control. That is, the costs of limited managerial discretion soon outweigh the benefits of those limitations. The same effect on wealth is experienced by the smaller investor. But

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[1]That stockholders buy expected dividends when they "join" a corporation has been suggested by Myron J. Gordon. See "The Savings Investment and Valuation of a Corporation," Review of Economics and Statistics 44 (1962), p. 37.

since stockholder utility is defined over the risk and return performance of the portfolio, his reaction is different. The large investor handles risk through diversification, whereas the small investor, limited to a relatively undiversified portfolio, handles risk through regulation. Hence, the same level of government intervention is valued more highly by the small investor. This is reflected in Figure 2, where the risk value of government for the large stockholder occurs to the left and below that of the small stockholder. Laying on more regulation eventually lowers the value of stock to even the small investor. Eventually, management may become so constrained in its activities that it becomes merely a caretaker, and at this point owning corporate stock is like owning a relatively risky time deposit.

From Figure 2 and the preceding discussion, two hypotheses are suggested. Stockholder welfare has been modeled as an indirect argument in the utility function of management. This being the case, a variety of investors implies the optimality of jurisdictional variety; stockholder and manager utility cannot be optimized by a uniform system of corporation law if U* (large) and U* (small) in Figure 2 do not coincide.[1] The fact record of the diversity of American stockholders

[1] The inefficiency of jurisdictional uniformity is somewhat analogous to the potential sub-optimality of product safety regulation. Preventing, by law, the production of risky but low cost goods (e.g., exploding lumps of coal) can harm those consumers who prefer this risk-benefit bundle (e.g., the poor). A Federal incorporation law which mandates high standards of management conduct can likewise "harm" the large investor who can prevent the damage caused by managerial discretion through diversification, research or dollar-voting. See James M. Buchanan, "In Defense of Caveat Emptor," University of Chicago Law Review 38 (Fall, 1970): 63-74.

suggests that if there exists a variety of corporation laws in the economy, then this variety should be reflected in the pattern of stock ownership across jurisdictions. States with strict protection laws will attract relatively more of the type of investors who do not engage in market or private methods of discipline or protection of their interests vis-a-vis management. The converse applies to jurisdictions with "lax" corporation codes. This is the ownership structure hypothesis to be tested below.

Also suggested by the preceding model of corporate behavior is a performance hypothesis. Managerial utility maximization suggests that where managers are able, they will divert a higher proportion of accounting profits to their own ends, rather than distribute it to stockholders.[1] As Edith Penrose has argued, ". . . providers of capital like providers of labor service, must be remunerated, sometimes handsomely but a desire to remunerate them as handsomely as possible is not a plausible explanation of the behavior of the modern corporation."[2] As indicated above, this fact of corporation life is subject to stockholder discount at the time stocks are purchased. What this implies is a particular pattern of corporation performance across jurisdictions differing in the level of governmental constraint on managerial

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[1]See Armen A. Alchian, "The Basis of Some Recent Advances in the Theory of Management of the Firm," Journal of Industrial Economics 14 (November, 1965): 30-44.

[2]Edith Penrose, The Theory of the Growth of the Firm. (Oxford: Clarendon Press, 1959): p. 28.

autonomy. One would expect to see a greater substitution of goals contrary to pure profit maximization in jurisdictions whose laws were less restrictive with respect to managerial conduct. Yet if profits were observed to be lower in such corporations, one would expect lower stock prices to be associated with this performance. That is, while certain measures of corporate performance may differ systematically across jurisdictions, other measures of fully discounted stock performance would not. With mobile capital resources and the market for corporate control, stockholder welfare should not differ systematically across jurisdictions, even if those accounting measures of corporate performance do differ.[1]

The hypotheses presented in this section may be briefly summarized. First, stockholders are pictured as being indifferent to any particular laws of corporate conduct as long as they have a choice among those laws. Therefore, jurisdictional variety should be manifested in systematic differences in ownership structure across state lines. Second, stockholders are posited to be indifferent to the particular behavior of corporate management as long as that behavior is discountable in the organized stock market. Since managers are presumed to be utility maximizers, the impact of jurisdictional variety should be reflected in profit performance, but not in the performance of fully discounted stock holdings.

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[1]Henry Manne, "Mergers and the Market for Corporate Control," Journal of Political Economy 72 (April, 1965): 110-120.

The Existence of Jurisdictional Variety

In order to conduct empirical tests of the general hypotheses stated above, it is necessary to explore the possibility that state corporation laws do indeed differ. Evidence to this effect may be found in the legal discussion pertaining to the need for corporate reform cited above in Chapter 1. Specifically, the debate over the quality of the Delaware General Corporation Law provides good reason to believe that this code is significantly different in its effects from other state laws. This follows from the fact that while there exist conflicting views regarding the real impact of Delaware law on stockholder welfare and managerial conduct, all parties seem to agree that this code is in fact different from many others.[1] This opinion is verified in the empirical analysis presented in the following section. For the present, the distinct quality of the Delaware law may be established through a brief summary of the legal provisions of that code.

The Delaware Code

Several features of the Delaware General Corporation Law have inspired legal commentary. These concern stockholder voting rights, the subject matter eligible for stockholder action, shareholder appraisal rights in case of mergers, pre-emptive rights of current

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[1] For a survey of this legal discussion, see Allan Hyman, "Do Lenient State Incorporation Laws Injure Minority Shareholders?" in Corporate Issues Sourcebook, ed. M. Bruce Johnson. (New York: McGraw-Hill, 1977): 166-172.

stockholders, and legislated standards of management conduct vis-a-vis stockholders.[1] In each instance, the Delaware Law seems to be unfavorable to the political control of management by minority stockholders. However, this does not mean that the interests of management relative to stockholders are enhanced by the provisions of this code.

Consider, for example, the rules governing the process of "corporate democracy," which apply to Delaware corporations. All corporate statutes contain provisions which require that stockholders be permitted to vote on such fundamental matters as corporate reorganization, mergers, name changes, and state of incorporation.[2] However, while the Delaware code permits the practice of cumulative voting on, for example, the composition of the board of directors, it does not require this practice.[3] It also allows the directors' terms of office to be staggered. Both the practice of straight voting and staggered terms reduce the voting power of minority shareholders who disagree with the practices of management. Of course, these provisions have no impact on the ability of stockholders to vote with their feet. Another feature of Delaware incorporation is the requirement of only a simple majority vote on fundamental issues, instead of the two-thirds majority required elsewhere. This provision works against political control by

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[1] Ibid., p. 167-169.

[2] Harry Henn, Law of Corporations, (St. Paul, MN: West Publishing Co., 1970), Chapter 6.

[3] General Corporation Law of the State of Delaware, Section 214.

minority interests, since it is easier for management to solicit 51 percent of proxy votes than 67 percent. However, this does not hinder the ability of stockholders to engage either in defensive discounting or voting with their feet.

In addition to these provisions, the Delaware code appears to give the officers of Delaware corporations extraordinary protection from litigation initiated by dissatisfied stockholders. In cases of alleged mismanagement, Delaware courts presume directorial good faith; Delaware law allows corporations to indemnify officers for court costs and board members may not be held liable for errors in managerial execution as long as they acted in good faith.[1] If such actions of the Delaware judicial system do effectively operate to the advantage of corporate management, their effect would seem to be limited to the activities of those stockholders who seek to modify managerial conduct through legal action. Again, this need not hinder the ability of stockholders to engage in defensive discounting, or to vote with their feet.

There is little reason to doubt that the effect of these features of the Delaware General Corporation Law is to put a handicap on the ability of political remedies to protect the interests of stockholders.

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[1] 39 Delaware Chancery at 109; 159 A. 2d at 295; 246 Ad 2d 789; and 255 Ad 2d 717.

Perhaps that is their purpose.[1] But this bias need not favor management at the expense of investors. It simply increases the relative attractiveness of market discipline. The principal point, however, is that the jurisdictional variety necessary for testing purposes seems to exist in the Delaware General Corporation Law versus other jurisdictional codes.

Hypothesis Testing: Ownership Structure

The facts of the Delaware General Corporation Law suggests that if a variety of investors existed in the American stockholding community, they would be arrayed, on a proportional basis, in a particular pattern among Delaware and other states. In particular, one would expect to observe in Delaware firms a higher proportion of individuals who might be expected to rely more on market discipline to equilibrate conflicts of interest between themselves and management than upon government regulation. The reason, of course, is that the structure of corporation law in Delaware does not seem to favor either political methods of conflict resolution or the interests of those who choose to engage in relatively little private monitoring or

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[1] In fact, reducing the political power of minority stockholders may be welcomed by the majority. As Alchian and Demsetz suggest, ". . . we invest in some ventures in the hope that no other stockholders will be so 'foolish' as to try to toss out the incumbent management. We want him to have the power to stay in office, and for the prospect of sharing his fortunes, we buy nonvoting common stock." Armen A. Alchian and Harold Demsetz, "Production, Information Costs, and Economic Organization," American Economic Review LXII (December, 1972), p. 789.

find self-protection, such as portfolio diversification, difficult. Several specific predictions may be derived from this hypothesis.

If Delaware and non-Delaware corporations were independently sampled, one would expect to observe a higher proportion of institutional and large, non-voting shareholders, with large average holdings of shares, in Delaware corporations than in corporations chartered elsewhere. This follows directly from the preceding discussion. It would also be expected that a higher volume of share transactions would be associated with Delaware corporations relative to those chartered in more politically strict jurisdictions. Once again, this prediction of greater market activity in corporations whose constitutions do nothing to promote political control of management follows directly from earlier discussion.

Finally, one would expect to observe that Delaware corporations, on average, were less closely held than their counterparts in states other than Delaware. This prediction is inferred from the nature of a close corporation. Standard definitions of the degree of ownership control, used in another context, employ as a benchmark the proportion of voting stock held by a single individual.[1] The proportions used in the empirical literature vary, but generally if any more than 5 to 10 percent of any corporation's stock is owned by one individual, the

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[1]The most thorough discussion of the empirical classification of firms by type of control is found in Phillip Sargent-Florence, Ownership Control and the Success of Large Companies. (London: Sweet and Maxwell, 1961).

corporation is classified as being closely held. As the amount of stock any individual owns in one corporation rises, his undiversifiable risk with respect to that firm also rises. In addition, it is relatively more difficult to exercise market control on management if a large block of shares must be marketed to effect such control. Hence, one would expect fewer closely held corporations to be located in a jurisdiction with laws that were relatively more favorable to private protection and market discipline. The state of Delaware would be such a jurisdiction.

The foregoing hypotheses are summarized in Table 3.

Data Source, Method, and Results

In order to provide some straightforward empirical tests of these hypotheses, a sample of New York Stock Exchange listed corporations was selected for analysis. To insure randomness, an alphabetical selection of companies covered by the Stock Reports published by Standard & Poor's Co. was made.[1] To enhance statistical accuracy, a large sample of 100 firms was selected with fifty being chartered in Delaware and fifty chartered elsewhere. In order to avoid the confounding effects of state codes which are similar to the Delaware law, certain states other than Delaware were not included in the non-Delaware category. These states are New York, California, Nevada, Maryland, and New Jersey.[2]

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[1] Standard and Poor's Co., New York Stock Exchange Stock Reports. (New York: Standard and Poor's Co., 1978).

[2] William L. Cary, "Federalism & Corporate Law: Reflections Upon Delaware," Yale Law Journal 83 (March, 1974), p. 665.

TABLE 3

HYPOTHESES TO BE TESTED

Hypothesis	Delaware	Non-Delaware
1. Proportion of Insitutional Activity	High	Low
2. Proportion of Large & Non-Voting Stockholders	High	Low
3. Proportion of Closely Held Corporations	Low	High
4. Level of Market Activity (Share Volume)	High	Low

The result was a sample of 100 firms, chartered either in Delaware or in states not considered similar to Delaware by legal scholarship.[1]

For each firm in the sample, several measures of ownership structure and market activity were computed and are given in Table 4. All measures were computed on a yearly total basis. From these individual measures, statistics were computed for Delaware and non-Delaware corporations. These give the mean value for each measure for the two jurisdictional categories. These statistics provided the basis for several difference-in-means tests. The purpose of this type of test is to determine, within a specific range of statistical confidence, whether two independent samples are drawn from the same or different populations. For the purpose of testing the set of hypotheses in Table 3, the null hypothesis employed is that the 100 corporations were drawn from the same population. That is, failure to reject the null hypothesis indicates that investors and corporations array themselves among jurisdictions at random.

For the difference-in-means test with fifty observations, testing is performed with the Z statistic.[2] The null hypothesis is stated as:

$$H_0: \mu_1 = \mu_2 \qquad (1)$$

where μ_1 is the actual population mean for the several measures for Delaware corporations, and μ_2 the population mean for non-Delaware

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[1] A list of the companies used in this analysis is included as Appendix I.

[2] Ya-lun Chou, Statistical Analysis. (New York: Holt, Rinehart, and Winston, Inc., 1969), pp. 320-321.

TABLE 4

OWNERSHIP AND MARKET ACTIVITY MEASURES

Relevant Hypothesis[a]	Measure
1	Institutional Shares Outstanding
1	Institutional Share-holders
1	Institutional Shares Over Common Shares
2	Insitutional & Pre-ferred Shares Over Common Shares
3	Proportion of Common Closely Held
4	Percent of Common Traded in Year

a - From Table 3

corporations. The set of alternate hypotheses is given in Table 5.

The Z statistic is given as:

$$Z_\alpha = \frac{(\bar{X}_1 - \bar{X}_2)}{\hat{\sigma}\Delta X}$$

where α gives the chosen level of statistical significance, and $\bar{X}_1$ and $\bar{X}_2$ gives the sample means of Delaware and non-Delaware corporation measures, respectively. The term $\sigma\Delta\bar{X}$ gives the standard error, which is defined as

$$\hat{\sigma}\Delta\bar{X} = \frac{S_1^2}{N_1} + \frac{S_2^2}{N_2}, \qquad (3)$$

where S_1 and N_1 stand for sample standard deviation and sample size, respectively. Results of the difference of means test are summarized in Table 6.[1]

To test the hypothesis that the Delaware General Corporation Law should attract relatively more institutional investor interest, three proxies for institutional investor activity were computed.[2] Significant differences were found in both the absolute amount of common shares held by institutions and in the proportion of common stock held by these large investors across jurisdictional lines. Thirdly, more institutional entities, on average, were listed among the stockholders

[1]A full presentation of testing data is given as Appendix II.

[2]From Table 6 these are number of institutional shares outstanding, number of institutional shareholders, and proportion of institutional shares.

TABLE 5

ALTERNATIVE HYPOTHESES

Testing Hypothesis[a]	H_a:
1	$\mu_1 > \mu_2$
2	$\mu_1 > \mu_2$
3	$\mu_1 < \mu_2$
4	$\mu_1 > \mu_2$

a - From Table 3

TABLE 6

RESULTS OF DIFFERENCE-IN-MEANS TEST:
SEVEN MEASURES OF CORPORATE OWNERSHIP STRUCTURE

H_o: $\mu_1 = \mu_2$ N = 50 α = .05 (one-tail)

RULE: If $|Z| > 1.645$, reject H_o

Hypothesis [a]	H_a:	Measure	$\bar{x}_1$	$\bar{x}_2$	Z
1	$\mu_1 > \mu_2$	Inst. Shares Outstanding (000)	4704	1525	2.08[b]
1	$\mu_1 > \mu_2$	No. Inst. Share-holders	66.04	42.26	1.46
1	$\mu_1 > \mu_2$	Inst. Shares Over Common Shares	0.19	0.14	1.97[b]
2	$\mu_1 > \mu_2$	Inst. + Pref. Shr. Over Common Shr.	0.22	0.16	2.08[b]
3	$\mu_1 < \mu_2$	Percent Common Closely Held	11.76	13.72	-.61
4	$\mu_1 > \mu_2$	Percent Common Traded in Year	3.82	2.83	1.90[c]

a - From Table 3.

b - Reject H_o at .01 level.

c - Reject H_o.

of Delaware corporations, but the difference was not statistically significant. This result, given the significant differences found in the other two measures, simply indicates that those institutions which do hold stock in Delaware corporations have higher average holdings. The results presented in Table 6, therefore, quite strongly support the notion that institutional owners are attracted in relatively greater numbers to Delaware corporations. Stated somewhat differently, it appears that smaller, non-institutional investors make up a larger part of the ownership identity of non-Delaware corporations.

The results presented in Table 6 also support the hypothesis that the ownership structure of Delaware corporations will be composed of relatively more large, non-voting stock. Adding preferred shares to institutional holdings actually increases the Z-statistic relative to the measure which includes institutional shares alone. This indicates that the proportional representation of preference shares in a corporation's capital structure provides a fairly good criterion by which to distinguish among purely legal environments.

The third hypothesis, that market control will be greater in Delaware corporations, is also supported by the tests conducted. While somewhat less than 4 percent of the common stock of Delaware corporations was traded over the course of a year, somewhat under three percent of the common stock of non-Delaware stock changed hands over the same period of time. This difference of one percent appears small but represents hundreds of market "votes" and is significant at a reasonable level. Thus is appears that market discipline is potentially a more

heavily used control device in Delaware corporations than in those chartered in more restrictive states.

The only hypothesis not confirmed by the difference of means tests concerned the relative amounts of closely held stock observed across legal jurisdictions. On the basis of the percentage of common stock held by one or a very few individuals, Delaware and non-Delaware corporations could not be differentiated. However, this is not the sole measure of closeness which may be meaningful.

The measure used in testing was a continuous percentage of stocks identified by Standard and Poor's as being held by all significant holders. However, the standard treatment of closeness in the empirical literature concerned with testing the effects of the so-called separation of ownership and control is as a discrete variable. The standard benchmark is from 5 to 10 percent of stock owned by one individual.[1] Where voting stock in excess of this amount is held by identifiable individuals, the firm is classified as being owner controlled. Otherwise, management control is assumed. When the sample of corporations was classified by this criterion, further testing of the closeness hypothesis became feasible.

Of the 100 firms in the random sample, 50 can be categorized as closely held with the remainder classed as dispersed-owner. Of the

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[1]See, for example, John Palmer, "The Profit Performance Effects of the Separation of Ownership from Control in Large U.S. Industrial Corporations," Bell Journal of Economics and Management Science 4 (Spring, 1973): 293-303; and Phillip Sargent-Florence, Ownership Control and the Success of Large Companies.

former 50, 19 were incorporated in Delaware, while the remaining 31 filed their charters in other jurisdictions. Treating closeness as a discrete variable suggests a test for differences in proportion. That is, would two independent samples drawn from the same population display a 24 percentage point difference in the proportion of closely held firms?

To test this proposition, a difference-in-proportions test was conducted. The testing statistic, Z, is given as

$$Z_\alpha = \frac{(p_1 - p_2)}{\hat{\sigma}\Delta p}$$

where p now substitutes for $\overline{X}$ from (1), above. The null hypothesis is given as

$$H_0: \Pi_1 = \Pi_2$$

where Π_1 and Π_2 stand for the population proportion of closely held firms in Delaware and non-Delaware states, respectively. The standard error used for testing is given as

$$\hat{\sigma}\Delta p = \overline{p}(1 - \overline{p})\ (N_1 + N_2/N_1N_2), \qquad (5)$$

where

$$\overline{p} = \frac{N_1p_1 + N_2p_2}{N_1 + N_2} \qquad (6)$$

With $p_1 = .38$, $p_2 = .62$, and $N_1 = N_2 = 50$, the Z statistic for this test was computed as -24.00, which is highly significant and carries the expected sign.[1]

Thus, where closeness of stockholdings is treated in a discrete fashion, it appears that many fewer corporations are closely held under Delaware law than under corporate law less favorable to private market protection and discipline. This conforms with the discussion presented in Chapter 3.

To sum up, the simple tests of cross-jurisdictional differences conducted seem to support the notion that jurisdictional diversity exists in the American corporate sector. Further, the tests support the hypothesis that, given this choice, stockholders will array themselves across jurisdictions as if they consciously selected legal structures which served their particular needs for government protection (or lack of it). In the next section certain hypotheses concerning the performance characteristics of corporations across jurisdictions will be presented and tested. Later these results will be compared with the structure-of-ownership tests and conclusions will be drawn relevant to the discussion presented in Chapter 3.

Hypothesis Testing: Performance

The purpose of this section is to test for differences in various measures of corporate performance across legal jurisdictions. Once

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[1]The probability the Z would be greater than 24.00 is less than .001. Hence, the hypothesis of no difference in proportions rejected with confidence.

again, the method of analysis will be to use the Delaware corporation law and other corporation laws as alternate environments which could affect performance in a systematic way. However, regression analysis will be used instead of the simple difference of means test used above. Various performance measures will be estimated, and the estimating equations will each contain a jurisdictional control variable. Inter-jurisdictional variety will be reflected in the statistical significance of this variable.

The vast empirical literature which has arisen to test various managerial theories of the firm provides a convenient set of experiments which may be adapted to present purposes.[1] As indicated in Chapter 2, the subject matter of this literature has been limited to the organizational structure of corporate enterprise. These studies have attempted to detect differences in profit performance between owner and manager controlled firms. They have generally attempted to test the familiar hypothesis that profit will be higher in owner

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[1]Particularly useful were the studies of H. K. Radice, "Control Type, Profitability and Growth in Large Firms: An Empirical Study," Economic Journal 81 (September, 1971): 547-562; Kenneth J. Boudreaux, "Managerialism and Risk-Return Performance," Southern Economic Journal 39 (January, 1973): 366-372; Robert F. Ware, "Performance of Manager- versus Owner-Controlled Firms in the Food and Beverage Industry," Quarterly Review of Economics and Business 15 (September, 1975): 81-93; and Peter Holl, "Effect of Control Type on the Performance of the Firm in the U.K.," Journal of Industrial Economics 23 (June, 1975): 257-271.

controlled firms because of the desire of owners to maximize profit.[1] Where owners are not significantly represented by large, individually controlled blocks of voting shares, managerial preferences will over-ride the "interests" of dispersed owners of stock and profits will be lower. In addition to these direct tests, others have attempted to measure differences across organizational forms in variables which presumably enhance managerial utility at the expense of profits. Thus, there have been studies conducted to test whether managerial firms engage in relatively more asset growth, display more X-inefficiency, or display lower profit variability (along with lower profit levels) than their owner controlled counter parts.[2]

In all cases, the firms used in testing were statistically matched on a number of attributes, leaving isolated the effect of ownership structure on performance. The procedure to be followed below will be similar with the exception that firms used in testing will be matched on various attributes, including ownership structure. This will allow the isolation of jurisdictional effects as a result. The method of analysis, therefore, is to replicate several studies of corporate

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[1]See, for example, David Kamerschen, "Influence of Ownership and Control on Profit Rates," American Economic Review LXVIII (June, 1968): 432-477; Robert J. Larner, "Ownership and Control in the 200 Largest Nonfinancial Corporations, 1929 and 1963," American Economic Review LXVI (September, 1966): 726-787; and John P. Palmer, "The Profit Variability Effects of the Managerial Enterprise," Western Economic Journal XI (June, 1975): 228-231.

[2]This was the approach taken by Robert F. Ware, "Performance of Manager- versus Owner-Controlled Firms in the Food and Beverage Industry."

performance, replacing organizational structure by jurisdiction as the discriminating variable.

The several tests conducted in this section use an analysis of covariance technique in the form of ordinary least squares estimation. Each equation is derived from a general equation of the following form:

$$P_i = \beta_0 + \beta_1 J + \beta_2 S + \beta_3 JS + \sum_{j=1}^{19} \beta_{4j} I_j + \beta_5 AGRO + \beta_6 VAR + \mu_1 \quad (7)$$

where P is the performance variable under consideration, J is a jurisdictional dummy variable which assumes a value of 1 if the firm is chartered in Delaware, zero otherwise; S is a size or scale variable; JS is an interaction term between size and jurisdiction; I_j is an industry membership attribute; AGRO is asset growth; VAR is earnings variability. Specification of each of these variables serves as a statement of a particular performance hypothesis relevant to the discussion above.

Dependent Variables

Five dependent variables serve the purpose of testing differences in corporate performance and managerial behavior across legal jurisdictions. These are profitability, efficiency (productive), capitalization (debt structure), earnings retention, and stock yield (market value of earnings).

When confounding factors are held constant, profits in Delaware corporations should be somewhat lower than in other jurisdictions. The

market for corporate control should keep this difference low, but because stockholders may discount the effects of low accounting return, there is no reason to expect that some managerial discretion will not be evidenced in lower accounting profits in Delaware. This is especially true if the market mechanism is assumed to operate at an efficiency less than the neoclassical ideal. Individual firm profits will be proxied by their mean rate of return on net worth over a five year period (ROR).

The second dependent variable provides an approximate measure of the efficiency of corporate management. The "X-inefficiency" literature suggests that Delaware firms, because the law is lax, will be characterized by more waste since managers are not penalized by the market for such behavior.[1] The model of corporate behavior presented above, however, suggests that no difference should be observed in this measure across jurisdictions. If managers derive utility from that portion of accounting profits that they devote to their own utility-enhancing activities, they will have the incentive to use corporate assets to enhance net accounting profits. There is no reason to expect that managers will be more wasteful of corporate resources across jurisdictions. Furthermore, if this measure was significantly lower in Delaware corporations, it would refute the hypothesis that corporate

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[1]See Harvey Leibenstein, "Allocative Efficiency vs. X-Efficiency," American Economic Review LVI (June, 1966): 392-415; and M. Crew, M. Lee-Jones and C. Rawley, "X-Theory Versus Management Discretion Theory," Southern Economic Journal 38 (October, 1971): 173-184.

managers choose their incorporating states in order to avoid the adverse selection phenomenon, rather than to provide a legal environment conducive to "bad management." The proxy used to measure corporate efficiency will be the average product of labor defined as the ratio of net sales revenue to work force (APL).

The next measure related to the hypotheses set forth above concerns the use of corporate debt in the capitalization of the firm. As indicated above, the structure of corporation law should have no effect on stockholders welfare, as long as choice exists. A difference in debt structure across jurisdictions would refute this hypothesis. If, for example, Delaware law was truly unfavorable to the interests of stockholders, any given level of capitalization would have to be supported by relatively more debt than equity. Therefore, since the impact of legal structure is posited to be neutral with respect to stockholder welfare, this should be reflected in the inability to distinguish among corporations across jurisdictions on the basis of debt structure. This measure is proxied for testing purposes by the average annual ratio (over five years) of long-term debt relative to stockholders equity (DE).

The fourth dependent variable used in testing is a measure of earnings retention. However, no strongly supported hypothesis may be presented concerning the expected behavior of earnings distribution to stockholders. Clearly, a case could be made that if given the opportunity, managers will retain a high share of corporate profits in order to finance the activities that they favor. But there exist

possible exceptions to this hypothesis. Because of tax considerations, stockholders may prefer high retentions in an effort to enhance the value of the corporation and hence to raise stock prices. The marginal tax reduction of taking income in the form of capital gains rather than dividend income can be significant, especially at high income levels. However, a point may be reached where earnings so retained and applied to asset accumulation will generate returns which fail to enhance the value of the corporation. Marris argues that the growth-maximizing tendencies of management will result, where allowed, in corporate investments (e.g., mergers), which yield less than the rate of return available to stockholders in the capital market, *cet. par.*[1] If this were the case, managers would be expected to retain a higher proportion of earnings in Delaware than in other more restrictive states. In this event, retention performance would be similar to profit performance. It may thus be that retention ratios are higher in Delaware, but are discounted effectively by the market. The hypothesis must therefore be stated in relative terms. That is, it is expected that if retention is greater in Delaware corporations, this fact will be reflected in different yield or valuation measures. The retention measure is proxied by the annual average ratio of earnings less dividends, to earnings (RET).

The final measure of performance is the ratio of dividends to stock price, or stock yield. As indicated above, stockholders may be

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[1] Robin L. Marris, *The Economic Theory of Managerial Capitalism*. (New York: The Free Press of Glencoe, 1964).

indifferent to profit performance as long as they are able to join the corporate venture at a properly discounted price. If the desideratum of investors in corporate stock is the maximization of the value of their portfolio, then where they differ, stock yields should be more important to investors than accounting profits. As a result, since capital is mobile, stock yields should not differ systematically across jurisdictions, regardless of the quality of laws within those jurisdictions. The stock yield measure is proxied by the mean ratio of declared dividends to the average market price of common stock (YLD).

Independent Variables

In general the independent variables which appear in equation (7) are included to isolate the effect of jurisdictional diversity on the various performance measures. There are two exceptions to this rule which will be discussed prior to the discussion of the statistical control measures.

Marris' model of managerial capitalism asserts that where they are able, the managers of large corporations will pursue asset growth policies which substitute growth for strict classical profit maximization. Thus, the separation of ownership and control is expected to be manifested in the relationship between asset growth and profits. This is illustrated in Figure 3.[1] In the Marris hypothesis, managers are

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[1]Figure 3 reproduces Diagram 615 in Robin L. Marris, The Economic Theory of Managerial Capitalism, p. 253.

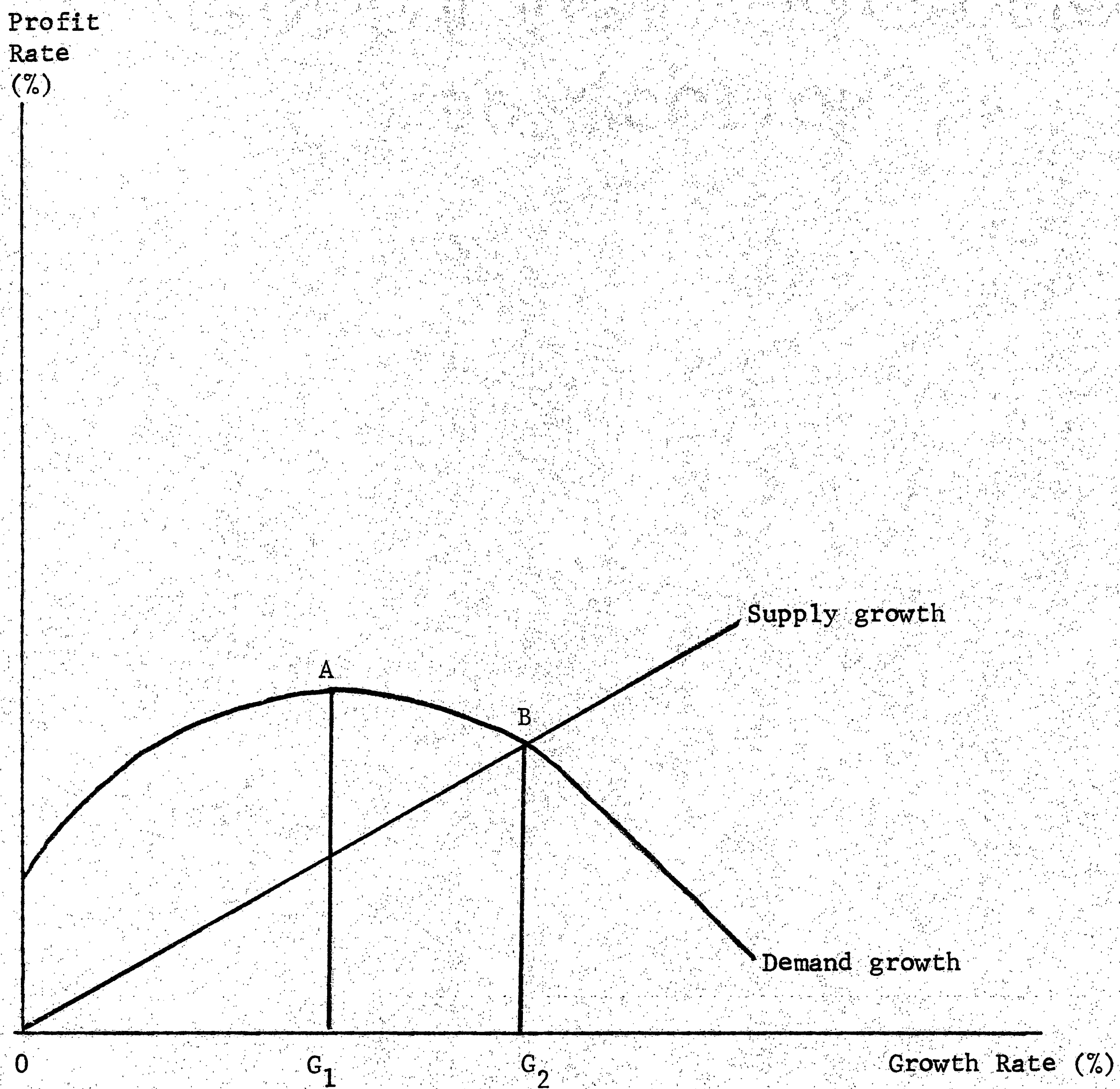

FIGURE 3

GROWTH AND PROFIT RATE TRADE-OFFS

able to choose from a menu of policies which impact on profitability.[1] The decision variable manipulated by management is the level of retained earnings. This source of funds is used to increase both the demand for the firm's output (e.g., advertising, price concessions) and the capacity to supply this increased demand. As such, policy choice reduces to the rate of asset growth. At some low level of growth, increased retentions and growth increase profitability. But as this policy is pursued, a point of maximum profit is reached beyond which asset growth detracts from the net rate of return. In the diagram this point is reached at growth rate G_1, or point A on the Demand Growth curve. At this level of growth, owner wealth is maximized. Of course, managers will attempt to pursue policies which exceed G_1. The capital market restricts their ability to increase growth without limit, however. Since total debt financing is inconsistent with optimal risk, managers will attempt to finance growth through increasing retentions, but retentions are limited by stock-market reaction. Since stockholders buy dividends, high retention (low dividends) will depress stock prices, reduce the valuation ratio, and increase the threat of take-overs. In the diagram the supply-of-capital curve maps the growth-profit rate combinations technically available to management. Management will attempt to promote the growth rate of G_2, the highest level the market will allow. The Marris model implies that owner-controlled firms will exhibit profit-growth

[1] _Ibid._, Chapter 3.

rate combinations nearer A, while manager-controlled firms will exhibit combinations nearer B. This hypothesis is readily adaptable to the issue of jurisdictional variety, as illustrated in Figure 4.

If a number of firms were sampled and their profit-growth rate combinations plotted, the scatters would look something like those in Figure 4. Firms in Delaware would display lower profit rates and higher growth rates (P_dG_d), while firms in other more restrictive jurisdictions would display higher profits and lower growth rates ($P_{Nd}G_{Nd}$) on average. The scatters of growth-profit points slope upward because the variations in the demand growth curve will be greater relative to the supply growth curve. That is, observation and statistical analysis will identify the upward sloping supply growth curve. (The stock market is a more steady influence on the trade-off between profit and growth than product markets are on demand growth.) Hence, the average annual growth rate of assets (AGRO) will be included in one specification of the profit equation to test the effect of legal structure on performance.

The second independent variable appearing in Equation (7) is profit variability, (VAR). Portfolio theory suggest that a trade-off exists between the level of profit and its variance; failure to include this measure in an equation designed to test performance differences is therefore likely to bias the empirical results.[1] For example, if

[1]See Eugene Fama and Merton Miller, The Theory of Finance. (New York: Holt, Rinehart, and Winston, 1972).

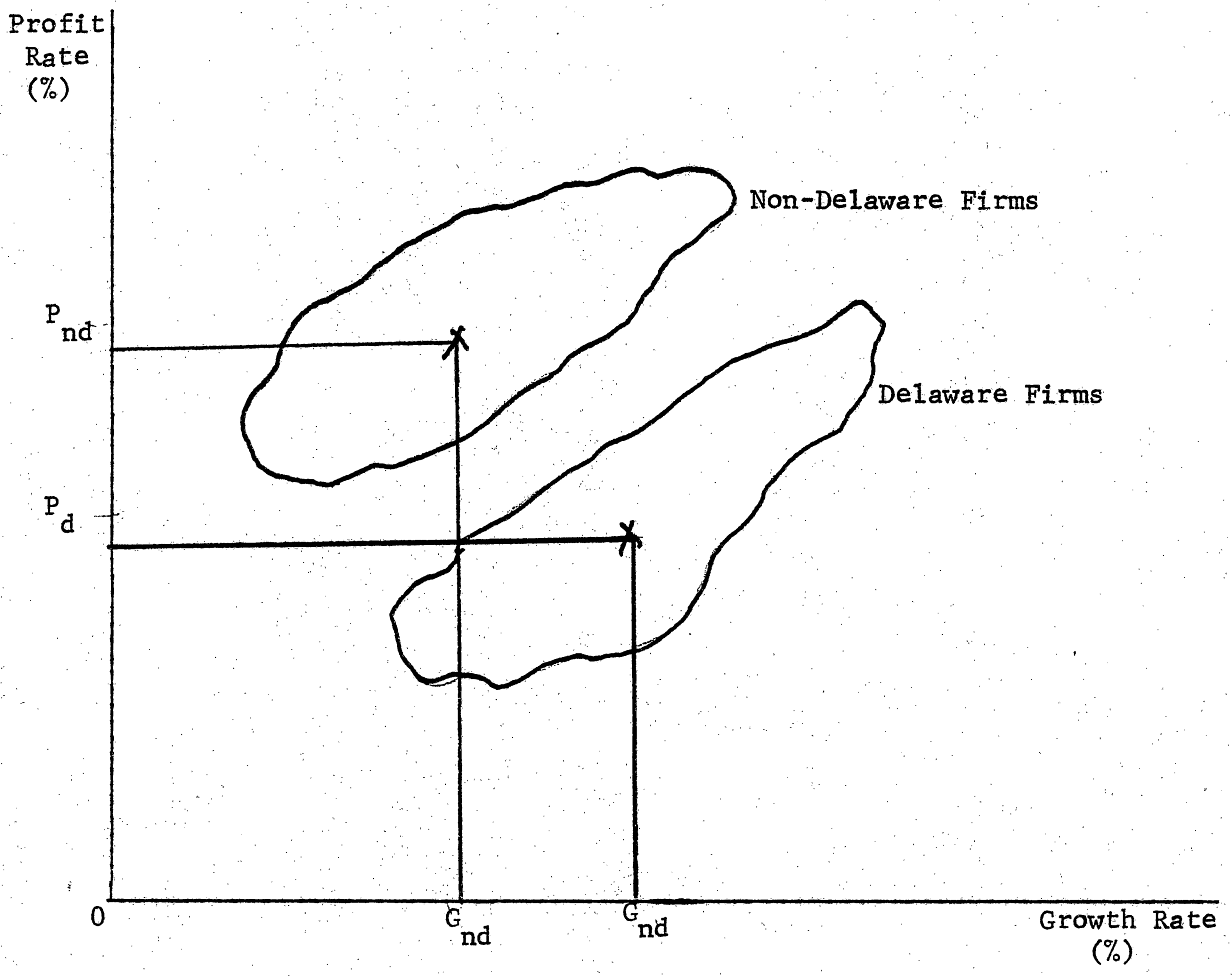

FIGURE 4

GROWTH AND PROFIT RATE SCATTER DIAGRAM

Delaware firms were observed to generate lower rates of return _and_ lower variance in this return than non-Delaware firms, from the viewpoint of stockholders this may represent better performance than some feasible combination of higher and more variable profits. This bias can be reduced by including a measure of profit variance in the rate of return equation. Profit variance is proxied by the average (five years) standard deviation of net return (VAR).

The first independent control variable included in (7) is a measure of corporate size. Some studies have indicated that size may have an effect on both the profitability and behavior of managers, independently of other environmental features.[1] If this is true, it will be picked up by the size variable, (S). This measure is proxied by the arithmetic average net worth of the firm over the five years preceding and including the cross-section year.

The next independent variable, JS, is included to control for any interaction effects between jurisdiction and size. A significant and positive relationship between this variable and the dependent variable under study would indicate that performance differences across jurisdictions, if they exist, are even greater in larger firms. The variable is generated by multiplying the continuous size measure, (S), by the jurisdictional dummy, (J).

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[1]H. K. Radice, "Control Type, Profitability, and Growth in Large Firms;" and, M. Hall and L. Weiss, "Firm Size and Profitability," _Review of Economics and Statistics_ 49 (August, 1967): 319-331.

The industry subgroup variables are included to control for performance differences which are industry-specific. If left out of the estimating equation, inter-jurisdictional differences in performance could be confounded by a random heavy representation of a particular industry in one jurisdictional category. Including these industry subgroup variables simply aids the isolation of true jurisdictional effects. Since twenty subgroups appeared in the test sample of firms, nineteen industry dummies (based on 4-digit SIC codes) were included in the various specifications of Equation (7).

Data, Sampling Technique, and Results

Data used to estimate Equation (7) in its several versions were obtained from the most recent (1978) releases of Standard Poor's Stock Reports and the Trendline surveys.[1] All firms included in the analysis are listed on the New York Stock Exchange and are engaged in non-financial production. A random sample of firms was selected for the study. The number of firms to be included in the study was not pre-selected. An alphabetical scan of the Stock Reports for all non-financial corporations whose listing title began with the letters A through L was conducted. The resulting selection was subjected to several control screens.

First, as in the ownership structure analysis reported above, all firms chartered in Delaware-like states were eliminated. This screen

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[1]Standard and Poor's Co., New York Stock Exchange Stock Reports, and Trendline's Current Market Perspectives. (New York: Standard and Poor's Co., 1978).

of the data actually served to enhance the probability of significant jurisdictional performance differences which, of course, would be contrary to the hypotheses posited in this chapter. All corporations which met the standard requirements for owner-control were deleted.[1] The tests being conducted are not concerned with the organizational structure of corporations, but with jurisdictional effects alone. This screen simply focused attention on the relationship between legal structure and managerial conduct without confounding the issue with the particular problems of closely held corporations. These screening exercises netted forty-eight non-Delaware dispersed owner, non-financial corporations, and a larger number of Delaware incorporated firms. In order to balance the design of the analysis of covariance, a final screen was passed through the data to eliminate n-48 Delaware corporations at random. The resulting sample of 96 firms is listed alphabetically in Appendix III.

Table 7 presents the arithmetic means of the several continuous variable employed in estimation. Based upon sample statistics, it appears that Delaware corporations are more efficient, rely less on debt in their capital structure, distribute more of their earnings to stockholders, experience more variable profits, and engage in slower asset accumulation than their non-Delaware counterparts. Of course,

[1]That is, corporations which reported that at least five percent of their outstanding common stock was owned by a single party were eliminated from the sample.

TABLE 7

MEANS OF CONTINUOUS VARIABLES
USED IN ESTIMATION

Jurisdiction	ROR (%)	APL ($)	DE	RET	V	YLD (%)	AGRO (%)	SIZE ($mil)
Delaware	21.84	55,399	.41	.66	6.20	3.86	9.83	850.0
Non-Delaware	23.34	53.558	.56	.70	5.22	3.84	12.62	324.0

these crude statistical comparisons serve only to give the flavor of the relationships existing between corporate performance and legal structure. Table 8 presents the results of a more sophisticated analysis in which confounding interrelationships are controlled for.

Equation (1) of Table 8 tests for the ability of managers to pursue profit-reducing asset growth where they are subject to different levels of political control by their stockholders. The negative sign on the coefficient attached to jurisdictional control variable indicates that sampled Delaware corporations display a lower rate of return than their counterparts in other jurisdictions, all else equal. At any rate of growth of corporate assets, non-Delaware firms earned about 1 percent more profit than Delaware firms. However, the fact that this coefficient is statistically insignificant means that this result cannot be generalized to the whole corporate sector. The highly significant F-statistic for Equation (1) indicates that in terms of pure profit performance, industry membership is more important than legal jurisdiction. This argues strongly against those who decry the laxness of the Delaware General Corporation Law. Efforts aimed at over-hauling this code, bringing it into line with more strict formulations, would not seem to be justified on the basis of the controlled experiment embodied in Equation (1) of Table 8. Of course, this result would also occur if <u>all</u> laws were uniformly permissive (or stringent, for that matter); yet, this is not the claim of the anti-Delaware faction. In that literature the Delaware Syndrome exists as a dynamic threat, not a static reality.

TABLE 8

SUMMARY OF REGRESSION RESULTS

Independent Variables	Dependent Variables (Equations)					
	ROR (1)	ROR (2)	APL (3)	DE (4)	RET (5)	YLD (6)
Intercept ('t')	13.89 (2.74)[a]	22.13 (3.59)[a]	52419.0 (3.91)[a]	0.805 (1.22)	0.690 (4.20)[a]	5.22 (4.12)[a]
Jurisdiction	-.996 (.504	-3.79 (1.82)[b]	1489.9 (.375)	-.323 (1.23	-.039 (.600)	-.233 (.464)
AGRO	.669 (7.12)[a]					
Size	.002 (.711)	.001 (.958)	429.9 (.463)	0.001 (1.34)	nil	nil
JS	-.001 (.371)		-1.02 (.108)	.001 (1.25)	nil	nil
V		.334 (1.55)				

a - Coefficient significantly differs from zero, .05 level.

b - Coefficient significantly differs from zero, .05 level, one-tail.

TABLE 8 (-continued)

Sub-industry Dummies	ROR (1)	ROR (2)	APL (3)	DE (4)	RET (5)	YLD (6)
Extractive Industries	-.458	.990	15390.3	.901	.030	-1.36
('t')	(.085)	(.413)	(1.06)	(1.26)	(1.68)	(.990)
Food Processing	8.00	7.85	28533.6	-.357	-.036	-1.59
	(1.41)	(1.08)	(1.85)	(.470)	(.193)	(1.08)
Textiles	-.787	-5.07	-8267.6	-.256	-.017	-.124
	(.126)	(.637)	(.488)	(.307)	(.082)	(.078)
Wood Products	2.68	-5.07	11887.6	-.252	-.008	-.212
	(.435)	(.642)	(.709)	(.304)	(.039)	(1.33)
Industrial Gases	4.16	8.36	16842.9	-.029	.152	-2.21
	(.670)	(1.05)	(1.00)	(.035)	(.738)	(1.39)
Drugs and Cosmetics	1.48	-2.00	4715.1	.076	-.122	.249
	(.238)	(2.53)	(.278)	(.090)	(.586)	(.155)
Oil Refining	-1.43	.282	-6472.3	-.098	.117	-2.99
	(.253)	(.039)	(.420)	(.129)	(.618)	(2.05)[a]

a - Significant at .05 level.

TABLE 8 (-continued)

Sub-industry Dummies (continued)	ROR (1)	ROR (2)	APL (3)	DE (4)	RET (5)	YLD (6)
Rubber Products	4.26	6.52	44380.8	0.353	-.107	1.47
('t')	(.502)	(.614)	(1.92)	(.310)	(.376)	(.673)
Glass	-.394	-.642	-9841.9	0.454	.036	1.02
	(.516)	(.736)	(.472)	(.444)	(.142)	(.516)
Primary Metals	-2.40	-7.79	-1760.2	-.278	-.098	.861
	(.388)	(.987)	(.104)	(.336)	(.474)	(.542)
Fabricated Metals	.921	-.977	2779.7	-.106	.053	-.072
	(.163)	(.135)	(.180)	(.139)	(.280)	(.049)
Non-Elect. Machinery	4.95	2.12	-15081.6	.012	.024	-.311
	(.845)	(.282)	(.944)	(.015)	(.126)	(.206)
Electric Machinery	-1.67	-.454	-11434.9	-.123	.039	-2.37
	(.332)	(.070)	(.834)	(.182)	(.233)	(1.82)

TABLE 8 (-continued)

Sub-industry Dummies (continued)	ROR (1)	ROR (2)	APL (3)	DE (4)	RET (5)	YLD (6)
Transport. Equipment ('t')	.237 (.042)	.034 (.004)	-14432.6 (.934)	-.179 (.236)	.069 (.362)	-2.64 (1.81)
Precision Instruments	-.442 (.083)	-1.79 (.261)	-2689.4 (.186)	-.167 (.235)	.071 (.399)	-2.58 (.209)
Freight Cartage	-.269 (.049)	-3.24 (.455)	-9611.2 (.638)	-.156 (.211)	.117 (.633)	-1.37 (.960)
Merchandising	24.29 (3.56)[b]	27.40 (3.13)[b]	10802.2 (.581)	-.325 (.356)	-.078 (.339)	-.936 (.533)
Restaurants & Hotels	2.74 (.441)	.805 (.101)	18250.8 (1.07)	-.364 (.437)	-.074 (.773)	-.976 (.608)
Misc. Services	-7.48 (1.20)	-6.47 (.811)	-27113.9 (1.59)	-.184 (.437)	.161 (.773)	-3.46 (2.15)[a]
Adjusted R-squared	.6091	.3542	.4510	.1496	.1448	.4079
F-Statistic	4.88[b]	1.82[a]	2.73[b]	.579	.588	2.28[b]
	(1)	(2)	(3)	(4)	(5)	(6)

a - Significant at .05 level.
b - Significant at .01 level.

Equation (2) of Table 8 includes profit variability as an independent variable in the profit performance specification. When the profit-variability as an independent variable in the profit performance specification. When the profit-variability bias is thus corrected, it appears that profit rates are significantly lower in Delaware corporations. For given risk levels, the rate of return on net worth is, on average, somewhat less than 4 percent lower in Delaware corporations. This result may be immediately contrasted with the performance of Equation (6), which tests the behavior of stock yields across jurisdictions. Both equations explain approximately 60 percent of the variance in return and stock yields across jurisdictions and are significant at the 5 percent level.[1] This allows meaningful comparisons to be made among the coefficients of the jurisdictional variable. For the sample of firms used in the study, yields are slightly lower for corporations chartered in Delaware. However, this result cannot support the same conclusion generalized to the entire corporate sector. The jurisdiction coefficient in the yield equation is not significantly different from zero. Lower profits in Delaware corporations are not reflected in the performance of Delaware securities. This is the expected result since stock yields measure the ratio of dividends to price. Equations (2) and (6) indicate that low profits and, hence, dividends reduce

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[1]The adjusted R^2 for equations (2) and (6) are .3542 and .4081, respectively. These produce multiple correlation coefficients of .5951 for the profit equation and .6388 for the yield equation.

stock prices and leave yields virtually unaffected. This result is consistent with the hypothesis that stockholder welfare and corporation law are unrelated.

Tests of other performance measures also fail to support the hypothesis that corporate law, especially that found in the state of Delaware, is biased toward management. Despite the care taken to control for industry differences and the influence of size, corporate performance does not appear to differ a great deal across state lines contrary to the predictions of reformers. In fact, Equation (3) confirms the contrary findings produced by simple statistical comparisons that Delaware corporations are somewhat more efficient than those operating in environments more protective of stockholder interests. However, the low level of significance of the jurisdiction variable in the APL equation still prevents generalization.

The poor performance (low F-statistics) of the retention and debt structure equations indicates that these measures do not even differ systematically across industries. This supports the hypothesis advanced above that the effect of legal structure is not manifested in the welfare of stockholders as a group. It appears from Equation (4) in Table 8 that Delaware corporations have no greater difficulty meeting their capital requirements in the equity market than other corporations. This tends to confirm the results of simple comparison presented in Table 7, where it was observed that non-Delaware corporations use relatively more debt in their capital structure (56 to 41 percent).

Summary

The empirical results presented in the two preceding sections support the hypotheses derived from the discussion of Chapter 3. In general, ownership structure was seen to differ significantly across purely legal jurisdictions, and in the expected manner. Investors who would be expected to rely *less* on government protection in their contractual associations with corporate management were found to be a more significant part of the ownership structure of Delaware corporations. Smaller investors, who might be expected to gain more utility from strict government intervention in corporate affairs, appear in greater proportions in the ownership structure of corporations chartered in stricter legal environments. In addition, trading volume, an indirect measure of the use of the market mechanism as a method of conflict resolution, was observed to be higher for corporations chartered in Delaware. This finding is consistent with the theory developed in Chapter 3, as well.

Supporting the results of these tests of ownership structure, analysis of corporate performance across legal boundaries fail to give support to the hypothesis advanced by legal commentators that the Delaware Law favors management. While some support is found for the notion that profit performance may differ across state lines, no support was found for the idea that rational stockholders could not discount this outcome in advance of the membership in the corporate organization. The results presented in this chapter are consistent

with the thesis that stockholders may be indifferent to the structure of state corporation laws, *as long as they may choose among these laws*.

CHAPTER 5

CONCLUSIONS AND IMPLICATIONS FOR FUTURE RESEARCH

The purpose of this dissertation has been to apply economic analysis to the question of the efficiency of corporate federalism. The controversy over this institutional arrangement has centered on the issue of stockholder welfare. Under the current system of corporation law it is both feasible and rewarding for the several states to compete among themselves for corporate charters. Legal commentators have argued that the current system of corporate jurisprudence, because of corporate federalism, is biased in favor of the managements of large, dispersed owner corporations. Others have countered with the proposition that stockholders are really sovereign within the corporate sector, and that the current system of liberal state laws is optimal. However, to date there has been virtually no rigorous analysis supportive of either side of the controversy. As a result, some commentators have called for a radical change in the structure of corporation law without a full understanding of the welfare implications of such a change.

Advocates of corporate reform would replace regulatory federalism with a uniform incorporation law, the provisions of which would be administered by an agency of the Federal government. Presumably, this law would impose strict controls on management conduct and, hence, subject many more business decisions to the political discipline of

"stockholder democracy." As a result, stockholders would be better off and the capitalization of the corporate sector would increase. However, the third chapter of this dissertation developed a logical argument which established that such uniformity in legal structure could make stockholders better off relative to the current federalist system only if an unrealistic degree of uniformity among investors was assumed. In that chapter, a theory of the (derived) demand for corporate regulation was presented, which demonstrated that corporate managers may prefer a strict enforcement environment as a signal of their expected conduct with respect to stockholders. The strictness of preferred environment was modeled as being dependent upon (variable) stockholder attributes. If some investors place different marginal valuations on government protection, only a choice of legal structures (jurisdictional variety) will optimize the value of corporate participation. The discussion presented in Chapter 3 suggested strongly that a uniform demand for government intervention was not a likely feature of the American investment community.

From the empirical analysis conducted in Chapter 4, it appears that the structure of American corporation law reflects the preferences of American investors. The diversity found in the entire system of corporate federalism reflects the wide range of investor types who participate in corporate finance. Efforts to reform the current system of corporate federalism by establishing a uniform, federal incorporation law would seem to be misplaced. The theory of corporate behavior and jurisdictional variety, supported by the evidence presented in this

chapter, indicates that such a uniform system of corporation law would eliminate desired choice without enhancing the interests of stockholders. In fact, the interests of all members of the corporate sector are optimized by the ability to choose among legal environments, and this institutional arrangement would be impossible under Federal corporate regulation.

This result is enhanced by the fact that there appears to be no support for the notion that stockholder welfare deviates across jurisdictions. While some of the statistical tests of Chapter 4 indicated that accounting profits are slightly different across political boundaries, it appears that stockholders discount these differences as hypothesized in Chapter 3. Advocates of legal reform, in their (unsolicited) attempts to make stockholders better off, face stiff competition from the individual behavior of stockholders themselves. In fact, the evidence presented in this dissertation indicates that the loss of investor freedom to choose a preferred property rights environment, which must occur if corporate federalism is abolished, bears no offsetting benefits.

These conclusions provide some analytic support to those scholars who for many years have warned against the gradual centralization of regulation and political control. The pattern which has been followed in the advocacy of corporate law reform has become familiar. Individuals outside the daily conflicts which are endemic to any economic activity try to promote the welfare of one group of participants. Implicit in these efforts is the assumption that the parties, as

individuals, are unable to affect the evolution of control mechanisms which aid conflict resolution without massive outside intervention by the state. In the case of corporate federalism it appears that stockholder indifference to reform is based firmly on the falseness of this presumption. While it is never sound practice to point to the existence of an institution as evidence of its efficiency, in the case of corporate federalism its persistence in the face of such attacks seems justified as indicated by the analysis presented in this thesis. Centralization of the corporate regulatory system is not an efficient substitute for corporate federalism.

Of course, this general conclusion in opposition to centralized political control is not new. Political and economic liberals have for centuries promoted those social institutions which allow individuals to settle their natural conflicts of interest in their own way within a minimum structure of government regulation. A law which is designed to protect the interests of shareholders from managerial discretion places the government in the role of a partner to one party in its equity conflict with another. The few examples of where such a role for the state is justified, given the resourcefulness of individual economic agents, proves the rule. In addition, a federal incorporation law would remove, through centralization, that overall institutional environment conducive to productive evolution. As Professor Hayek has observed,

> Competition between local authorities or between larger units within an area where there is freedom of movement provides in a large measure that opportunity for experimentation with alternative methods which will

> secure most of the advantages of free growth. Though the majority of individuals may never contemplate a change of residence, there will usually be enough people . . . to make it necessary for the local authorities to provide as good services . . . as their competitors.[1]

Without the analysis presented in Chapter 4 this reasonable proposition and argument in support of a federalist regulatory structure would be as convincing to many economic liberals as it would be without such evidence. However, with the analysis presented in this dissertation, inroads may perhaps be made into the beliefs of those who are not convinced by the force of logic alone. If it is true that some number of those responsible for the implimentation of policy are among this latter group, then further research along the lines begun in this thesis is indicated.

At a minimum the binary (i.e., Delaware and non-Delaware) classification of jurisdictions should be expanded to provide information on the structure and performance parameters of the laws of all the chartering jurisdictions as individual property rights environments. In addition, a clear analogy between the growing literature on products liability and regulation is suggested by the analysis presented in this dissertation. If stocks are modeled as risky products, the demand-for-regulation theory developed here could be applied to analysis of securities regulation along similar lines developed to analyze the regulation of intra-corporate affairs. The growth, in recent

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[1] Friedrich A. von Hayek, The Constitution of Liberty. (Chicago: The University of Chicago Press, 1960), pp. 263-264.

years, of state intervention into private behavior suggests a need for behavioral models which allow a rational analysis of this phenomenon. The model of demand for regulation developed in this thesis may be extended in this direction. The rewards which might accrue to such efforts may be great. As Professor Hayek has warned,

> The great lesson which the individualist philosophy teaches us . . . is that, while it may not be difficult to destroy the spontaneous formations which are the indespensible basis of a free civilization, it may be beyond our power deliberately to reconstruct such a civilization once these foundations are destroyed.[1]

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[1] F. A. Hayek, Individualism and Economic Order. (Chicago: University of Chicago Press, 1958), p. 25.

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APPENDIX I

CORPORATIONS USED IN OWNERSHIP STRUCTURE TESTS

Name of Company	State of Incorporation
ARA Services, Inc.	Delaware
A-T-O, Incorporated	Ohio
Abbott Laboratories	Illinois
Acme-Cleveland Corporation	Ohio
Adams Drug Co., Inc.	Delaware
Addressograph-Multigraph Corp.	Delaware
Air Products and Chemicals, Inc.	Michigan
Airborne Freight Corp.	Delaware
Akzona, Incorporated	Delaware
Alco Standard Corporation	Ohio
Alberto-Culver Company	Delaware
Alexander's, Incorporated	Delaware
Allen Group, Inc. (The)	Delaware
Allied Products Corporation	Delaware
Allied Stores Corporation	Delaware
Allied Supermarkets, Inc.	Delaware
Allis-Chalmers Corporation	Delaware
Amalgamated Sugar Company, (The)	Utah
Amerada Hess Corporation	Delaware
American Cyanamid Company	Maine
American Hospital Supply Corp.	Illinois
American Air Filer Company, Inc.	Delaware
American Standard, Inc.	Delaware
Amfac, Inc	Hawaii
Angelica Corporation	Missouri
Ansul Company (The)	Wisconsin
Arctic Enterprises, Inc.	Minnesota
Armada Corporation	Michigan
Armada Corporation	Michigan
Armco Steel Corporation	Ohio
Armstrong Rubber Co., The (Conn.)	Connecticut
Arvin Industries, Inc.	Indiana
Ashland Oil, Inc.	Kentucky
Associated Dry Goods Corporation	Virginia
Automatic Data Processing, Inc.	Delaware

APPENDIX I (continued)

Name of Company	State of Incorporation
Ball Corporation	Indiana
Bally Manufacturing Corp.	Delaware
Bandag, Incorporated	Iowa
Bangor Punta Corporation	Delaware
Banner Industries, Inc.	Delaware
Barber Oil Corporation	Delaware
Barnes Group Incorporated	Delaware
Barry Wright Corporation	Massachusetts
Basic Incorporated	Ohio
Baxter Travenol Laboratories, Inc.	Delaware
Bearings, Inc.	Delaware
Beatrice Foods Company	Delaware
Beech Aircraft Corporation	Delaware
Beker Industries, Corp.	Delaware
Bemis Company, Inc.	Missouri
Bendix Corporation (The)	Delaware
Best Products Co., Inc.	Virginia
Big Three Industries, Inc.	Texas
Bobbie Brooks, Inc.	Ohio
Brush Wellman, Inc.	Ohio
Bundy Corporation	Michigan
Burroughs Corporation	Michigan
CTS Corporation	Indiana
Carrier Corporation	Delaware
Celanese Corporation	Delaware
Cenco, Incorporated	Delaware
Cessna Aircraft Company (The)	Kansas
Charter Company (The)	Florida
Chicago Bridge & Iron Co.	Illinois
Chrysler Corporation	Delaware
Church's Fried Chicken, Inc.	Texas
Cincinate Milacron, Inc.	Ohio
Clark Eouipment Co.	Delaware
Clark Oil & Refining Corp.	Wisconsin

APPENDIX I (continued)

Name of Company	State of Incorporation
Cleveland-Cliffs Iron Company (The)	Ohio
Clevepak Corporation	Delaware
Coachmen Industries Incorporated	Indiana
Coca-Cola Bottling Co., NY (The)	Delaware
Coca-Cola Company (The)	Delaware
Cole National Corporation	Ohio
Coleco Industries, Inc.	Connecticut
Colgate-Palmolive Co.	Delaware
Colonial Stores, Inc.	Virginia
Columbia Pictures Industries, Inc.	Delaware
Combined Communications Corp.	Arizona
Combustion Engineering, Inc.	Delaware
Compugraphic Corporation	Massachusetts
Cone Mills Corporation	North Carolina
Congoleum Corporation	Delaware
Consolidated Freightways, Inc.	Delaware
Continental Oil Company (Del.)	Delaware
Control Data Corporation	Delaware
Conwood Corporation	Delaware
Cook United, Incorporated	Ohio
Cooper Industries, Inc.	Delaware
Cooper Tire & Rubber Company	Delaware
Copeland Corporation	Delaware
Cox Broadcasting Corporation	Georgia
Craig Corporation	Delaware
Crane Company	Illinois
Crompton & Knowles Corporation	Massachusetts
Culligen International Company	Delaware
Cummins Engine Company	Indiana
Cunningham Drug Stores, Inc.	Michigan
Curtis-Wright Corporation	Delaware

APPENDIX II

STATISTICS USED IN DIFFERENCE-IN-MEANS TESTS

Measure	Delaware Firms (N = 50)		Non-Delaware Firms (N = 50)	
	$\bar{X}$	s[a]	$\bar{X}$	s[a]
Institutional Shares Outstanding	4704	7926	1525	2670
Number of Institutional Shareholders	66.04	90.35	42.26	71.49
Institutional Shares Over Common Shares	.190	.152	.138	.111
Institutional & Preferred Shares Over Common Shares	.217	.161	.159	.115
Percent of Common Traded in Year	3.818	3.21	2.831	1.81

a.- $$s = \frac{\sum_{i=1}^{n} (x_i - \bar{x})^2}{N - 1}$$

APPENDIX III

CORPORATIONS USED IN PERFORMANCE TESTS

Company Name	State of Incorporation
ARA Services, Inc.	Delaware
A-T-O Incorporated	Ohio
Addressograph-Multigraph Corp.	Delaware
Air Products & Chemicals, Inc.	Michigan
Allen Group, Inc. (The)	Delaware
Allis-Chalmers Corporation	Delaware
American Cyanamid Co.	Maine
American Hospital Supply Corp.	Illinois
American Air Filter Company, Inc.	Delaware
American Standard Incorporated	Delaware
Ashland Oil, Inc.	Kentucky
Associated Dry Goods Corp.	Virginia
Basic Incorporated	Ohio
Baxter Travenol Laboratories, Inc.	Delaware
Bendix Corporation (The)	Delaware
Brush Wellman, Inc.	Ohio
Burroughs Corporation	Michigan
Callahan Mining Corporation	Arizona
Carrier Corporation	Michigan
Castle & Cook, Incorporated	Hawaii
Celanese Corporation	Delaware
Central Soya Company, Inc.	Indiana
Cessna Aircraft Company (The)	Kansas
Chris-Craft, Incorporated	Delaware
Chromalloy American Corporation	Delaware
Chrysler Corporation	Delaware
Cincinati Milacron, Inc.	Ohio
Clark Equipment Co.	Delaware
Cleveland-Cliffs Iron Company (The)	Ohio
Coachmen Industries, Inc.	Indiana
Colgate-Palmolive Company	Delaware
Combustion Engineering, Inc.	Delaware
Compugraphic Corporation	Massachusetts

APPENDIX III (continued)

Company Name	State of Incorporation
Congoleum Corporation	Delaware
Consolidated Freightways, Inc.	Delaware
Continental Oil Company (Del.)	Delaware
Control Data Corporation	Delaware
Cooper Industries, Inc.	Ohio
Cooper Laboratories, Inc.	Delaware
Dan River Incorporated	Virginia
Dana Corporation	Virginia
Diamond Shamrock Corporation	Delaware
Diebold, Incorporated	Ohio
Dillingham Corporation	Hawaii
Dover Corporation	Delaware
Dr. Pepper Company	Colorado
Dresser Industries, Inc.	Delaware
DuPont (E.I.) de Nemours and Co.	Delaware
EG & G, Incorporated	Massachusetts
Eagle-Picher Industries, Incorporated	Ohio
Eaton Corporation	Ohio
Echlin Manufacturing Company (The)	Connecticut
Emerson Electric Co.	Missouri
Emery Air Freight Corporation	Delaware
Emhart Corporation	Virginia
Ex-Cell-O Corporation	Michigan
Federal Signal Corporation	Delaware
Ferro Corporation	Ohio
Ford Motor Company	Delaware
Freeport Minerals Company	Delaware
Fruehauf Corporation	Michigan
GAF Corporation	Delaware
GCA Corporation	Delaware
GF Business Equipment, Inc.	Ohio
Gardner-Denver Company	Delaware
General Motors Corporation	Delaware
General Tire & Rubber Company (The)	Ohio
Genuine Parts Company	Georgia
Georgia-Pacific Corporation	Georgia
Giant Portland & Masonry Cement Co.	Delaware

APPENDIX III (continued)

Company Name	State of Incorporation
Giddings & Lewis, Incorporated	Wisconsin
Goodyear Tire & Rubber Co. (The)	Ohio
Graniteville Company	South Carolina
Great Northern Nekoosa Corporation	Maine
Gulf Resources & Chemical Corp.	Delaware
Hanna Minimg Company (The)	Delaware
Hardee's Food Systems, Inc.	North Carolina
Harnischfeger Corporation	Delaware
Harris Corporation	Delaware
Harsco Corporation	Delaware
Heilman (G.) Brewing Company, Inc.	Wisconsin
Hercules Incorporated	Delaware
High Voltage Engineering Corp.	Massachusetts
Holiday Inns, Incorporated	Tennessee
Honeywell, Incorporated	Delaware
Hughes Tool Company	Delaware
Inland Steel Company	Delaware
Interco Incorporated	Delaware
Jim Walter Corporation	Florida
Johnson Control, Inc.	Wisconsin
Keystone Consolidated Industries, Inc.	Delaware
Kimberly-Clark Corporation	Delaware
Kraft, Incorporated	Delaware
Kroger Co. (The)	Ohio
Abbott Laboratories, Inc.	Illinois
Electronic Memories & Magnetics Corp.	Delaware

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A THEORY OF THE EFFICIENCY OF JURISDICTIONAL CHOICE: THE CASE OF CORPORATE FEDERALISM

by

Barry D. Baysinger

(Abstract)

The efficiency of the current structure of American corporation law was investigated. Critics of the current system point to the lack of strict government intervention into the ongoing affairs of the business corporation as the result of state competition for corporate charters. Such competition is made feasible by the ability of each state to draft corporation laws of its own choosing, and is presumed to have created a system of law which is unfavorable to the interests of stockholders.

A theory of the demand for government intervention into private contracting was developed which produced the conclusion that the welfare of contracting parties can only be maximized if they are permitted to choose from a variety of legal environments. Since such choice is only feasible under a federal system, the efficiency of corporate federalism is established.

Tests of the various implications of the theory of the demand for government intervention were included.