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An Inquiry into the Efficiency of the Limited Liability Company: Of Theory of the Firm and Regulatory Competition

William W. Bratton
University of Pennsylvania Carey Law School

Joseph A. McCahery
Tilburg University

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Joseph A. McCahery**

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* Professor of Law and Governor Woodrow Wilson Scholar, Rutgers School of Law-Newark.

** Lecturer in Law, University of Warwick. Our thanks to Robert Hillman, Deborah DeMott, Robert Hamilton, and Larry Ribstein for their comments on earlier drafts of this paper and to Allan Vestal for suggesting that we write it. This Article is based on an address presented at the Washington and Lee University School of Law on November 15, 1996, in connection with *The Future of the Unincorporated Firm* Symposium.

Introduction

In an ideal world, inquiry into the efficiency of a legal regime would require the collection and analysis of empirical information concerning costs and benefits. But, due to cost constraints and limits on available means of measurement, fact studies are the exception rather than the rule in law and economics. Instead, legal policy debates respecting efficiency usually deploy economic theories in the absence of determinative empirical evidence. Efficiency emerges as presumption, not as fact. Absent data on costs and benefits, legal policy debates must be resolved by allocating an empirical burden of proof, with the party bearing the burden losing the debate. Participants in such debates draw on the behavioral predictions of economic theory as they search for ways to assure that the burden rests on their opponents' shoulders.

Economic models do not come ready-made with burden of proof recommendations keyed to legal policy debates. The models must be translated and adjusted for legal contexts. Historically, these arbitrage exercises have simplified the economics and caused the models to yield clear regulatory or deregulatory policy signals. But as to some heavily traversed subject matter, the passage of time has brought such an accumulation of economic assertions that the presumptive regulatory signal has lost its clarity. Such a mature literature, by virtue of its very complexity, is less well suited to the sustenance of strong policy positions. Policy debates go forward, but clarity of position follows less from the terms of economic theory itself than from the employment of the ordinary tools of normative lawyerly debate.

The law and economics of limited liability, with its succession of back-and-forth arguments about the location of an efficiency presumption for and against,[1] presents a literature of this sort. So when Allan Vestal asked us to inquire into the efficiency implications of the recent proliferation of limited liability company (LLC) statutes for this Symposium, we accepted the invitation without making any projection about the exercise's probable results. We hoped that the economic literature, upon de novo review, would yield some new theoretical spin on limited liability — a spin that would provide new advice as to the appropriate location of the legal presumption and that would redirect the back-and-forth legal debate. Unfortunately, that hope was not fulfilled. The economics we reviewed offer new theoretical perspectives on limited liability. But instead of sending a new efficiency signal, these economics only further complicate the existing picture. Upon concluding our review, we found ourselves in a position to recommend only that the best presumption is that the present economics support no presumption at all.

This Article reports on our encounter with the economics of limited liability. Part I begins with a review of the back-and-forth debate on limited liability in law and economics and the application of positions in that debate to the LLC. This review observes that the proponents of the LLC have grounded their claims for productivity enhancement on an extremely thin theoretical base. The proponents' claims follow the view first articulated more than a decade ago that limited liability fosters efficiency by lowering the cost of shareholder monitoring, reducing the risk of investment, and creating conditions for the free transferability of shares. These effects of limited liability are said to permit shareholder portfolio diversification that in turn prompts more productive investment policies

1. *See infra* notes 15-96 and accompanying text.

within firms. The thinness of this efficiency view becomes apparent when reference is made to a contrasting law and economics theory — the pro rata hypothesis. The pro rata hypothesis asserts that the problems of unlimited liability can be solved if a pro rata liability regime is employed in place of the joint and several liability regime manifested in current partnership law. This hypothesis projects that, given a pro rata regime, efficiency gains will result from stepped-up equityholder incentives to limit firms' suboptimal risky investments. The pro rata view directly and strongly challenges all standing justifications for limited liability for small firms. Somewhat surprisingly, LLC proponents thus far have failed to address this hypothesis.

Part I goes on to report on our encounter with the economic literature. This report claims that the story about capital and ownership structure previously drawn on to claim efficiency effects for limited liability no longer safely can be relied on as a matter of economic theory. We show that the most basic notion behind the efficiency case — the idea that there is a connection between a single firm ownership structure and the maximization of firm value — has become highly contestable. In the absence of empirical verification, it may be unsafe to assume that a direct relationship exists between a particular ownership structure and firm performance. More specifically, some models show that an incentive device (such as collateral) can provide a sufficient economic basis to align management incentives and limit the effects of risky decisions.[2] Other models show that under certain conditions concentrated shareholding may have productivity advantages.[3] Together, these models sharply controvert the assertion that limited liability enhances productivity by discouraging concentration and by encouraging diversification. Part I also considers the implications of the assumption, made by both the efficiency and pro rata approaches, that insurance is readily available to cover the risks taken by firms. This discussion asks some questions about the validity of this assumption, making reference to recent literature on insurance's availability and effect.

Part II considers the second component of the LLC proponents' efficiency case — the assertion that the economic theory of regulatory competition justifies the states' seriatim adoption of LLC statutes. Here, in contrast to Part I, our encounter with the economics yields a definite result. We assert as a general proposition that regulatory competition analysis cannot plausibly be conducted on a black box basis that avoids inquiry into the incentives of government actors. We use this perspective to show that, although LLCs present a law as product situation, the classic race to the top

2. *See infra* notes 65-74 and accompanying text.

3. *See infra* notes 80-96 and accompanying text.

story in which fifty states compete to supply cost-saving business forms to an undifferentiated class of discriminating consumers does not fit the facts of the case. A more plausible economic account of the enactment of LLC statutes centers on a locally based supply and demand description and on an interest group causation story. Given such an account, regulatory competition theory provides no basis for an efficiency pronouncement in favor of the LLC. We also show that regulatory competition theory does not imply an affirmative inefficiency story. We consider and reject the suggestion that the LLC amounts to a race to the bottom, finding that the application of the downward model of regulatory competition is just as implausible as the application of the upward, race to the top model.

Our regulatory competition analysis reaches definite conclusions only to offer no help on the ultimate question — the appropriate location of an efficiency presumption respecting the LLC. As to that issue, we make no recommendation.

I. Limited Liability and Economic Efficiency

This Part begins with a review of the law and economics of limited liability and its application to the LLC. We then situate some of the economic concepts operative in this literature in the larger context of the economic theory of the firm. We pursue a modest objective in so doing. We do not, for example, purport to offer either a complete review of the latter literature or a definitive statement of its bearing on the subject of limited liability. We seek instead to show that some of the economic assertions figuring prominently in the legal policy discussion are highly contestable as a matter of economic theory. To the extent that we succeed, we further complicate an already complex discourse.

A. The Limited Liability Company and the Law and Economics of Limited Liability

An LLC bandwagon has rolled across the country. Since 1988, when two states provided for this new business form,[4] forty-six additional states have enacted enabling statutes. Law practice in the field has matured rapidly, aided by a prototype statute from the American Bar Association,[5] a model act from the Uniform Laws Commissioners,[6] and a comprehensive

4. We use the word "new" guardedly. The LLC is a first cousin of the historical joint stock company. William J. Carney, *Limited Liability Companies: Origins and Antecedents*, 66 U. COLO. L. REV. 855, 868-77 (1995).

5. PROTOTYPE LIMITED LIABILITY COMPANY ACT (1992).

6. UNIF. LIMITED LIABILITY COMPANY ACT, 6A U.L.A. 425 (1995). For criticism of

Revenue Procedure from the Internal Revenue Service (IRS).[7] Most observers agree on a simple explanation for this spontaneous expansion of the menu of business forms: there is high demand for the LLC's combination of one-tier, partnership tax treatment,[8] limited liability, and flexibility respecting governance terms.[9] The menu's antecedent means to the same end — the Subchapter S Corporation and the limited partnership — now appear in comparison to implicate excess complexity and excess cost.[10]

The LLC's development appears to improve the menu of business forms in several ways. The LLC brings us to the final stage in the evolutionary abandonment of the historical association of, on the one hand, limited liability, corporate governance norms, and two-tier tax treatment, and, on the other hand, unlimited liability, partnership governance norms, and one-tier tax treatment. The substantive justifications for the bundling of the former trio lost their force many years ago when limited liability, quasi-partnership governance norms, and one-tier tax treatment became available to actors who elected Subchapter S status and made full use of close corporation provisions in state codes. Given the availability of one-

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this statute, see Larry E. Ribstein & Bruce H. Kobayashi, *Uniform Laws, Model Laws and Limited Liability Companies*, 66 U. COLO. L. REV. 947 (1995).

7. Rev. Proc. 95-10, 1995-1 C.B. 501.

8. The IRS's 1988 determination to accord flow-through tax treatment, Rev. Rul. 88-76, 1988-2 C.B. 360, is a *sine qua non*. *See* Larry E. Ribstein, *The Emergence of the Limited Liability Company*, 51 BUS. LAW. 1, 4 (1995).

9. LLC statutes tend to allow members to choose between centralized and direct member management.

10. Limitation of liability through the limited partnership form presupposes barriers to the exercise of control by those participants enjoying the benefit of limited liability. *See* REVISED UNIF. LIMITED PARTNERSHIP ACT (1976) (RULPA) § 303, 6A U.L.A. 144 (1976).

The corporate form does not require such an arrangement. Parties may incorporate and adopt special provisions that approximate the terms of partnership governance, such as management at the shareholder level, restrictions on transfer of stock, and exit through buyout or dissolution. Single-tier tax treatment can be achieved under Subchapter S, I.R.C. § 1361 (1988). The popularity of the LLC implies that the complexity of the planning required for employment of these provisions has limited the number of businesses that opt for limited liability. As Ribstein argues, given the imperfections of planning by contract, the background of inappropriate corporate governance norms never recedes from significance. Ribstein, *supra* note 8, at 2-3. The Subchapter S restrictions — as to the number of shareholders, capital structure, and ownership interest in subsidiaries — also often are included on the list of deterrents. *See* I.R.C. § 1361(b)(1)(A)-(C); *see also* William L. Klein & Eric M. Zolt, *Business Form, Limited Liability, and Tax Regimes: Lurching Toward a Coherent Outcome?*, 66 U. COLO. L. REV. 1001, 1004 (1995).

Forced to choose between the two disabling factors — state corporate law and federal tax restrictions — we would choose the former. The Subchapter S restrictions do not operate as constraints on many small businesses; but, the smaller the business, the larger the barrier presented by complex planning supervised by an outside legal professional.

tier tax treatment with limited liability to those willing to pay the extra layer of transaction costs incurred in organizing a close corporation, it appears arbitrary, even undemocratic,[11] to withhold the benefit from those similarly situated but unwilling to pay.[12] Corporate law has abandoned mandatory imposition of its board-level, collective decisionmaking norm without concern for the resulting expansion in the number of firms enjoying limited liability.[13] Thus, there appears to be no compelling reason against an expansion of the menu of governance options available to firms doing business under the shield of limited liability.[14] The list of factors that in an ideal world would determine the availability of limited liability and the application of one- and two-tier tax treatment is unlikely to include the actors' preference for partnership as opposed to corporate governance norms.

Legal coherence, however, provides only a conditional basis for the validation of business law practices. Today, the practices also must be efficient. Unsurprisingly, the literature leaves open the empirical question respecting the LLC's costs and benefits and addresses the matter only at a theoretical level. Unfortunately, the theoretical literature takes a divided stance, inviting replication of its back-and-forth arguments as discussion goes forward respecting the LLC's presumptive efficiency.

1. Efficiency Theory

One line of theory, referred to here as efficiency theory, enunciates a productivity argument strongly favorable to limited liability. The theory's leading proponents, Easterbrook and Fischel, make the argument by describing the situation of the publicly held firm in a hypothetical regime of

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11. *See* Stephen B. Presser, *Thwarting the Killing of the Corporation: Limited Liability, Democracy, and Economics*, 87 NW. U. L. REV. 148, 155-56 (1992); *see also* Klein & Zolt, *supra* note 10, at 1030-34.

12. Here we echo the argument of Klein and Zolt, who assert that the status quo makes no sense as a tax policy proposition. They comment that it is surprising that investors can elect between two significantly different tax regimes. They also find it peculiar that the participants get to choose whether or not to enjoy limited liability. Klein & Zolt, *supra* note 10, at 1002. Although the wisdom of limited liability may be debatable, the liability shield should not be connected to the choice of business form or the tax shield. *Id.* at 1007. Klein and Zolt also analyze the tax policy issues implicated by LLCs. *See id.* at 1006-07.

13. Ian Ayres, *Judging Close Corporations in the Age of Statutes*, 70 WASH. U. L.Q. 365, 378-88 (1992).

14. *See* Jonathan R. Macey, *The Limited Liability Company: Lessons for Corporate Law*, 73 WASH. U. L.Q. 433, 451-52 (1995) (noting that theoretical questions about tort externalities have not entered political processes that have produced LLC statutes); *cf.* Larry E. Ribstein, *Limited Liability and Theories of the Corporation*, 50 MD. L. REV. 80, 92-93 (1991) (arguing that corporate law process mandates serve functions similar to those of control rules of limited partnerships in that both rules discourage use of limited liability form of doing business).

joint and several unlimited liability.[15] Easterbrook and Fischel focus on the firm's equity investors and project problems investors would encounter with respect to monitoring, liquidity, and diversification under the unlimited liability regime.[16] They identify four critical differences between limited and unlimited liability. First, limited liability reduces the need for shareholders to monitor managers.[17] With unlimited liability, monitoring costs could be so high that equity investment would not get made in the first place.[18] Second, because a joint and several liability regime potentially makes each shareholder liable for the entire amount of an unsatisfied judgment, an unlimited liability regime forces shareholders to incur costs of monitoring one another's wealth levels.[19] Third, limited liability enables the transfer of securities on a trading market, ensuring liquidity.[20] Absent limited liability, shares would be difficult to value because they would carry the potential of excess liabilities.[21] The magnitude of such excess liabilities would depend on the level of wealth of the shareholders; as a result, stock pricing would encompass intractable variables,[22] and free transfer would be constrained.[23] Fourth, by reducing the monitoring costs and downside risks of shareholding, limited liability facilitates diversification.[24] Because diversification of holdings reduces the equityholders' risk, it lowers the firm's cost of capital.[25] In addition, shareholder risk aversion is eliminated from the agency relationship so that management is freer to make riskier investments holding out greater returns. Thus, limited liability facilitates a more productive investment policy for the firm.[26]

Easterbrook and Fischel acknowledge that moral hazard results when investors and managers are protected against potential liabilities for the firm's investment losses and costs suffered by third-party tort claimants.[27]

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15. The leading article is Frank H. Easterbrook & Daniel R. Fischel, *Limited Liability and the Corporation*, 52 U. CHI. L. REV. 89 (1985).

16. *Id.* at 93.

17. *Id.* at 94.

18. *Id.* at 94-95.

19. *Id.* at 95-96.

20. *Id.* at 96.

21. *Id.*

22. *See generally* Paul Halpern et al., *An Economic Analysis of Limited Liability in Corporation Law*, 30 U. TORONTO L. J. 117 (1980).

23. Easterbrook & Fischel, *supra* note 15, at 96.

24. *Id.* at 97.

25. *Id.*

26. *Id.*

27. *Id.* at 103-04.

But they do not deem that problem to be determinative.[28] As to the firm's voluntary claimants, Easterbrook and Fischel argue that no externality exists because voluntary creditors receive compensation for the extra risk.[29] As to involuntary claimants, they argue that the expected magnitude of unsatisfied tort liability will be minimal.[30] The incentive to insure remains strong despite limited liability because tort liability presents a threat to the underdiversified, firm-specific human capital investments of the firm's managers.[31] At the same time, voluntary insurance will not provide a complete solution because it is doubtful that firms can insure fully against all tort liability.[32] Nonetheless, Easterbrook and Fischel conclude that the benefits of limited liability outweigh the costs.[33]

2. *Pro Rata Theory*

Pro rata theory, a contrasting approach to efficiency theory, has been articulated by Leebron and Hansmann and Kraakman.[34] Proponents of the pro rata theory assert that most of the problems of unlimited liability identified by efficiency theory are solved if the regime of unlimited liability abandons the joint and several rule of partnership law in favor of a rule of pro rata liability based on and limited by the proportion of equity owned by each shareholder.[35] Proponents assert that in a pro rata regime investors would not have to monitor one anothers' levels of wealth and would have every incentive to diversify to reduce the proportionate size of their holdings.[36] At the same time, the present system's perverse incentives to invest in suboptimally risky production functions would be eliminated.[37] Proponents also assert that in a pro rata regime unlimited liability will not adversely affect the role of shareholding in the financial system and even will serve to enhance firm performance. Although the cost of equity capital would increase, more productive outcomes still can be expected because

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28. *Id.*

29. *Id.* at 104-06.

30. *Id.* at 107-09.

31. *Id.* at 108-09.

32. *Id.*

33. *Id.*

34. *See generally* Henry Hansmann & Reinier Kraakman, *Toward Unlimited Shareholder Liability for Corporate Torts*, 100 YALE L.J. 1879 (1991); David W. Leebron, *Limited Liability, Tort Victims, and Creditors*, 91 COLUM. L. REV. 1565 (1991).

35. *See* Leebron, *supra* note 34, at 1578-79.

36. *Id.*

37. *Id.*

managers and investors would emerge with high-powered incentives to limit the firms' pattern of risky activities or to increase the level of investment in corporate insurance.[38] A financial system benefit also is projected in that business risk would be reflected in the share price.[39]

The pro rata model has been criticized at the level of feasibility. Critics assert that the model suffers from two significant limitations. First, contingent liability (unlimited or otherwise) would have little impact on share prices and liquidity. Given that offshore investors are attachment proof and that modern financial instruments permit investors to arbitrage the increased level of risk attached to the limited liability rule, little impact on the share price of firms is projected.[40] The second limitation follows from a legal process perspective. Because a given forum may be unable to obtain jurisdiction over foreign shareholders, enforcement of an unlimited liability system would carry significant administrative costs. As a result, it would be rational for creditors to pursue only the wealthiest foreign shareholders. Such a strategy would cause future investors to purchase shares based on the wealth of the shareholder pool.[41] Under this analysis, the pro rata approach returns us to the scenario described under the efficiency view.

3. Efficiency Theory, Pro Rata Theory, and the Limited Liability Company

Ironically, LLC statutes proliferated just as pro rata theory appeared to raise serious questions about the productivity effects of limited liability. Given pro rata theory, an across-the-board inefficiency presumption respecting limited liability became plausible for the first time. This presumption has put proponents of LLC efficiency in an awkward position. Efficiency theory no longer supplies an unshakable basis for asserting that limited liability is a first-best result for public corporations. Indeed, even proponents of large firm limited liability now argue from the position of feasibility; they claim that a limited liability regime is the first-best choice in a

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38. Hansmann & Kraakman, *supra* note 34, at 1907.

39. More specifically, the emergence of a single share price eliminates certain constraints on the movement of the share price. Hansmann and Kraakman explain that unlimited liability, as applied to the publicly traded corporation, would cause the stock price to "incorporate available information about the full extent of . . . possible losses." *Id.*

40. Joseph A. Grundfest, *The Limited Future of Unlimited Liability: A Capital Markets Perspective*, 102 YALE L.J. 387, 395-96 (1992).

41. Janet Cooper Alexander, *Unlimited Shareholder Liability Through a Procedural Lens*, 106 HARV. L. REV. 387, 429-31 (1992).

second-best world of practice created by technical problems and perverse incentives.[42] In addition, the feasibility objections to a pro rata regime at best rehabilitate limited liability only for publicly traded firms and provide no basis for justifying limited liability for close corporations and LLCs.

LLC proponents have been forced to equivocate as a result of the weaknesses in the efficiency theory. At least as to contract creditors, LLC proponents continue to assert efficiency claims: firms with limited liability, they argue, have to pay more for their credit, thus aligning the social costs and benefits of their activities.[43] LLC proponents have more trouble with the irrelevance point — that is, that the shift of the risk of failure to the firm's voluntary creditors is matched by an offsetting increase in the cost of credit. They seek to refute this point by repeating the basics of efficiency theory and by stretching them to fit the small-firm context. They claim that the increased cost of credit is more than offset by (a) monitoring cost savings resulting from delegation to specialized small-firm managers and (b) diversification benefits resulting from venture capitalists assembling portfolios of investments.[44] In addition, LLC proponents assert that all parties save the cost of negotiating into limited liability,[45] and small-firm creditors can diversify risk better than can small-firm equityholders.[46] As to involuntary creditors, LLC proponents have to concede that the economics give rise to a strong negative inference.[47] They respond by pointing to the offsetting benefits respecting relations with voluntary creditors,[48] pointing to the possibility of veil-piercing,[49] making old-fashioned appeals for the need to encourage capital formation,[50] and asserting that the equity investments and risk aversion of small-firm investors will lead to considerable internalization of tort risk.[51] At least one commentator boldly concludes

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42. *See id.* at 444-45. *See generally* Grundfest, *supra* note 40. For a rebuttal to both, see generally Mark R. Patterson, *Is Unlimited Liability Really Unattainable?: Of Long Arms and Short Sales*, 56 OHIO ST. L.J. 815 (1995).

43. Macey, *supra* note 14, at 449.

44. Ribstein, *supra* note 14, at 101-04; *see also* Macey, *supra* note 14, at 451.

45. Ribstein, *supra* note 14, at 105.

46. Macey, *supra* note 14, at 450-51. One might ask whether in that case they should be expected to contract into limited liability anyway. For a strong argument that this would not be the case, see Richard A. Booth, *Limited Liability and the Efficient Allocation of Resources*, 89 NW. U. L. REV. 140, 157-58 (1994).

47. Macey, *supra* note 14, at 448-50.

48. *Id.*

49. *Id.*; *see also* Ribstein, *supra* note 14, at 129.

50. Macey, *supra* note 14, at 451.

51. Ribstein, *supra* note 14, at 127-28.

that the benefits outweigh the costs.[52] However, LLC proponents fail to confront directly the pro rata theory.

B. The Efficiency Theory of Limited Liability in a Larger Theoretical Context

This subpart situates the efficiency theory of limited liability within the larger framework of theories of agency and optimal capital and ownership structure. This larger context shows that efficiency theory is derived from assertions prominent in the theory of the firm as postured ten or fifteen years ago. Efficiency theory remains rooted in these assertions today. Meanwhile, the theory of the firm, like a caravan, has moved on.

We focus on the implications of two assertions central to the efficiency case for the LLC: (a) that limited liability promotes efficiency by enabling diversified shareholding and liquidity, and (b) that diversified shareholding leads to an efficient firm investment policy. We inquire whether these efficiency assertions are safe as a matter of economic theory. Our analysis focuses on the assertions' close ties to first-generation agency theories of the firm and questions those theories' success at evading the irrelevance point. Further, we describe a contrasting line of theory on management-investor incentive contracting. Our response next surveys some economic literature on financial contracting and optimal ownership structure that attempts to eliminate agency costs under a limited liability regime. Finally, we consider a recent financial economic suggestion that there may not be a single ownership structure that deals optimally with the complex agency problems of ownership structure and financial contracting. An important contextual limitation should be noted: involuntary creditors do not appear in the economic theory of capital and ownership structure, and so we refer here only to models of relationships among managers, contract creditors, and equityholders.

1. The Irrelevance Hypothesis and First-Generation Agency Theory

Economic theories of capital and ownership structure have evolved as a response to the irrelevance hypothesis of Modigliani and Miller.[53] Under the Modigliani-Miller model, firm value in a full information and taxless world stems entirely from the production function and is independent of

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52. *Id.* Another commentator is more cautious, leaving the bottom-line question open. Macey, *supra* note 14, at 449-50.

53. Franco Modigliani & Merton H. Miller, *The Cost of Capital, Corporation Finance and the Theory of Investment*, 48 AM. ECON. REV. 261 (1958).

capital structure.[54] Furthermore, the cost of capital is constant across all debt-equity ratios.[55] Applying the irrelevance hypothesis of capital structure to business form — the choice of corporate or partnership structure makes no difference to the value of the firm, at least so far as concerns the effects of contracts with voluntary creditors. As noted above, the irrelevance point continues to show up in legal discussions of limited liability when it is noted that the interest rate fully reflects risk shifted to creditors.[56]

Agency theory rebuts the irrelevance hypothesis by showing that frictions that impact the value of the firm's production function emerge from features of standard debt and equity contracts. As a result, agency theory holds that an optimal capital and ownership structure for the firm exists as a theoretical proposition. The efficiency theory of limited liability uses this agency perspective[57] when it asserts that the single limited liability ownership structure reflects the optimal arrangement for productive investment.

Recall Jensen and Meckling's classic model of frictions attending standard debt and equity contracts.[58] Here, limited liability makes its first appearance in a model of optimal capital and ownership structure. The model asserts that agency costs attach both to equity and to debt.[59] As to debt, the conflicting interests of debtholders and equityholders give equityholders an incentive to invest suboptimally. Given the debt contract's provision for a fixed payment, equityholders receive a fairly large portion of the positive returns on investment. Yet, given limited liability, debtholders can experience a greater loss on the downside if the investment fails. Thus, the limited liability regime is not irrelevant. Indeed, the limited liability regime is suboptimal because its differential effect on downside risk gives equityholders an incentive to invest in highly (and suboptimally) risky projects. As to equity, costly conflicts arise between managers and outside equityholders because the managers are not the residual owners of the firm. Managers do not gain pro rata from the firm's profit-making activities, cannot diversify their risky human capital investments, and remain exposed

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54. *Id.* at 268.

55. *Id.* at 268, 281-88.

56. Easterbrook & Fischel, *supra* note 15, at 105.

57. The fundamental articles are Eugene F. Fama, *Agency Problems and the Theory of the Firm*, 88 J. POL. ECON. 288 (1980); Eugene F. Fama & Michael C. Jensen, *Agency Problems and Residual Claims*, 26 J.L. & ECON. 327 (1983); and Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305 (1976).

58. Jensen & Meckling, *supra* note 57.

59. Jensen & Meckling, *supra* note 57, at 333-49.

to the firm's downside risk. Accordingly, they will tend to pursue their own interests at the expense of wealth-maximizing activities for the firm.

Jensen and Meckling looked to contractually grounded monitoring and incentive schemes to offset the agency costs of capital and ownership structure.[60] By hypothesis, the optimal capital and ownership structure is the one that minimizes agency costs. Debtholders, for example, will anticipate the asset substitution problem described above and will attempt to minimize its effect (and the effects of other agency costs of debt) with covenants and by increasing the cost of the debt. Furthermore, certain firms could commit themselves to operate in the interests of their equityholders and restrict managerial shirking by increasing the amount of debt.[61] According to the Jensen and Meckling model and related models, then, the central concern is to show how the capital structure can be employed as an incentive instrument.[62] The efficiency theory of limited liability follows this pattern precisely when it asserts that limited liability is needed to facilitate shareholder diversification because diversification permits managers to achieve the productivity benefits of a risk-neutral investment policy.

A series of objections have been raised against this agency view of the firm. Strictly speaking, when agency theory holds that capital structure manipulation is the dominant strategy for influencing management productivity, it assumes that the terms of the managers' contract with the equityholders are fixed. Agency theory thereby fails to consider the alternative option of offering managers incentives not to interfere with the firm's choice of financing.[63] If we can materially influence managers' incentives

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60. *Id.*

61. The attempt to resolve the conflict between managers and shareholders by taking on more debt can of course result in new conflicts between debtholders and equityholders, as many learned to their regret during the 1980s and early 1990s.

In a related model, developed in Douglas W. Diamond, *Financial Intermediaries and Delegated Monitoring*, 51 REV. ECON. STUD. 393 (1984), the agency problem between manager and outside investor is analyzed in terms of introducing an optimal penalty that operates to maximize the manager's expected payoff. Viewing the basic framework in terms of whether verification costs can be minimized, Diamond's model implies that when a manager can appropriate any income not paid out, a nonpecuniary penalty can be imposed on the agent on the basis of what is paid out. The optimal penalty is a standard debt contract that permits the investor to appropriate all the reserve. The problem with Diamond's model is that it is not consistent with ownership of equity claims made by outside investors. That is, these debt-like contracts, which assume risk-neutrality, one-period contracting, and a single investor and deterministic verification, are too simplistic and, as a result, fail to apply to contract situations between investors and managers.

62. Diamond, *supra* note 61.

63. *See* Bengt R. Holmstrom & Jean Tirole, *The Theory of the Firm*, *in* 1 HANDBOOK OF INDUSTRIAL ORGANIZATION 63, 81 (Richard Schmalensee & Robert D. Willig eds.,

by varying the terms of their contracts, it is reasonable to assume that the same incentives can be offered under different capital structures. In theory, unless agency theory can explain why changes in capital structure cannot be undone by corresponding changes in the contractual incentive scheme, agency analysis re-emerges as consistent with the Modigliani and Miller hypothesis, and we lapse back to irrelevance.[64] The same result would follow for limited liability.

2. *Limited Liability for Managers and Models of Investor-Manager Incentive Contracts*

The previous section having asserted that contracting between managers and equity investors serves as a means of reasserting the theoretical irrelevance of capital and ownership structure, this section follows up by examining some models of manager–equityholder incentive contracts. Unsurprisingly, managers' preference as to limited or unlimited liability for business failure is a central variable in these models. Also unsurprisingly, the question whether capital structure is a critical component in an optimal incentive structure remains sharply contested. As these models show us, today that contest proceeds in an assumptional context quite different from the context prevailing in the first-generation agency models that inform the efficiency theory of limited liability.

The earliest manager-investor models followed an agency framework. These models asserted that risk-sharing between managers and investors could lead to an optimal outcome, given asymmetric information at the time of contracting and risk neutrality on the part of the manager. In addition, these simple models assumed that the firm's output, although influenced by the manager's activities, is nevertheless observable. For the most part, these models' moral hazard approaches were based on the premise that the manager, before contracting, could select a distribution over the output of the firm which is influenced by his effort.[65] These models asserted that it was optimal for the manager to rent the technology from the investor.

Using the same assumptions, Harris and Raviv moved this literature forward a step to show that a self-interested principal can design an optimal contract with a firm's manager.[66] This model asserts that in the absence of limited liability or other risk constraints, the optimal contract mitigates the

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1989).

64. Modigliani & Miller, *supra* note 53.

65. *See* Holmstrom & Tirole, *supra* note 63, at 80.

66. Milton Harris & Arthur Raviv, *Optimal Incentive Contracts with Imperfect Information*, 20 J. ECON. THEORY 231 (1979).

agency problem by placing all the risk and upside returns for the project on the manager. The investor receives a fixed amount under the contract in exchange for his investment, and the manager receives all the additional returns from the project. These provisions mitigate the agency problem. But this mitigation of the agency problem is achieved only because the model assumes the existence of contractual institutions, such as the posting of a bond to guarantee that the agent will not breach the contract regardless of how costly maintaining that course of action becomes for the agent. In effect, the manager's position in the model of Harris and Raviv corresponds to that of a holder of unlimited liability equity, with the position of the investor corresponding to that of a holder of riskless debt. However, the fixed payment to the investor limits the model's feasibility[67] because we are not really modeling equity investment.

Subsequent models are more robust. For one thing, they achieve limited liability for the manager. In a model developed by Innes,[68] the manager's costly efforts (which the investor cannot observe) improve the expected returns of the investor, and the investor's compensation cannot be decreased regardless of firm profit.[69] Under the model, if the investor's compensation is monotonic-increasing, the investor's first-best choice will be a debt contract. Without the monotonic constraint, the optimal contract will give the manager all the profits in times of high profit and none of the profits when the firm's profits are below a given level. This more realistic model still suffers from the monotonicity requirement. This constraint, Innes notes, "can be motivated either by a requirement that investors never have an incentive to sabotage the firm or by an ability of entrepreneurs to costlessly revise their profit reports upward (with hidden borrowing for example)."[70] Neither of these situations is likely enough to provide support for Innes's debt-contracting result.

Recent models move closer to replicating the observed relationships of managers and investors with ownership claims. Williams offers a multi-period model of the firm that involves a risk-averse manager and investors who are in effect risk-neutral.[71] Williams assumes that the manager's effort

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67. *See* Robert Innes, *Limited Liability and Incentive Contracting with Ex Ante Action Choices*, 52 J. ECON. THEORY 45 (1990).

68. *Id.*

69. This is consistent with the view that all financial contracts, such as the optimal debt contract, are nondecreasing.

70. *Id.* at 46.

71. *Cf.* Joseph T. Williams, *Perquisites, Risk and Capital Structure*, 42 J. FIN. 29-48 (1987) (stating that optimal corporate agency structure requires mix of debt and equity and certain perks).

influences firm output, and that this output is unobservable by outside investors. The investors commit at $t = 0$ in reliance on an *ex ante* monitoring system that functions to restrict the manager from appropriating the firm's returns — specifically, the provision of debt collateral. The model provides that the value of the collateral is uncertain at $t = 1$ and observed only by the manager. The Williams model stipulates that financial contracts must specify what fraction of the collateral and what amount of cash earnings should be transferred to outside investors at $t = 1$. The problem is that amounts to be transferred must depend on the manager's report which depends on the unobserved value of the debt collateral. Although some have taken the position that the optimal contract would have the manager allocating the entire collateral to investors, Williams argues that such an allocation would result in the manager suffering a costly control loss. Thus, for Williams, the optimal contract must be incentive compatible — outside investors receive the entire asset and no cash when the value of the asset and control value are low; and, when the values are high, outside investors receive a fraction of that value. The results of this model demonstrate that the optimal contracts involve features of both equity and debt.

The result of the Williams model contrasts starkly with the results of the earlier agency cost exercises respecting manager-investor relations. Because earlier models assumed that the manager could affect the distribution of returns, they had to rely heavily on techniques such as monitoring verification devices and deadweight penalties in order to get optimal results. Under the Williams model, a contractual priority does the job. The Williams model, with its emphasis on the problem of verifying firm results over time, highlights the excess simplicity of the agency model of Jensen and Meckling, which focused on a financial contract over only a single period.[72] In order to reach the conclusion that changes in the capital structure can be used as an incentive device to align the interests of managers, the Jensen and Meckling model and other first-generation agency models had to assume that firm profitability and cash flows are fully contractible. The Williams model, like other recent work in financial economics, alters these basic assumptions.[73] This model is more in line with the experience of actual firms because contracting for optimal investment incentives must cover contingencies that unfold over time. In addition, these recent models look past the debt–equity ratio to changes in the institutional features of the firm for effective means of limiting managers' ability to appropriate the firm's returns.

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72. Jensen & Meckling, *supra* note 57; *see supra* notes 58-62 and accompanying text (discussing Jensen & Meckling model).

73. Williams, *supra* note 71.

The contractual priority in the Williams model gets part of its incentive power from its debt-like characteristic and part from its equity-like characteristic. Therein lies its contestability. A contrasting line of multiperiod asymmetric information models asks sharp questions about the relative effectiveness of management-investor contracts and control transfer structures bound up in capital structure as a means to channel management incentives in productive directions. The economists responsible for these models assert that to the extent that crucial management choices are noncontractible due to problems of observability and verifiability, monetary-incentive schemes based on firm profitability or stock market performance cannot be expected to import adequate discipline. Although a second-best solution, control structures that allow outsiders to take actions that managers dislike in the event of poor firm performance can do a more effective job of manipulating management incentives in productive directions.[74]

Hart offers a more formal expression of this point.[75] He notes that, given managers who derive no private benefits from control of assets, first-best results easily can be achieved (in a taxless world) with an all-equity capital structure and a simple incentive compensation system. In a two-period situation, Hart simply would make the managers' compensation depend entirely on the dividend on the stock. That is, assuming investment at $t = 0$, and cash flows to be realized at $t = 1$ and $t = 2$, incentive compensation I should equal $B(dt=1 + dt=2)$, where B is a small positive number, and d is a dividend. If the payment also covers liquidation proceeds L at $t = 2$, then $I = B[dt=1 + (dt=2, L)]$, and the manager can be expected to make an optimal decision respecting liquidation at $t = 1$. If at $t = 1$, the expected L is greater than the cash flow expected at $t = 2$, the firm is liquidated at $t = 1$, and no indebtedness is needed in order to align management incentives.[76]

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74. Mathias Dewatripont & Jean Tirole, *A Theory of Debt and Equity: Diversity of Securities and Manager-Shareholder Congruence*, 109 Q. J. ECON. 1027, 1028 (1994).

Similar observations have been made respecting the agency dynamics of investment within a firm. Arijit Mukherji & Nandu J. Nagarajan, *Moral Hazard and Contractibility in Investment Decisions*, 26 J. ECON. BEHAV. & ORG. 413 (1995). Mukherji and Nagarajan model the situation of a principal investing in research and development projects. They show that if the principal receives verifiable "hard" signals concerning the quality of the projects during the development period, the principal will be able to make a full *ex ante* commitment to a project. But, problems of opportunism and monitoring costs still will make for a second-best result — the principal rationally will overinvest relative to the first-best. In contrast, in a world holding out only "soft" noncontractible information prior to the last period, underinvestment is predicted.

75. OLIVER HART, FIRMS, CONTRACTS, AND FINANCIAL STRUCTURE (1995).

76. *Id.* Note an interesting real-world implication of these observations — incentive

But managers do derive private benefits from asset management, and in Hart's conception, the bribe *B* required to align management incentives with those of the outside security holders is unfeasibly large. Accordingly, a complex capital structure that includes control mandates must be interpolated. In a dynamic environment, a range of possibly optimal contractual formulas for setting the terms of that control transfer can be suggested; however, uncertainty makes it impossible to deem any one formula optimal.[77] Thus, under Hart's model, it appears that a simple one-period incentive contract that sets the firm's capital structure based upon a particular projection of the appropriate direction for the agents' activities will not be optimal for all future scenarios. As a result, a significant question arises for the efficiency theory of limited liability. The question is whether it follows that, in a dynamic and uncertain environment, more than one liability structure for the firm's owners might be optimal, rather than the single structure assumed in first-generation agency theory.

3. *Optimal Ownership Structures, Agency Theory, and Limited Liability*

The efficiency theory of limited liability relies heavily on a second line of first-generation agency theory when it suggests that a single ownership structure maximizes the value of the firm. More particularly, efficiency theory's operative notions are (a) that diversified and dispersed shareholding leads to efficient investment policies; (b) that limited liability, by promoting diversification, provides high-powered incentives for firm managers to invest the firms' resources in assets whose value is higher than under the next available alternative; and (c) that limited liability creates value by assuring easy transferability of shares, presumably due to an assumption that optimal incentives obtain inside the firm when its equity interests trade in an outside market with maximum liquidity.

The line of agency theory that supports these operative notions looks to the structure of ownership to ameliorate moral hazard problems on the part of those performing the production function. The connection between ownership structure and production can be traced back to the classic analysis of Alchian and Demsetz.[78] Their model considers the incentive problems of team production and asks how asset owners can induce the manager

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compensation should come in the form of illiquid long positions in stock rather than in the form of stock options.

77. *See* William W. Bratton, *Dividends, Noncontractibility, and Corporate Law*, 19 CARDOZO L. REV. (forthcoming 1997).

78. Armin A. Alchian & Harold Demsetz, *Production, Information Costs, and Economic Organization*, 62 AM. ECON. REV. 777 (1972).

of the asset to cooperate. The model introduces two mechanisms to overcome the control problem — monetary incentives and a third-party monitor — and assumes that the monitor can measure the agents' performance. Fama and Jensen later sharpened this theory by centering on how the structure of ownership can be altered to limit the externalities tied up with the incentive problems of joint production.[79] More specifically, they argued that an ownership structure, such as a partnership, can be designed to produce an optimal outcome for the firm. The equilibrium result allegedly follows from the role played by contractual constraints enforced by third parties.

The inquiry into the relationship between ownership structure, team production, and firm value moved toward robustness when Holmstrom identified concentration of equity ownership as a critical bottom-line factor.[80] Holmstrom's model considers techniques for disciplining production team members. Holmstrom emphasizes that there is no sharing rule which can achieve an equilibrium outcome. Given technological nonseparabilities and problems in monitoring individual contributions to firm output, team members always will have an incentive to collude to facilitate shirking and therefore cannot enforce a sharing agreement among themselves. Therefore, a principal always must exist to enforce penalties respecting shirking. To solve the moral hazard problem respecting agents, the principal must impose an incentive scheme that breaks the firm's budget constraint. In other words, given bad news about team performance, a budgeting authority must be in a position to cut off needed capital.[81] Holmstrom suggests that shareholders with an ongoing contingent commitment to provide capital could perform this incentive function; upon occurrence of the contingency related to team performance, the shareholders are released from their funding commitment. Furthermore, the incentives are provided by a marginal source — investors. In the face of contingencies, investors must cooperate to finance the marginal distribution of profits. As a result, to the extent that investors are called on to make contributions to a fund, it is unlikely that free-rider problems will arise.

A final problem remains for solution in the Holmstrom model. Holmstrom asserts that to the extent equity ownership requires monitoring, there will be an incentive for some owners to free ride on other owners' efforts. From a monitoring perspective, then, a single owner might be

79. Fama & Jensen, *supra* note 57.

80. Bengt Holmstrom, *Moral Hazard in Teams*, 13 BELL J. ECON. 324 (1982).

81. At the margin, says Holmstrom, this is more likely to produce an equilibrium outcome. *Id.* at 326-28.

optimal. Thus, the costs of independently monitoring the firm and pledging capital for financing raise a question respecting the optimal level of ownership concentration.[82]

The problem that Holmstrom identifies — the relationship between ownership concentration, liquidity, management agency costs, and investor incentives respecting governance — is well known to corporate lawyers as the separation of ownership and control. Holmstrom's suggestion that concentration might help solve the separation problem was novel because when he wrote in the early 1980s, takeovers and other market controls were thought to be adequate to overcome shareholder collective action problems. Holmstrom's line of agency theory, then, anticipated the turn taken by the 1990s corporate law discussion of governance initiatives for institutional shareholders.[83] Holmstrom's concentration theory also has disturbing implications for efficiency theory because efficiency theory asserts without equivocation that limited liability enhances productivity by discouraging concentration and encouraging diversification.[84]

This theoretical inquiry into optimal ownership structure remains at an early stage of development. As it evolves, it centers on the problems facing increased levels of firm ownership in the presence of private information. If shares are highly diversified, there are few incentives for a single investor to invest in monitoring and control. Block holding of shares could solve the problem of the shareholder disincentives to invest in monitoring and control that come with high diversification. But block holding is discouraged by the fact that the block holder incurs the significant cost of forgoing her chance fully to diversify her portfolio. Shleifer and Vishny confronted this problem with a model of an equity-financed firm in which there is one large shareholder and a number of small shareholders who free ride.[85] In this model, firm value increases with a larger shareholder's presence. Consequently, the large shareholders are likely to have an incentive to retain their large shareholdings. The problem arises if the large shareholders are able to sell their shares anonymously in the trading market because they will have every incentive to do so.

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82. *Id.*

83. *See, e.g.*, MARK J. ROE, STRONG MANAGERS, WEAK OWNERS: THE POLITICAL ROOTS OF AMERICAN CORPORATE FINANCE 233-39, 260-81 (1994).

84. We note that pro rata theory asserts that pro rata unlimited liability encourages diversification. However, this assertion is distinct from efficiency theory. With pro rata theory, diversification causes enhanced monitoring incentives. Efficiency theory, in contrast, claims that decreased monitoring incentives are efficient.

85. Andrei Shleifer & Robert W. Vishny, *Large Shareholders and Corporate Control*, 94 J. POL. ECON. 461 (1986).

A recent model from Bolton and von Thadden takes a second look at this problem.[86] They examine the properties of a choice between concentrated, illiquid shareholdings and a combination of a control block and a publicly traded, noncontrolling portion of the firm's stock. The question is whether a closely held firm can go public with a big block still in place under an arrangement in which the small holders compensate the remaining block holder for the cost of foregone diversification. In theory, such a deal holds advantages for the small holders because the monitoring services of the control block likely will lead to greater returns than would be received with fully dispersed shares. But this arrangement encounters the problem identified by Shleifer and Vishny in the precedent model:[87] because the trading market will be anonymous, the large shareholder will have an incentive to take in compensation through one door and unwind his position through slow market sales out the other door. The result is that there will be few incentives on the part of the small holders to commit to paying for the monitoring *ex ante*. Consequently, block holding will be less attractive. In addition, if public trading aggravates information asymmetries between the block holder and the small holders, there will be an additional negative impact on the feasibility of a financial arrangement between the block holder and the rest of the shareholder group. The small holders will be willing to enter into the arrangement only in a very special case: they must have reliable information about the future plans of the block holder. Unsurprisingly, Bolton and von Thadden conclude that there is no optimal tradeoff between liquidity and concentration.[88]

This line of inquiry prompts questions about efficiency theory's association of diversification and productivity. Significantly, it also has prompted a model that reconsiders the place of limited liability in the theory of the firm.[89] This model, presented by Andrew Winton, suggests that contingent shareholder liability is feasible and holds potential productivity benefits and that shareholder assumption of additional liability is interconnected with the efficient choice of an ownership structure. Winton notes that his model is motivated by the successful appearance in practice of unlimited liability with respect to large firms. He cites a range of examples including Lloyds

86. Patrick Bolton & Ernst-Ludwig von Thadden, *Blocks, Liquidity, and Corporate Control* (unpublished paper presented at *The Design of Financial Systems and Markets: A Symposium on Financial Intermediation and Corporate Finance*, Loosdrecht, Holland, June 6-8, 1996) (on file with *Washington and Lee Law Review*).

87. Shleifer & Vishny, *supra* note 85.

88. Bolton & von Thadden, *supra* note 86, at 22-23.

89. Andrew Winton, *Limitation of Liability and the Ownership Structure of the Firm*, 48 J. FIN. 487 (1993).

of London, unlimited liability for shareholders in Britain, and double liability for chartered banks in the United States.[90]

In the model, Winton stipulates that there are a number of large (symmetric) shareholders who each may be responsible for additional financing for the firm. The model assumes that any investor can monitor the activities of management and that investors always will prefer to increase the amount of wealth they invest in the firm. The model demonstrates that the wealth effects of increasing shareholder concentration depend on the cost function of monitoring. If the cost of monitoring is positive, an increase in the number of shareholders causes the value of the firm to decrease. The model shows that, given the adverse selection problem that arises when there is additional liquidity, investors have an incentive to commit their external wealth to bond management. The model assumes that most of investors' external wealth is illiquid. Thus, the model asserts that investors will prefer to commit their assets through a contingent guarantee — collateralized debt — rather than to make an actual investment in the firm. This is asserted to reduce the probability of liquidation costs. The model's insight is that as long as the firm is funded by a large number of shareholders via collateralized debt, wealth illiquidity will impose a transaction cost that mitigates the adverse selection problem on both sides of the market. Thus, the average price of a share will reflect the residual wealth of the poorest outside shareholder. The model challenges the position that unlimited liability causes share value to decrease because it causes shares to gravitate to poorer investors who have less to lose.

Winton makes one additional assumption in his model. Specifically, Winton cannot get a result favoring a contingent liability regime without trading restrictions on the equity and wealth verifications respecting the shareholders.[91] His model of contingent liability thus concludes that, although increasing shareholder liability has benefits as well as costs, there is a difficult cost-benefit tradeoff choice between adverse selection and costly restraints on trading. Unsurprisingly, the tradeoff between liquidity and monitoring requires empirical investigation.

We note an absence of conclusive empirical work on the connection between ownership structure and firm performance.[92] The pertinent studies

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90. *Id.* at 487-90. For a fuller presentation of the history, see PHILLIP I. BLUMBERG, THE LAW OF CORPORATE GROUPS: TORT, CONTRACT, AND OTHER COMMON LAW PROBLEMS IN THE SUBSTANTIVE LAW OF PARENT AND SUBSIDIARY CORPORATIONS (1987).

91. Winton notes that limiting the sale of shares without approval or requiring residual liability has been employed in many unlimited liability settings. Winton, *supra* note 89, at 500.

92. To our knowledge, no conclusive empirical work exists on this point.

send conflicting signals. An early study by Demsetz and Lehn[93] found no significant relationship between ownership concentration and accounting profit rate.[94] But, in a different context, Wruck observed that private placements of equity produce higher shareholder concentration and positive stock prices and concluded that the public, perceiving that higher shareholding concentration involves better monitoring, places a higher value on the firm.[95] A contrasting study by Leach and Leahy revealed that in firms in which nondiversifiable risk is high, there is likely to be more managerial shirking.[96] In this regard, shareholders reap more benefits from monitoring. However, the Leach and Leahy study found no evidence that higher shareholder concentration produces a higher return on investment.

C. Some Questions About Insurance

Corporate law teachers like to rely on insurance as the solution to the problem of limited liability. The efficiency and pro rata theories also rely on insurance at critical junctures, but with radically different treatments. Serious questions can be asked about both theories' use of insurance.

1. Efficiency Theory

Easterbrook and Fischel suggest that limited liability does not give rise to significant externalities because corporations will contract for insurance on activities that implicate significant social costs.[97] Given limited liability, corporations have an incentive to invest in risky activities even when they cannot pass along the extra costs to consumers. One result is that the firm, in order to capture the market rents it requires, will transfer some of the costs to involuntary creditors. Given that shareholders have limited liability and incentives to diversify, how could it be cost-effective for the firm to contract for insurance? Intuitively, when the firm contracts for risk coverage of its socially costly business activities, it pays extra for protection that its shareholders already have. Accordingly, the incentive to insure must

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93. Harold Demsetz & Kenneth Lehn, *The Structure of Corporate Ownership: Causes and Consequences*, 93 J. POL. ECON. 1155 (1985), *reprinted in* 1 HAROLD DEMSETZ, OWNERSHIP, CONTROL AND THE FIRM, THE ORGANIZATION OF ECONOMIC ACTIVITY 202-22 (1988).

94. Thereby supporting Demsetz's earlier insights. *Id.* at 217-19.

95. Karen Hopper Wruck, *Equity Ownership Concentration and Firm Value: Evidence from Private Equity Financings*, 23 J. FIN. ECON. 1 (1989).

96. Dennis Leach & John Leahy, *Ownership Structure, Control Type Classifications and the Performance of Large British Companies*, 101 ECON. J. 1418 (1991).

97. Easterbrook & Fischel, *supra* note 15.

stem from limited possibilities to diversify the negative spillovers of business risk on the part of managers, employees, and certain investors. An additional cost incentive stems from risk sensitivity on the part of voluntary creditors who adjust contract terms to reflect risk — lower interest rates on debt offset insurance costs to some extent. Once a limited liability entity purchases tort liability insurance, say Easterbrook and Fischel, it will have less incentive to transfer risk and a diminished incentive to invest in risky activities.[98] In addition, to the extent that the firm insures, there will be less probability of organizational collapse via bankruptcy.[99] Easterbrook and Fischel caution that they do not claim that the insurance incentive they describe completely eliminates the incentive to engage in risky activities that accompanies limited liability.[100] Ribstein extends this analysis to the LLC, arguing that LLC members will have sufficient incentives to insure for their potential tort liability.[101]

Hansmann and Kraakman object to the Easterbrook and Fischel analysis.[102] In their view, firms with limited liability have an incentive to underprovide for insurance.[103] Why should managers invest in insurance, they ask, when it may indicate to outside investors that they are shirking?[104] Managers may want to show investors that they are undertaking sufficiently risky investments without drawing attention to their contrary career concerns.[105] In addition, liability insurance contracts have ceilings on coverage,[106] leading to decisions to insure at a low coverage limit. Firms also may mistake either the frequency of claims or the number of claimants that will settle rather than pursue the full claim.[107] The fact that firms frequently pursue an underinsurance strategy suggests that shareholders will have low-powered incentives to protect potential tort victims.[108] Hansmann and Kraakman suggest that even if a firm wanted to purchase full insurance

98. *Id.* at 107-11.

99. *Id.*

100. *Id.*

101. *See* Ribstein, *supra* note 14, at 129.

102. Hansmann & Kraakman, *supra* note 34, at 1887.

103. *Id.* at 1887-89.

104. *Id.*

105. *Id.*

106. *See id.* at 1889. *See generally* Gur Huberman et al., *Optimal Insurance Policy Indemnity Schedules*, 14 BELL J. ECON. 415 (1983).

107. Hansmann & Kraakman, *supra* note 34, at 1887-89.

108. *Id.*

coverage, the existence of moral hazard and loading costs destroys any incentive to follow through.[109]

Hillman, in turn, has countered Ribstein's extension of the Easterbrook and Fischel analysis to the LLC. He observes that Ribstein fails to take into account the differences between insurance incentives respecting public corporation ownership structures and small-firm ownership structures.[110] Hillman notes that the insurance incentive will not exist when the firm's assets are worth less than its potential liabilities. Alternatively, Hillman suggests that risk-averse employees and managers of underinsured or undercapitalized firms could instead bargain *ex ante* for additional compensation as an insurance substitute. We find these criticisms persuasive.

2. *Pro Rata Theory*

Insurance also plays an important role in the case for pro rata unlimited liability. Insurance provides essential support for the theory's predictions of a high-powered shareholder monitoring incentive with respect to suboptimal risky investment and of only modest increases in the cost of liability to investors. The two predictions can be made simultaneously only to the extent that liability insurance actually would be available to firms under an unlimited liability regime. If insurance is unavailable, unlimited liability will mean increased costs for investors. Given complete insurance, those costs could be contained with shareholders having a high-powered incentive to reduce risk taking due to a desire to keep down the insurance's cost. Hansmann and Kraakman admit, however, that insurance markets essentially are incomplete, with market performance being hobbled by moral hazard, asymmetric information, and loading costs.[111] The viability of their theory accordingly depends on the robustness of their assertion that the insurance market nevertheless substantially performs its job. Hansmann and Kraakman argue that loading costs, although substantial, are unlikely to be significantly greater than the costs of defending tort actions or the transaction costs related to bankruptcy. They also assert that insurance firms generally are able to control moral hazard through ratings and monitoring of potential insureds. They then assume that there would be no higher level of risk bearing by investors under unlimited liability.

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109. *Id.*

110. Robert W. Hillman, *Limited Liability and Externalization of Risk: A Comment on the Death of Partnership*, 70 WASH. U. L.Q. 477, 480-501 (1992).

111. Hansmann & Kraakman, *supra* note 34, at 1887-89. Hansmann and Kraakman neglect to point out that in some cases insurance may not be available. *See* JOSEPH E. STIGLITZ, WHITHER SOCIALISM? 287-88 (1994) (citing to working paper).

We wonder whether pro rata theory asks for more than the insurance market can bear. The assertion that the insurance market works well enough is based on the assumption that insurers, through experience, ratings, and menus, are able to design contracts that effectively reduce adverse selection and moral hazard. Early work in the economics of insurance supports this conclusion by showing the existence of an equilibrium in which high-risk and low-risk types separate themselves by selecting different price-quantity policies.[112] More recent work still shows that in contracts in which a menu is available to policyholders to select the amount of coverage based on price per unit, policyholders sort themselves based on their type.[113] But there is some evidence to the contrary. It has been suggested that experience-rated contracts lead to first-best outcomes only under limited conditions.[114] Indeed, these contracts are feasible only when an insurer has a comparative advantage over rivals in monitoring the claims histories of policyholders.[115] Therefore, if an information asymmetry regarding valuable claim information exists, the underwriting policies with respect to new policies could lead to a lowballing price policy. The evidence of lowballing is consistent with the presence of adverse selection in certain insurance markets, such as the market for automobile policies.

We also have questions about the assertion that the insurance market can handle the increased levels of risk and demand that would follow a shift to an unlimited liability regime. The insurance industry, like other industries, may be subject to underinvestment problems that lead to the reduction of the value of its firms' equity and policies. The degree and location of the problem will depend on the situation. The ability of insurers to insulate themselves from exogenous shocks (due to interest rates and so forth) may be related to their ownership structure, capital market access, and reinsurance availability and varies across the insurance industry.[116]

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112. Michael Rothschild & Joseph Stiglitz, *Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information*, 90 Q.J. ECON. 629 (1976).

113. In practice, the insurance industry tends to rely on multiperiod, experience-related contracts to select out high- and low-risk types.

114. Stephen P. D'Arcy & Neil A. Doherty, *Adverse Selection, Private Information, and Lowballing in Insurance Markets*, 63 J. BUS. 145, 148 (1990) (referring to Samuel Gal & Michael Landsberger, *On "Small Sample" Properties of Experience Rating Insurance Contracts*, 103 Q.J. ECON. 233 (1988)).

115. *Id.* at 150 (referring to Howard Kunreuther & Mark Pauly, *Market Equilibrium with Private Knowledge: An Insurance Example*, 26 J. PUB. ECON. 269 (1985)).

116. *See* Neil A. Doherty & James R. Garven, *Insurance Cycles: Interest Rates and the Capacity Constraint Model*, 68 J. BUS. 383 (1995).

The literature on insurance, considering the industry capacity question from another angle, asserts that firms operating in insurance markets have a basic shortcoming — there is a limit on the amount of insurance that any firm can offer.[117] Moreover, capacity in insurance markets fluctuates.[118] Under this constrained capacity view, unanticipated claims on insurance firms lead to a loss in equity that can be replaced either internally or externally.[119] Given sudden and excessive losses, the insurance firms' short-term supply curve will shift.[120] To the extent that insurance firms prefer internal capital, they will have to respond by increasing premiums.[121] As a result, capacity will be constrained. This constrained capacity model is thought fairly to explain the reasons for cyclical changes in premiums for insurance contracts.[122] Given the existence of an underwriting cycle, some have suggested that an imbalance between supply and demand exists in the industry.[123] Insurance company earnings lately have been substantially impacted by losses, and the capital bases of insurance companies are under review.[124] As a response to this capacity constraint, the Chicago Board of Trade in 1995 introduced a new catastrophe option to hedge against risk of loss due to unexpected events.[125] Although the introduction of an option contract provides an important new asset to control risk, it should be noted that this instrument offers only a small reduction in an insurer's exposure to credit risk.[126]

This suggests that more empirical support may be needed to sustain Hansmann and Kraakman's assertion that contracting institutions within the insurance industry work reasonably well.[127] The question remains open

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117. Ralph A. Winter, *The Liability Insurance Markets*, 5 J. ECON. PERSP. 115, 126-29 (1991).

118. *Id.* at 126-31.

119. *Id.*

120. *Id.*

121. *Id.*

122. Much of the industry losses suffered during the 1980s could be linked to adverse selection and other characteristics of the insurance market. In contrast, during the 1990s, the insurance and reinsurance industries face a new capacity constraint that is linked to more frequent and more costly natural disasters taking place.

123. Michael S. Canter et al., *Insurance Derivatives: A New Asset Class for the Capital Markets and a New Hedging Tool for the Insurance Industry*, 4 J. DERIVATIVES 89 (1996).

124. *Id.* at 89-91.

125. The contracts were introduced based on information that insurance losses potentially could limit the overall effectiveness of the industry. *Id.* at 92.

126. *Id.* at 95.

127. Hansmann & Kraakman, *supra* note 34, at 1887-89.

whether the insurance market is sufficiently stable and predictable to provide liability insurance under an unlimited liability regime. We note that the complexity of this industry's problems may make the requisite support difficult to marshal. The possibility of controlling moral hazard and other market imperfections is difficult to measure unless the individual performance of each firm in the industry is evaluated. What, for example, are the incentives to monitor and supervise managers in an industry that may suffer financial losses for idiosyncratic reasons rather than because of moral hazard?

II. Regulatory Competition and the Limited Liability Company: Law as Domestic Product

Proponents of the LLC employ a regulatory competition story to counter negative implications arising from the back-and-forth debate on limited liability. This line of defense draws heavily from the literature that describes and justifies state competition for public corporation charters. That precedent regulatory competition story is retold in the first subpart below. The subparts that follow confront and refute the story's extension to the LLC. This three-part analysis first considers the prospects for adoption of an LLC statute in a hypothetical island jurisdiction assumed to have an income tax system and interest group alignment identical to those of a typical American state. This discussion invokes public choice theory to project that special interests in the jurisdiction will procure an LLC statute. This analysis is then extended to a hypothetical federal system of four states in which charter competition is precluded by a *siège réel* choice of law rule. Here the question is whether the enactment of an LLC statute by a single state in the federation can lead to a race to the bottom. The discussion shows that possibilities for externalizing the costs of torts make a race to the bottom a structural possibility. But the discussion also projects that this race to the bottom scenario is highly unlikely to occur in practice. The final subpart carries the analysis to a hypothetical federal system in which charter competition is a structural possibility. Here the question is whether the enactment of LLC statutes can be characterized as a competitive race to the top. The discussion acknowledges the possible presence of competitive influences, but concludes that these influences do not provide a plausible basis for explaining either the initial proliferation or the ongoing evolution of LLC statutes. Domestic rent seeking by interest groups, the explanation offered for the first subpart's island jurisdiction, provides a better explanation even in the context of a federal system. Interstate competition emerges in a secondary posture, taking its usual role

as an inevitable limiting factor on state-level economic regulation. Thus positioned, it cannot support an efficiency presumption and, accordingly, has no significant justificatory role to play for the LLC.

A. Corporate Charter Competition

Regulatory competition is an economic theory of governmental organization that equates decentralization with first-best equilibrium results. The theory analogizes law to product and then asserts that junior level governments — local, state, or national, as opposed to federal or supernational — compete for citizens and factors of production when they regulate.[128] The theory predicts that such competitively determined regulation will satisfy citizen preferences. The prediction has a normative implication for legal and political theory: just as price competition disciplines producers of private goods for the benefit of consumers, regulatory competition promises to discipline government producers for the benefit of taxpaying citizens. Two distinct benefits are said to follow — the distortions that result as interest groups compete for, and win, political favors are ameliorated, and incentives for innovative lawmaking are enhanced.[129]

Regulatory competition has been brought to bear on the entire range of federalism discussions, usually to support a devolutionary initiative or to oppose a proposal for federal intervention. This is because the law as product model implies a preference for decentralized regulation. The model depicts central government as a cartel: just as collaboration among competing producers of products reduces price competition and incentives to innovate, so the removal of regulatory subject matter to a central government reduces the number of potential competitors and dilutes entrepreneurial incentives. Furthermore, because the revenue enhancement constraint on the national government is less intense,[130] the national lawmaking process will be slower, less responsive to productive concerns, and more susceptible to the influence of organized interest groups.[131]

Regulatory competition theory applies to corporate law on the assumption that state corporation codes are products for which reincorporating

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128. Citizens signal their preferences respecting legal goods and services when they migrate from regime to regime. Citizens' ability to exit disempowers government actors, whose welfare diminishes as citizens depart, taking along votes and revenues. *See* Ronald J. Daniels, *Should Provinces Compete? The Case for a Competitive Corporate Law Market*, 36 MCGILL L.J. 130, 142-43 (1991).

129. *See* ROBERTA ROMANO, THE GENIUS OF AMERICAN CORPORATE LAW 4-5 (1993).

130. *Id.* at 48.

131. *Id.* at 5.

firms are the marginal consumers.[132] In the resulting description, competition for the legal business of firms forces the states to adapt the law to the dynamic conditions in which the firms operate. State lawmaking emerges as a trial and error process suited to the accurate identification of optimal corporate arrangements. More particularly, reincorporating firms seek a predictable legal regime that reduces their costs. Delaware, leading provider of corporate charters, provides predictability with comprehensive case law, well-specified indemnification rules, and an expert judiciary.[133] Reincorporating firms also seek a guarantee that the new state of domicile will maintain the desirability of its code — the reincorporating firm and the target jurisdiction enter into a relational contract that entails a risk of opportunistic breach. Even as the firm invests to gain access to the target's favorable legal regime, the target remains free to change its politics and to transform itself into an unresponsive jurisdiction. The competitive jurisdiction has to reduce this possibility by offering a credible commitment. Delaware's commitment stems from its fiscal dependence on franchise tax revenues.[134] These revenues are an intangible asset that results from the combination of a large number of incorporations and a small population. Delaware also invests in real assets specific to its incorporation business — its case law and judicial and administrative expertise. These, together with Delaware's corporation code, constitute reputational capital.[135] To protect the capital, Delaware imposes internal process and structure rules that deter political disruption.[136]

As originally articulated, this market-based race to the top validation of state law bypassed the problem of the shareholders' lack of influence over state lawmaking with a reference to the control market deterrent. The assertion, in effect, was that managers' exit option adequately disciplined the states while the possibility of shareholder exit by tender to a hostile offeror adequately disciplined the managers. This story lost its persuasiveness when managers and state politicians collaborated[137] to hamper the

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132. *Id.* at 6, 32.

133. *Id.* at 32, 33-34, 39 & n.20.

134. *Id.* at 37-39.

135. The store of capital bolsters Delaware's market position. Other states cannot credibly precommit to offer superior service and thus are deterred from incurring the necessary start-up costs. A first-mover advantage in Delaware results. *Id.* at 40-41, 43-44.

136. These rules include Delaware's direction of corporate matters to a specialized chancery court, its practice of appointing rather than electing its judges and limiting them to twelve-year terms, and its requirement of two-thirds majorities of both houses of its legislature for the approval of corporation code amendments. *Id.* at 38-42.

137. Although this is interest group legislation, it did not result from the efforts of a

market deterrent with the antitakeover legislation of the 1980s.[138] This manifest case of charter market failure[139] reinforced the assertion of the system's opponents that, despite its competitive elements, it still allows management to capture the states, with suboptimal results. Following the lead of Roberta Romano,[140] the members of the market deterrent school moved to a middle ground position on charter competition.[141] There they defend the state system, except to the extent that it inhibits the control market. Other commentators, all of whom also occupy middle ground views, have taken the occasion to attack the state system and argue for federal intervention.[142] As usual, at the debate's bottom line lies the alloca-

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centrally organized management lobbying effort. Romano's case study of the state legislative process suggested that the statutes are initiated by threatened managers of local corporations and their assistants in the local corporate bar rather than by broad coalitions of business, labor, and community leaders. *See* Roberta Romano, *The Future of Hostile Takeovers: Legislation and Public Opinion*, 57 U. CIN. L. REV. 457, 461-62 & n.11 (1988).

138. For a summary, see ROMANO, *supra* note 129, at 53-57, 74-75.

139. A large body of empirical work confirms that the antitakeover statutes had a harmful effect on shareholder value. This empirical result emerges from a complex picture that encompasses the negative price effects of contractual antitakeover provisions such as poison pills. For a summary, see *id.* at 60-67.

140. *See* Roberta Romano, *Law as Product: Some Pieces of the Incorporation Puzzle*, 1 J.L. ECON. & ORGS. 225 (1985).

141. *See, e.g.*, FRANK H. EASTERBROOK & DANIEL R. FISCHEL, THE ECONOMIC STRUCTURE OF CORPORATE LAW 222 (1991) (concluding that race to top stands as refuted, but proposition that competition creates "powerful tendency" to enact shareholder beneficial laws remains vital); Ralph K. Winter, *"The Race for the Top" Revisited: A Comment on Eisenberg*, 89 COLUM. L. REV. 1526, 1528 (1989) (expressing more confidence in incorrectness of race to bottom view than in view that state competition results in race to top).

142. *See* Lucian Arye Bebchuk, *Federalism and the Corporation: The Desirable Limits on State Competition in Corporate Law*, 105 HARV. L. REV. 1435, 1458-75 (1992). Bebchuk argues that the middle-ground result stems from a structural defect in the competitive system that disables the production of a maximizing legal regime. The market leads the competing states to focus on the variables that influence reincorporation decisions. *Id.* at 1452-54. From this there follows a concern for management preferences rather than for shareholder value. Accordingly, nothing deters the states from pursuing policies of management accommodation respecting the fiduciary and market deterrents. *Id.* at 1462-63, 1468, 1488. Bebchuk concludes that much state takeover regulation should be preempted and federal fiduciary standards should be imposed. *Id.* at 1494-95; *see also* David Charny, *Competition Among Jurisdictions in Formulating Corporate Law Rules: An American Perspective on the "Race to the Bottom" in the European Communities*, 32 HARV. INT'L L.J. 423, 441-53 (1991); Roberta S. Karmel, *Is It Time for a Federal Corporation Law?*, 57 BROOK. L. REV. 55, 91-96 (1991); Joel Seligman, *The Case for Minimum Corporate Law Standards*, 49 MD. L. REV. 947, 971-74 (1990); Joel Seligman, *The New Corporate Law*, 59 BROOK. L. REV. 1, 60-63 (1993). New allegations of interest group capture also have cropped up. See William W. Bratton & Joseph A. McCahery, *Regulatory Competition,*

tion of the theoretical burden of proof for or against federal intervention. Theoretical burdens of proof also show up at the bottom line when regulatory competition theory is drawn on to explain the proliferation of LLC statutes. The inclusion of regulatory competition in the account of events supports an inference of productivity, countering the negative signal sent by the pro rata theory of limited liability.

B. Domestic Incentives: LLCs in an Island Jurisdiction

Hypothesize an island jurisdiction that makes available the corporate, limited partnership and general partnership business forms and that taxes income pursuant to a system identical to our federal tax system. Assume that the taxing authority issues a new ruling that makes one-tier taxation available to an incorporated partnership. The question is whether the island-state's legislature can be expected to respond by enacting an LLC statute. Assume further that the efficiency of the statute follows from a relatively simple cost-benefit comparison: the costs are the costs of externalized firm torts and the benefits stem from cost savings accruing to firms organizing as LLCs and new capital formation induced by the form's availability. Finally, make the public choice assumption that the legislature is open to the influence of special interests and routinely enacts suboptimal legislation in order to meet their demands and preferences.

Regulatory Capture, and Corporate Self-Regulation, 73 N.C. L. REV. 1861 (1995), in which we argue that capture of corporate law by the management interest operates across the 50 states and that regulatory competition exacerbates the problem, producing corporate codes that block shareholder access to the corporate contract and justifying limited federal intervention. Our interest group capture story complements and, to some extent, contrasts with an antecedent description by Jonathan Macey and Geoffrey Miller. *See* Jonathan R. Macey & Geoffrey P. Miller, *Toward an Interest Group Theory of Delaware Corporate Law*, 65 TEX. L. REV. 469, 498-509 (1987). Macey and Miller offer a supply-side account that highlights the impact of internal interest group politics on the production of Delaware law. *Id.* at 471-72. In their account, all groups within the state have a common interest in producing a marketable legal regime, but the groups differ on the relative proportions of costs imposed and revenues earned. The taxpayers have an interest in higher direct costs (franchise tax revenues) and lower indirect costs (legal fees). The lawyers' interest in fees would be served by lower direct costs leading to a greater number of incorporations and by higher indirect legal costs even at the sacrifice of some incorporations to the extent that the legal fees paid exceed those lost. Macey and Miller assert that, unlike Delaware, a state acting as a pure profit maximizer would limit indirect costs so as to maximize direct costs. *Id.* at 498. Delaware fails to conform to the product model's predictions because the bar acts as a small, cohesive interest group that extracts special concessions from the legislature at the expense of the general public. *Id.* at 504-08. For an extension of this story to the broader context of choice of law, see generally Larry E. Ribstein, *Delaware, Lawyers, and Contractual Choice of Law*, 19 DEL. J. CORP. L. 999 (1994).

1. Beneficiary Firms

Legislative authorization of LLCs holds out potential cost-saving benefits for several classes of firms.[143] The first class is made up of existing partnerships for which incorporation is unduly costly due to the costs and uncertainties of planning within the corporate form and Subchapter S. The second class of firms contains existing Subchapter S corporations for which long-term cost savings accrue in the event of reorganization as LLCs, with the savings exceeding the cost of reorganization.[144] The third class consists of future firms which, but for the LLC statute, would fall into one of the first two classes.

Three additional classes of beneficiary firms can be suggested, but only on a more speculative basis. The first class contains future firms that come into existence in the LLC form, but that would never have come into existence had the form not been available. The number of firms falling into this category is likely to be quite small. To the extent that limited liability and one-tier tax treatment are preconditions to these firms' existence, Subchapter S incorporation would be available in any event at additional cost. The class thus contains only firms for which the cost savings held out by the LLC have a magnitude sufficient to induce new capital formation. We suspect that, given a project of a value so marginal that the cost of Subchapter S organization presents an insuperable barrier, the nontrivial costs of organizing as an LLC also will present a significant deterrent. A second and related class of beneficiaries consists of existing and future C corporations that prefer one-tier tax status obtainable only through the LLC form. This class, by definition, falls outside of the Subchapter S limitations, presumably due to a large number of equity participants. Such a large base of equity participants also would tend to preclude selection of the partnership form. Presumably, the number of firms in this class is very

143. We stress the word "potential." The pattern of LLC usage in practice appears to be more complex than one would predict based on an encounter with the cost-saving claims of LLC enthusiasts. For example, start-up firms in which venture capitalists invest continue to choose the corporate form, despite the two-tier tax treatment thereby entailed. *See* Joseph Bankman, *The Structure of Silicon Valley Start-Ups*, 41 UCLA L. REV. 1737, 1747-50 (1994). For a governance-based explanation, see Deborah A. DeMott, *Agency and the Unincorporated Firm: Reflections on Design on the Same Plane of Interest*, 54 WASH. & LEE L. REV. 595 (1997).

144. Larry E. Ribstein, *Statutory Forms for Closely Held Firms: Theories and Evidence from LLCs*, 73 WASH. U. L.Q. 369, 428-30 (1995), collects numbers for organizations in the LLC, limited partnership, and corporate firms in five states during the period 1988-1994. Ribstein interprets the numbers to support an inference that actors have been switching from the corporate and limited partnership form to the LLC form. *Id.* at 429.

small, because the defining characteristics make the firms likely candidates for organization as limited partnerships. With that point we identify a final class of beneficiary firms — present limited partnerships for which long-term cost savings will accrue in the event of reorganization as LLCs, with the savings exceeding the cost of reorganization. Future firms that, but for the LLC statute, would have organized as limited partnerships also fall into this class.

2. *Costs and Benefits*

The beneficiaries of the legislation having been identified, we can proceed to consider the island jurisdiction's cost-benefit calculation. An LLC statute will be Kaldor-Hicks[145] efficient if the externalities suffered and additional costs incurred as the result of its employment are outweighed by the quantum of benefits from cost savings to firms and spillovers from incremental capital formation accruing within the state. For the sake of discussion, we will make a contrary cost-benefit assumption here — that is, the costs externalized and incurred as the result of the increase in the number of limited liability businesses are not trivial. From this point, there ensues a complex cost-benefit comparison. Clear benefits accrue: first, from the cost savings yielded for existing Subchapter S firms and second, from spillovers from new businesses that otherwise would not be formed. Things become less clear, however, when we turn our attention to the class of partnerships that reorganize under the LLC statute. Here we have two additional categories of social cost to consider. These businesses presumably will incur additional transaction costs as they pursue limited liability as LLCs. Also, because these firms are new to limited liability, it is possible that LLC status will alter their incentives so that they now engage in suboptimally risky new lines of business. By analogy, a technical innovation that lowers the cost of evading detection for criminal conduct leads to no overall gain for society. Accordingly, as to this class of firms, any benefits result only from the productive aspects of new lines of business taken up after reorganization as LLCs that would not have been taken up had LLC organization been unavailable.

So to raise with clarity the political issue implicated by LLC legislation, we will stipulate a cost-benefit result: the enactment of the LLC statute is inefficient. Accordingly, if the public interest is the state legislature's sole concern, there will be no LLC statute. But because public choice assumptions are made here, the question as to enactment remains open.

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145. That is, aggregate economic welfare will increase, although there will be losers as well as winners.

3. *Interest Groups*

Will the island-state's legislature enact an LLC statute? Projection of an answer to this question requires us to specify the pro and con interests and to project their likely influence on legislative results.

First and foremost on the pro side are the business lawyers. They have a high-powered incentive to persuade the legislature to enact the statute in order to increase fee revenues. There appears to be one-period pent-up demand that the lawyers can satisfy,[146] stemming from the existing inventory of partnerships, limited partnerships, and corporations that will opt to transfer to LLC status. In subsequent periods, the lawyers presumably gain to the extent that new firms that otherwise would organize as partnerships choose the more formal and more expensive LLC form and also benefit to the extent of new capital formation.[147] But the lawyers will lose to the extent that firms that otherwise would organize as more expensive corporations or limited partnerships choose the LLC form.[148] The lawyers will have no problem in mobilizing to procure the legislation. Their bar associations routinely step in to solve problems of collective action respecting enactment of beneficial legislation, serving the drafting function as well as the lobbying function.[149] Organized small business interests conceivably could join the lawyers in the lobbying process. Both voices, thus organized, would serve as a proxy for the voice of any present and potential outside investors in small firms.

There are three possible voices that might be heard on the opposition side. The first is the state treasurer to the extent that the LLC implies revenue losses. However, the extent of any such losses would not appear to be significant. Any income tax consequences would be trivial because most corporate candidates for LLC reorganization presumably already would be Subchapter S taxpayers, and one-tier treatment also will have been the rule for all partnership and limited partnership candidates for LLC formation.[150] Nor should the franchise tax revenue present a problem. If

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146. *See* Jennifer Gerarda Brown, *Competitive Federalism and the Legislative Incentives to Recognize Same-Sex Marriage*, 68 S. CAL. L. REV. 745, 747-69 (1995).

147. *Id.* at 759-69.

148. We have heard informally from practitioners in two different states that the LLC form is most widely employed for single-purpose real estate acquisition vehicles having a single equityholder. With the LLC, counsel can just file a piece of paper, skipping the additional step of producing a needless set of bylaws.

149. *Cf.* William J. Carney, *Federalism and Corporate Law: A Non-Delaware View of the Results of Competition*, *in* INTERNATIONAL REGULATORY COMPETITION AND COORDINATION 157-61 (William Bratton et al. eds., 1996).

150. Moreover, if the Silicon Valley experience is any guide, some potential LLCs will

franchise taxes for LLCs are set at a level comparable to that already existing for close corporations, the treasurer should experience a net gain as untaxed partnerships convert to LLC form and become franchise taxpayers. The second candidate for the opposition role is the banks. To the extent that limited liability presents a contracting barrier, the statute will disable them from contracting back to their *ex ante* position of security respecting small-business lending.[151] But because banks can adjust the cost of credit to make up for this and diversify the additional risk, one would not expect banks to expend financial resources and political capital on an opposition campaign.[152] The third potential class of objectors is the tort plaintiffs' bar. Here, participation in the political process would depend on a cognizable division of labor[153] between business lawyers and plaintiffs' litigators. Even given such a division of labor, the business lawyers would appear to have the more high-powered incentive. Business lawyers would be going after the near-term reward of fees generated by pent-up demand. In contrast, income reduction to the plaintiffs' lawyers stemming from the difficulty of collecting judgments against LLCs amounts to a distant period problem and, as a result, may appear speculative in the present. Indeed, the likelihood of loss might rationally be discounted on a number of grounds. Individual defendants could be identified in many cases,[154] and the remedy of veil-piercing might provide some compensation.[155] In addition, to the extent that the expansion of limited liability attracts assets to risky endeavors, the volume of tort litigation will rise, with recoveries out of corporate assets in those cases offsetting losses from unsatisfied judgments in others. Finally, because the incentives of the tort plaintiffs' bar have themselves become a political issue, a perceived need to husband political capital for opposition to more threatening future legislative initiatives might counsel silence here, even given a perceived impairment of

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organize as C corporations despite the tax disadvantage. *See* Bankman, *supra* note 143, at 1747-50.

151. Booth, *supra* note 46, at 157-61.

152. Contract creditors unaware that firms were shifting to limited liability status in quantity might suffer surprise losses. *See* Saul Levmore, *Partnerships, Limited Liability Companies, and Taxes: A Comment on the Survival of Organizational Forms*, 70 WASH. U. L.Q. 489, 491-92 (1992). Obviously creditors so positioned would not be players in a political process.

153. Note that a complete division of labor among individual business lawyers and tort litigators need not result in a visible division of interest on the part of the bar if the two types of lawyers practice together in firms.

154. *See* Booth, *supra* note 46, at 154-57.

155. *See* Ribstein, *supra* note 8, at 8-9 (suggesting that corporate veil-piercing on general equitable principles should apply equally to LLCs).

interest. In all, then, the organized plaintiffs' bar serves as a decidedly imperfect proxy for the interest of an inchoate class of future tort victims. It accordingly is plausible to project complete silence respecting tort victims' interest in the political process respecting LLCs.

4. Predicted Result

Comparison and weighing of the competing interests, thus described, supports a projection of prompt enactment of an LLC statute. Here we tell a "just so" story, of course. The historical proliferation of LLC legislation has been attributed to the initiative of state bar committees rather than to the initiative of the legislators themselves.[156] State treasurers, if they have objected behind the scenes, have been overruled. The banks and the plaintiffs' bars appear to have taken no interest in the matter. Thus, in practice, the business lawyers' high-powered incentives appear to have carried the day.

Note that in our hypothetical island-state the law of business forms very much is product — domestic product. The local bar procures the legislation in order to access and satisfy an existing client demand. Yet, significantly, nothing in this law as product description provides the slightest assurance that the legislation is efficient. Indeed, in the confines of the model here, the supply-side interest procures the legislation in the usual manner of interest group capture and the demand being satisfied stems in part from a perverse incentive to externalize accident costs.

It also should be noted that the alignment of incentives in the island-state makes it likely that innovation respecting the terms of the LLC form will continue in the period following enactment. The legal practitioners can learn the particulars of the statute's effects only on a trial and error basis over time. As they do so, one would expect to see amendment of the legislation. This presumably suboptimal incentive to innovate follows from the business lawyers' interest in maximizing fee revenues. Recall that one of the main sources — perhaps even the primary source — of fee revenues from LLC organization lies in firms that, but for the LLC statute, would organize as partnerships due to the prohibitive costs and uncertainties attending corporate organization under Subchapter S. An implication of extreme cost sensitivity arises on the part of these firms. Limited liability has a value to them, but they opt in only if the cost is minimal. Given such discriminating consumers, we can expect the business bar to invest in close

156. *Id.* at 4; *see also* Ribstein, *supra* note 142, at 1008-12 (explaining that in "non-corporate" situations holding no cognizable franchise tax yield for state, legislators will not have incentives to innovate).

monitoring of the operation of the LLC statute. Because complexity is involved, there is no reason to expect that the bar associations' (and legislatures') first-round draft of the statute will best satisfy client demand. Rounds of revision will be needed to achieve the maximum possible satisfaction of client demand for lowest cost organizational terms. As the statute is improved through amendment, the class of firms for which LLC organization is beneficial expands, with the bar experiencing the reward of higher revenues. Here again we tell a "just so" story: the prevailing forms of LLC statutes have evolved dynamically in the course of their short history.[157]

C. Incentives to Race to the Bottom: LLCs in a Federal System with a Rule of Siège Réel

It has been suggested that the states' rapid movement to enact LLC statutes cannot be described as a race to the bottom for the reason that a downward corporate race can only occur given a separation of ownership and control.[158] However, this suggestion misses a point. If a given legislative enactment causes costs to be incurred in other states, then a race to the bottom always is a structural possibility. Thus, to the extent that the costs of limited liability are felt outside of the state providing the business form, a race to the bottom could occur when multiple states expand the availability of limited liability.

We model such a race to externalize below. The pattern of regulatory competition that informs the model follows from conditions quite distinct from those that determine the familiar corporate law race of charter-mongering jurisdictions. To underscore this difference, our model assumes a federal system in which charter-mongering is precluded by a *siège réel* choice of law rule. In other words, firms must be chartered in the state in which most of their assets are situated. Although the exercise shows that a race to the bottom is a structural possibility, we conclude that this theoretical race is very unlikely to have figured into the proliferation of LLC statutes across the states.

1. Regulatory Races to the Bottom — Externalities, Preferences, and Prisoner's Dilemmas

Regulatory competition theory recognizes two exceptions to its presumption favoring state-level lawmaking. First, the federal government has

157. *See* Ribstein, *supra* note 144, at 412-28.

158. *See* Macey, *supra* note 14, at 442-43.

to keep state borders open if factor and citizen mobility is to bring competitive discipline to regulation at the state level.[159] Second, pursuant to the command that the scope of regulation should match the domain of its costs and benefits, the federal government has to police interstate externalities.[160] Competing governments have an incentive to regulate in order to facilitate cross-border cost externalization by their citizens. This occurs, for example, when a jurisdiction makes an exception in its environmental law for a given type of pollution knowing that prevailing winds blow the permitted particles across the border. Here, not only does the producer externalize a cost, but those affected by the externality have no voice as to its regulation and get no chance to trade sufferance of the pollution for higher incomes.

Cross-border externalities, then, invite races to the bottom across multiple states, with either federal intervention or interstate governmental cooperation being justified as a remedy.[161] Choice of law behavior in products liability litigation has been presented to argue such a case.[162] The key to this argument, as articulated by Michael McConnell, lies in the problem of synchronizing local preferences respecting levels of product liability with supply and demand conditions in a national product market. Because each state's manufacturers price and sell on a national basis, individual states have an incentive to set a higher level of product liability protection than they would set as island jurisdictions. The federal system thus allows states to satisfy local plaintiffs at the expense of foreign manufacturers and causes free-riding on states that legislate lower levels of protection. Downward adjustment of the level of liability does local manufacturers little good and forces local plaintiffs to incur the cost of finding alternative jurisdictions in which to sue. Says McConnell, we accordingly

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159. Frank H. Easterbrook, *Federalism and European Business Law*, 14 INT'L REV. L. & ECON. 125, 129-30 (1994).

160. *Id.* at 127.

161. Richard B. Stewart, *Environmental Regulation and International Competitiveness*, 102 YALE L.J. 2039, 2098 (1993).

162. *See* Michael W. McConnell, *A Choice-of-Law Approach to Products Liability Reform*, *in* NEW DIRECTIONS IN LIABILITY LAW 90, 91-92, 97-100 (W. Olson ed., 1988); *see also* Michael E. Solimine, *An Economic and Empirical Analysis of Choice of Law*, 24 GA. L. REV. 49, 89 (1989). *But cf.* Bruce L. Hay, *Conflicts of Law and State Competition in the Product Liability System*, 80 GEO. L.J. 617, 617-18, 651-52 (1992) (arguing that states have dual incentive — to attract investment with manufacturer-favorable liability rules and to skew their choice of law rules in directions favorable to individual local plaintiffs suing foreign manufacturers — and that therefore incentive picture is more complicated than in McConnell's presentation and thus counsels caution respecting federalization of product liability system).

tend to see downward adjustments of liability levels only where both costs and benefits are felt locally — medical malpractice and municipal liability being examples. With products liability, McConnell argues, the downward race to set high levels of liability requires federal level adjustment.[163]

Races to externalize, as hypothesized by McConnell, comprise a subset in the range of race to the bottom situations debated in the literature. Some important points of distinction should be noted. Consider, by way of contrast, the famous race to the bottom argument advanced to justify the federalization of environmental law.[164] That argument presupposes no cross-border pollution. The argument instead focuses on the internal state politics of environmental regulation, asserting that local factors of production exercise a distortive influence when they threaten to relocate in the wake of stepped-up regulation. The argument is that competition for new factors of production among the states leaves them in a prisoner's dilemma respecting environmental standards. Each state is deterred from promulgating standards at its preferred level of strictness by the threat of a loss of production factors to a defecting competing state. The more intense the competition for factors, the greater the disparity between the level of environmental protection desired by the public and the level evolving in practice. Furthermore, given a large number of states, the transaction costs of collective action will prevent coordination. The prisoner's dilemma accordingly ripens into a commons dilemma calling for a federal level solution.[165]

Regulatory competition proponents have mounted a strong attack on the assumptions underlying this prisoner's dilemma story. The prisoner's dilemma set up, they say, depends on the assumption that the multiple jurisdictions have fixed preferences for strict regulation, each believing that the subject matter should not be one for cost-benefit tradeoffs. Competition for factors and collective action problems then undermine the jurisdictions'

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163. McConnell, *supra* note 162, at 91-92.

164. *See, e.g.*, Richard B. Stewart, *Pyramids of Sacrifice? Problems of Federalism in Mandating State Implementation of National Environmental Policy*, 86 YALE L.J. 1196, 1212 (1977); Richard B. Stewart, *The Development of Administrative and Quasi-Constitutional Law in Judicial Review of Environmental Decisionmaking: Lessons from the Clean Air Act*, 62 IOWA L. REV. 713, 714-22 (1977).

165. Revesz restates that the prisoner's dilemma occurs in a two-party framework, showing that when a player has two strategies, lax and strict, a suboptimal lax strategy will strongly dominate the optimal stringent strategy. Richard L. Revesz, *Rehabilitating Interstate Competition: Rethinking the "Race-to-the-Bottom" Rationale for Federal Environmental Regulation*, 67 N.Y.U. L. REV. 1210, 1216-17, 1229-33 (1992). The suboptimal lax strategy is a unique equilibrium and always will be selected. Note also that given 50 states, cooperation through mutual forbearance is unlikely to evolve even given infinite repetition of the game. Hay, *supra* note 162, at 625-26.

ability to adhere to the stated policy, leading to a suboptimal result.[166] A more realistic set up, say the critics, would depict the situation differently: in a world of scarce resources, cost-benefit tradeoffs between levels of regulation and income are inevitable, and no a priori fixed preference for a given level of regulation should be assumed. Without fixed preferences across jurisdictions, higher payoffs through federalization or interstate cooperation cannot be assumed, and a prisoner's dilemma is not inevitable. Although it is in theory possible that absolute, normatively based preferences, whether for stricter environmental rules or some other form of regulation, could exist across jurisdictions, this is asserted to be very unlikely as a practical matter.[167] A prisoner's dilemma characterization remains structurally appropriate, however, in cases in which negative externalization drives the lawmaking strategy.[168] The model that follows falls into this category.

2. *Racing to Externalize with Limited Liability*

(a) Low trade scenario. We begin by returning to our island jurisdiction.[169] As before, larger firms endure two-tier taxation, but enjoy limited liability. For simplicity, we assume that all smaller firms are organized as partnerships because of the high expense of incorporation. We also drop our public choice assumption and instead stipulate that the jurisdiction's government devote itself to the maximization of the welfare of its citizens. The jurisdiction has altered its income tax regime to extend the availability of one-tier taxation, and its legislature now has to decide whether to enact an LLC statute. The legislature correctly ascertains the value of the present system of small-firm unlimited liability to be 100 — the sum of the value of extra compensation to tort victims, transaction cost savings, and foregone investment in unproductively risky ventures. The cost of this unlimited liability system is 80 — the sum of the negative value of foregone investment in productive ventures and the deadweight extra costs incurred by firms that incorporate but that would not do so in a regime making limited liability less expensive. On these numbers, the legislature, immune as it is to the ministrations of interest groups, will not enact an LLC statute.

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166. Revesz, *supra* note 165, at 1219-24.

167. Stewart, *supra* note 161, at 2058-59. For a strong rebuttal, see Brian A. Langille, *Competing Conceptions of Regulatory Competition in Debates on Trade Liberalization and Labour Standards*, *in* INTERNATIONAL REGULATORY COMPETITION AND COORDINATION, *supra* note 149, at 479, 479-90.

168. *See* Hay, *supra* note 162, at 625-26.

169. *See supra* text preceding note 143.

Now let us change the facts and place the island jurisdiction in a federation of four identical states. As stated, the rule of *siège réel* prevails. But, as in our interstate corporate system, each state must recognize corporations formed in other states. Trade and interstate contact are spread evenly across the jurisdictions' geographies and are enjoyed on a pro rata basis by all firms. The level of trade is such that some of the benefits of each state's unlimited liability regime are felt in three other states. Specifically, 90% of the benefits accrue to local residents and firms, while 10% of the benefits accrue to out-of-state residents and firms. All of the costs of the regime are incurred by local businesses and citizens. Because the legislature of each state cares only about the welfare of its own citizens, the externalized benefits have no bearing on the legislative cost-benefit calculation. Yet no shift in favor of LLCs results on these numbers. Although the costs of an LLC statute now amount to only 90 of foregone benefits of unlimited liability, the LLC statute's benefits remain fixed at 80. Because we are in a world of *siège réel*, no state's preference calculation can be influenced by the possibility of setting up shop as a charter-mongerer that draws benefits from pent-up demand for LLC status across the four states. If any one state enacts an LLC statute, foreign corporations wishing to take advantage literally will have to pick up stakes and move their assets. Such capital movement seems unlikely because incorporation is available in each of the four states for any firm willing to pay the incremental cost.

(b) Significant trade scenario. Now let us examine the incentives of each of the four states in a different scenario. We go from a low trade scenario at $t = 0$ to $t = 1$ at which interstate trade has picked up substantially and makes up a more significant proportion of the gross product of each state. The increased level of trade is such that 70% of the benefits of unlimited liability are felt at home, and 30% are felt outside, distributed as an even 10 to each other state. As before, all costs of unlimited liability are felt at home by local businesses.

Assume further that State *A* fortuitously adjusts its corporate tax system at $t = 1$ to make one-tier treatment available to all small firms whatever their form and, as a result, rethinks its policy respecting limited liability. State *A* has a short-term incentive to take the first-mover role respecting an LLC statute. The local benefits of unlimited liability are 70, and costs are 80. And, because the benefits of unlimited liability are the costs of limited liability, the state can export 30 of the costs of the shift, provided of course that none of the other states make the same move.

State *A* thus enacts an LLC statute at $t = 1$. We now look at the situation from the point of view of the legislature of State *B* at $t = 2$. State *B* experiences 70 of benefits from unlimited liability and bears 80 of costs.

In addition, it bears 10 of additional costs of limited liability exported by State *A*. Standing pat thus leaves State *B* in a loss situation. If it enacts an LLC statute, it will receive benefits of 80, incur local costs of 70, and export 30 of costs to the other three states. Of those exported costs, 10 will go to State *A*, offsetting the 10 of costs coming from State *A*. Netting all of this out, an LLC statute will be a wash for State *B*, yielding 80 of benefits against 70 of local costs and 10 of costs coming from State *A* in any event. If States *C* and *D* do not act, enactment of the LLC statute is the maximizing move for State *B*.

The problem, of course, is that States *C* and *D* are doing the same analysis at $t = 2$. If all three states enact LLC statutes, they will get the following result: each of the four states will gain 80 in benefits of limited liability, incur 70 of local costs, export 30 of costs, and import 30 of costs, for a total cost of 100. This situation clearly is suboptimal because, as island jurisdictions, none would prefer the limited liability regime. Absent an opportunity for coordination across the states, this also would appear to be the equilibrium result, because each of States *B*, *C*, and *D* has a sucker payoff to worry about. If, say, State *B* stands pat and States *C* and *D* enact LLC statutes, State *B* ends up in a worst case situation, experiencing 70 in local benefits, 80 in local costs, and an additional 30 in costs exported from the other states for a total cost of 110. On the other hand, if coordination among the states is feasible, States *B*, *C*, and *D* could mutually agree to stand pat.[170] This leaves each with 80 of benefits and 90 of costs for a deficit of 10 — a result superior to the deficit of 30 resulting from uncoordinated enactment of LLC statutes. Of course, if the agreement to stand pat cannot be enforced, there will remain an incentive to defect on the part of each state so as to pick up 10 of benefits. The first-best result, however, comes only as the result of intervention by the federal government to bar all four states from extending the availability of limited liability.

A question arises about the incentives of the first mover, State *A*. Given that its initial adoption of an LLC statute creates the possibility of a suboptimal equilibrium at $t = 2$, why would it move in the first place? Two reasons can be suggested. First, given information asymmetries and the vagaries of political processes, the time lapse between the first and second periods might be long — long enough to make first movement optimal given a high discount rate on the part of State *A*'s politicians and the possibility of interstate coordination in a later period. Second, if State *A* is lucky, States *B*, *C*, and *D* will coordinate to stand pat, leaving State *A* on a first-best free ride.

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170. The stand pat result also might emerge as a focal point equilibrium.

(c) Imbalanced trade scenarios. Let us try one further scenario to illustrate the possibility that State *A* can succeed with a scheme to externalize. All we have to do is give State *A* a special reason to take the first-mover role. Specifically, State *A* contains the federation's largest city and business center. As a result, the benefits of limited liability to State *A* are 100, although the benefits remain at 80 for the other states. On these numbers, there is no reason for State *A* either to refrain from enacting an LLC statute or to cooperate with the other states.

We get a variation on this theme if we stipulate benefits of limited liability at an even 80 across all four states, but then accord State *A* a 70-30 split between internal and external benefits, and accord each of States *B*, *C*, and *D* a 90-10 split between internal and external benefits. That is, citizens from States *B*, *C*, and *D* go to the big city in State *A* to do business, but the volume both of citizens going out of State *A* to do business and the volume of traffic between the other three states *inter se* is much lower. On these numbers, State *A* has every incentive to externalize. At $t = 2$, if each of the other states stands pat, each will have an unlimited liability benefit of 90, a local unlimited liability cost of 80, and an externalized cost of 10 that it cannot avert. If the states enact LLC statutes, they will each have a limited liability cost of 90, a limited liability benefit of 80, and a burden of externalized costs in excess of 10, assuming that each spreads some of its trade around the group of three other states.[171] Doing nothing thus is the superior strategy, and State *A*'s move does not prompt a race to the bottom.

3. Summary

Generally, then, the higher the level of interstate contacts and trade, (a) the wider the spread between the benefits and costs of liability and unlimited liability in each state, and (b) the more likely it is that a given state will have an incentive to move to a limited liability regime from a position of unlimited liability in order to effect externalization of the costs of limited liability. Given such a first move, a race to the bottom among the remaining states in the federation may or may not ensue, depending on the cost-benefit posture of each state.

That having been said, it appears very unlikely that desire to externalize costs of limited liability on the part of individual states has played a causative role in the proliferation of LLC statutes. Because we tend to deal with small firms here, we also deal for the most part with local costs and benefits. The posture might be different if the subject was an extension of

171. Even if each of the three states does all of its trading with State *A*, the enactment of an LLC statute leaves it in a negative situation with costs of 100 and benefits of 80.

the availability of limited liability for the benefit of large corporations doing business in the national market.

D. Incentives to Race to the Top: LLCs in a Federal System

We here stay with our hypothetical federal system, but change a number of assumptions. First, we abandon the rule of *siège réel*, making it possible for firms to incorporate in any state despite the location of their assets. Second, we revert to the public choice framework and assume that there obtains in each state the interest group alignment described above for an island jurisdiction. Third, we initially assume that there is no uncertainty respecting recognition of foreign LLCs in any state in the federation (an assumption we later relax).[172] And, fourth, we add a fifth state modeled on Delaware: State *E* is smaller in area and population than the other four and has made a successful business of attracting the chartering business of large, publicly held firms. We look at the five jurisdictions three times. First comes $t = 0$, when the federal government alters its tax system to allow one-tier treatment for incorporated firms matching the description of LLCs; second comes $t = 1$, some years later, when all five jurisdictions have LLC statutes; third comes the period after $t = 1$ and before $t = 2$ that occurs several years later still. Here is the question for discussion: is there any basis to conclude that regulatory competition plays a significant causative role either in the first appearance of an LLC statute immediately after $t = 0$, in the proliferation of LLC statutes between $t = 0$ and $t = 1$, or in the ongoing maintenance and modification of the LLC regime between $t = 1$ and $t = 2$?

1. Corporate Charter Competition as a Model for the Period Between t = 1 *and* t = 2

We will begin with the period between $t = 1$ and $t = 2$ and inquire as to the likelihood that the pattern of corporate law charter competition will be replicated with respect to LLCs. Historically speaking, charter competition began after general incorporation statutes already had proliferated across the states — in effect ex post $t = 1$. We accordingly begin with the end period as we explore the possibility of direct application of the corporate charter competition model to LLCs. Under the charter competition model, State *E* would take the first-mover role respecting improvements in

172. Here we assume away a possible barrier to regulatory competition respecting LLCs. LLC proliferation in the federal system occurred despite a slight degree of uncertainty respecting recognition of foreign firms. *See* Larry E. Ribstein, *Choosing Law by Contract*, 18 J. CORP. L. 245, 250 (1993).

the LLC form, amending its LLC statute with a view to attracting registration fees and legal business from the other four states.

The question as to whether we plausibly can project replication of this charter competition pattern in the LLC context can be asked in two forms, one narrow and the other broad. The narrow question is whether we can expect a literal repetition. It admits of a clear answer: no. Two reasons can be cited, one lying on the supply-side and the other lying on the demand-side: State *E*'s government has little financial incentive to compete for LLC business; at the same time, costs constrain the migratory options of small firms suited to organize as LLCs. The broad question is, despite the absence of conditions supporting literal repetition, whether some out-of-state LLC business may find its way to State *E*, with actors in the state having incentives to shape its legal environment so as to attract that business. Here a more equivocal answer is yielded: possibly.

(a) The narrow question. We address the question about exact replication by looking first at the supply-side incentive picture. Firms opting to become LLCs tend to be small firms, and small firms historically have been excluded from descriptions of charter competition. Close corporation charters, even when registered in quantity, provide only insignificant revenues to the chartering state. Delaware keys its franchise tax rates to the size of the chartered firm. The resulting revenue figures for close corporations contribute only a minor portion of the state's revenue draw.[173] The Delaware legislature, accordingly, has only a weak financial incentive to compete for small-firm business.

The charter competition analogy also fails to carry over to the demand side of the incentive picture. As noted above, firms reincorporate in Delaware to obtain comprehensive case law, well-specified indemnification rules, and an expert judiciary.[174] Historically, these benefits have justified the costs of the move in the case of larger firms, either because the firms plan merger and acquisition transactions or, more generally, have a concern about shareholder litigation.[175] Because small firms have only a limited need for these services, they historically have tended to find that the costs of foreign incorporation outweigh the benefits. Nothing in the nature of the LLC provides a basis for a different projection. One would expect a strong incentive for foreign organization to arise only if a given home state provided a negative incentive, whether because it enacted a statute that failed

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173. *See* Ayres, *supra* note 13, at 373.

174. *See supra* note 133 and accompanying text.

175. *See* ROMANO, *supra* note 129, at 37-48; *see also* Macey, *supra* note 14, at 444-46 (arguing that LLCs do not replicate publicly held corporate fact pattern).

to meet the demand of local firms in some material respect or because it failed to enact any statute at all. And even in these cases, it would not be immediately clear that the costs and benefits favored foreign organization as an LLC. Recall, from the demand picture set out above for an island jurisdiction, that we for the most part deal here with a class of small firms as to which the costs of Subchapter S corporate organization loom so large that unlimited liability in the partnership form is the preferred alternative. The degree of transaction cost sensitivity thereby implicated makes foreign organization an unlikely first choice even in the case of a suboptimal domestic statutory provision. Incorporation in a foreign state costs the firm more because it results in two franchise taxes and two sets of compliance costs instead of one.[176] Whatever the benefits held out by superior foreign codes and dispute-resolution regimes, they have not historically outweighed the costs for close corporations. This demand-side pattern should continue to obtain with LLCs.

The failure of the strict charter competition analogy should come as no surprise to anyone familiar with charter market's structure. Although it is fair to speak in terms of a charter "market," that market does not function as a sort of Middle Eastern *souk* in which fifty states set up booths in a small space, and corporate consumers go from booth to booth comparing product quality and haggling over price. Instead, only one state, Delaware, competes for charters on a national basis. Its capture of about half of the available volume has enabled it to develop an expertise in sophisticated corporate dispute resolution that cannot easily be replicated by a competitor.[177] Given convergence among the states as to the terms of corporate codes, the possibility of easy replication of any statutory innovations by Delaware and the difficulty and expense of replicating Delaware's dispute resolution expertise,[178] no other state has had an incentive to invest in entry into active competition. Thus, interest group influence in the separate states, rather than regulatory competition, can be drawn on to provide an explanation for the phenomenon of fast diffusion of innovative code provisions across the states.[179]

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176. The firm also opens itself to suit in two states instead of one. Ayres, *supra* note 13, at 374-75.

177. *See* Bratton & McCahery, *supra* note 142, at 1893-95.

178. *Cf.* Ian Ayres, *Supply-Side Inefficiencies and Competitive Federalism: Lessons from Patents, Yachting, and Bluebooks*, *in* INTERNATIONAL REGULATORY COMPETITION AND COORDINATION, *supra* note 149, at 239, 241-46 (suggesting that absence of intellectual property protection for innovators will lead to suboptimal charter competition).

179. Carney, *supra* note 149, at 172-82.

(b) The broad question. The absence of conditions necessary for replication of the corporate charter market does not imply the complete absence of competitive behavior respecting LLCs in the period after $t = 1$. To the extent that firms with substantial capitalizations choose the LLC form, it is not implausible to project that lawyers in State *E*, Delaware in our hypothetical federation, can succeed in skimming a little cream from the other states.

In making this projection, we look to Delaware's bench and bar for supply-side incentives. The Delaware bench maintains a national reputation as a center for resolution of complex business disputes, and the Delaware bar draws rents from the resulting flow of litigation business.[180] LLCs, taken by analogy to close corporations, could provide some additional litigation volume. Some out-of-state close corporations organize in Delaware, despite the standard cost-benefit recommendation against Delaware situs for small firms.[181] A cognizable number of cases respecting Delaware close corporations have been reported over the decades.[182] These firms thus add value to the state even though they do not contribute a substantial portion of its franchise tax draw, and there is every reason to expect the Delaware bar to pay close attention to the shaping and reshaping of the state's LLC statute with a view to catching any parallel LLC business. This is not a high-powered incentive — here any present investment in legislative drafting looks toward a speculative and sporadic return on the litigation side. But a high-powered incentive may not be needed. One suspects that the

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180. State policy to expand the volume of this business is manifested in Delaware's contractual choice of law statute, DEL. CODE ANN. tit. 6, § 2708(a),(c) (1993). For discussion, see Ribstein, *supra* note 142, at 1003-07.

181. This point is strongly implied by raw numbers of Delaware incorporations. In 1994, for example, there were 44,762 new incorporations in Delaware. *See* Joe Fulgham & Kimberly Quillen, *Keeping Businesses in Delaware*, DEL. BUS. REV., Dec. 4, 1995, at 1. In 1996, the total number of active Delaware incorporations was 270,000. Kimberly Quillen, *Entrepreneurial Woman of the Year: Carolyn E. McKown*, DEL. BUS. REV., Oct. 28, 1996, at 2. No doubt a large number of these firms were not out-of-state close corporations. They might, for example, be either (a) publicly traded firms organized in other states migrating to Delaware, (b) subsidiaries of existing publicly traded Delaware firms, (c) subsidiaries of publicly traded firms organized in other states, or (d) domestic close corporations. But it nonetheless seems highly likely that these large numbers include a cognizable number of out-of-state close corporations.

182. *See, e.g.*, Giuricich v. Emtrol Corp., 449 A.2d 232 (Del. 1982); Oceanic Exploration Co. v. Grynberg, 428 A.2d 1 (Del. 1981); Ringling Bros.-Barnum & Bailey Combined Shows v. Ringling, 53 A.2d 441 (Del. 1947); Lehrman v. Cohen, 222 A.2d 800 (Del. Ch. 1966);. Interestingly, the Delaware courts have taken a distinct antifiduciary posture in disposing of some issues presented in close corporation cases. *See* Nixon v. Blackwell, 626 A.2d 1366, 1379-81 (Del. 1993).

requisite investment of time carries a correspondingly low cost, and the returns, although sporadic, would accrue across a long-term.

Turning to the supply side, the class of potential customers for Delaware LLC organization presumably would have attributes parallel to those of its close corporation customers. Several attributes readily suggest themselves. These must be firms as to which transaction cost penny-pinching is not a primary concern, so that the lawyer has discretion to pursue a first-best legal regime. One suspects that such a firm would engage a large law firm. Lawyers at that large law firm might opt for Delaware LLC situs out of dissatisfaction with the local LLC statute. Alternatively, Delaware organization might be indicated when litigation is foreseeable, as might be the case when parties in interest conduct complex negotiations over conflict of interest points, or when, absent such negotiation, the lawyer nonetheless identifies nascent conflicts. As already noted, the Delaware bar has every incentive to craft an LLC statute that signals sensitivity to the interests of such marginal firms.

Having thus hypothesized a national role for Delaware, and hence State *E*, in the organization of LLCs, the question arises whether this implies a law development path paralleling that of corporate law, with Delaware taking the role of prime mover respecting LLC statutory and case law. Such a scenario is very unlikely because there is no apparent source of responsive competitive pressure in the other states. Here any litigation business is lost as a result of Delaware's standing reputation as a dispute resolution center, an attraction that cannot be copied, at least not at a low cost. And, because out-of-state lawyers routinely join Delaware lawyers on Delaware-based litigation, the litigation loss is far from total in the eyes of out-of-state lawyers. Organization business, meanwhile, need not be lost at all so far as they are concerned. One of the factors that has assured Delaware's success as a charter competitor has been its laws' availability to lawyers nationwide — it is the custom for out-of-state corporate lawyers to form Delaware corporations and give Delaware opinions on due incorporation and corporate authority to enter into transactions. The out-of-state organizing lawyer thereby views Delaware as a choice rather than as a threat. For a source of continuing incentives to improve the local LLC statute, we are better off looking to domestic concerns, as the discussion that follows will show.

2. *Incentives for the First-Mover State at* t = 0

The incentive picture changes only slightly when we change our temporal perspective and survey the five state federation at $t = 0$. Here the question is whether it plausibly can be hypothesized that the first LLC

statute will be enacted by a state seeking to take a prime-mover advantage and draw on all five states for LLC business. Such a scenario is implausible assuming a modicum of rationality on the part of each state's actors and an awareness of the history respecting corporate charter competition. Because the other states are free to copy the first-mover's statute,[183] the time window for a first-mover advantage must be short, too short to permit the first mover to develop any less easily replicated expertise that might preserve its leading position over time. First movement with a view to out-of-state business thus is only plausible given a high projected flow of out-of-state fees during the period of time advantage or given some special (and enduring) advantage on the first-mover's part. Significantly, the latter situation of special advantage has figured into the history of charter competition. Delaware's small population enabled its emergence as the chartering jurisdiction: it credibly could commit to serve the needs of large corporations without a risk of local political interference because, given its small size, charter revenues make up a substantial portion of its total tax receipts.[184] Something comparable might be present here if, for example, the interest group alignment in the other four states disfavored LLC legislation. But, as we saw when considering incentives in an island jurisdiction, such an unfavorable political climate cannot plausibly be projected. But if the first mover does not seek foreign business, how can we account for the appearance of the first LLC statute? If the first-mover state is not State *E*, then the above description of the incentives of an island jurisdiction provides an answer. Domestic as opposed to foreign demand plus the local bar's pecuniary interest in satisfying that demand together explain first movement. Foreign demand would figure in only as a low probability upside factor — an extra splash of gravy on a loaded plate. Such a factor certainly could come into the first-mover's cost-benefit analysis. But no implication of determinative influence arises thereby.

Further to this point, consider the possibility that State *E* could take the first-mover role as a means to the end of adding litigation business. Given our assumption of certain recognition of foreign LLCs in states without an LLC statute, that possibility at least must be conceded. But if we relax the assumption and admit a small risk of nonrecognition between $t = 0$ and $t = 1$, the State *E* incentive picture changes radically. Now State *E* lawmakers may project that conservative counsel in States *A* to *D* would advise that any State *E* organization be in the corporate form pending termination of the risk of nonrecognition by means of domestic enactment of LLC

183. Ayres, *supra* note 178, at 241-46.

184. ROMANO, *supra* note 129, at 6-12.

legislation. They furthermore might ask themselves whether State *E*'s interests are served at all by first movement respecting a novel business form. That very novelty, coupled with the prospect of easy replication by the legislatures of other states, creates a risk of dissipation of the value of its accumulated experience and consequent business loss. In this scenario, then, State *E* is the least likely first mover due to the combination of a vested interest in the status quo and a low level of domestic demand.

3. *Incentives to Copy Between* t = 0 *and* t = 1

The same domestic demand factors that best account for the actions of the prime mover also come to bear in explaining the actions of the other states during the period of proliferation of LLC statutes. One can plausibly model the statues' rapid diffusion as a sequence of domestic events, without any reference to interstate competition. Simply, the organized bar of each state invests in securing the legislation in pursuit of domestic revenues. Note that nothing in this description denies the appropriateness of the law as product analogy. Law is as much product here as it is in the charter competition model. Here, however, cost advantages enjoyed by the local producer make it a *domestic* product.

But, given enactment by the first mover, might not competition figure into the legislation's proliferation because bar associations of the follower states either experience loss of business to the prime mover or fear a potential loss of business? The first of these two suggestions presupposes: first, no relaxation of our assumption of certain recognition of foreign LLCs and, second, a somewhat stylized model of interest group activity. Recall the sensitive cost-benefit profile of the bar's small-business customers. Given this sensitivity, any firms unlikely to be deterred by the additional costs of out-of-state-organization presumably already will be organized domestically as Subchapter S corporations.[185] Accordingly, no massive, state-wide loss of business plausibly can be projected. A limited loss of business at the state's borders is a more likely possibility.[186] But such a projection literally depends on the customer firm's geographical proximity to the border — the proximity minimizes the firm's information costs and other transaction costs. For this competitive causation story to work, information about such border-town lost business must then diffuse to and motivate the actors in the

185. Out-of-state reorganization as an LLC is possible for such a firm, but such a step would seem unlikely given any uncertainty as to domestic recognition.

186. *See* Ayres, *supra* note 13, at 375 (suggesting that Delaware might take close corporation business from Pennsylvania); Ribstein, *supra* note 144, at 400 (hypothesizing that Kansas City, Missouri lawyers might lose LLC business to lawyers in Kansas City, Kansas).

state bar who procure the legislation.[187] Such a scenario is not implausible, although it works best where the border-town is itself a place of influence in the state.[188]

Taken alone, the story's plausibility does not propel it to the top of the list of likely causative factors in the proliferation of LLCs. After all, the very fact of loss of business to a neighbor reinforces a projection of untapped domestic demand. In addition, the overall risk of business loss to the bar declines sharply once State *E* enacts an LLC statute. Recall that State *E* stands in here for Delaware and that it is the custom for out-of-state corporate lawyers to form Delaware corporations and to give Delaware opinions with the Delaware bar taking its special rents from litigating. Thus, once State *E* has an LLC statute, a lawyer in State *B*, still lacking an LLC statute, plausibly can compete with a cross-border lawyer in State *A* by offering organization in State *E* to a firm client desiring LLC status. Of course, with State *E* organization being more costly than domestic organization, the State *E* alternative provides no basis for the realization of maximum LLC fee revenues by the State *B* bar. In this scenario, then, local lawyers never need lose business to out-of-state lawyers. But local lawyers nevertheless retain a powerful incentive to secure the enactment of domestic legislation. Finally, we note a close and enervating tie between this scenario and the assumption of certain foreign LLC recognition in non-LLC states. If we relax the assumption and introduce uncertainty respecting recognition of a State *E* LLC in State *B*, then, at least until $t = 1$, the State *E* solution is suboptimal for both the State *B* lawyer and the client. The implication of domestic causation in State *B* is proportionately strengthened.

But this lost business story can be restated so that it survives despite the foregoing analysis. We simply say that risk-averse State *B* lawyers fear lost business, even though on reflection they will see that no significant amount of business actually need be lost. This less-pointed version of the story is notably easy to tell. So long as even one firm might find it cost beneficial to organize out of state and accept the risk of nonrecognition, it will be plausible to say that the actors moving the bar association fear a loss of the business. At this level of generality, a regulatory competition story can indeed be included in the description of the proliferation of LLC statutes.

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187. David A. Rice, *Product Quality Laws and the Economics of Federalism*, 65 B.U. L. REV. 1, 52-60 (1985) (articulating such scenario in context of product safety standards).

188. Thus Ribstein places Kansas City in the story. Carney, *supra* note 149, at 859, suggests that the cross-border business loss might be an influential fact even absent a business center with a border location. He recalls a reference in a Georgia bar association committee to south Georgia businesses crossing to Florida to organize as LLCs and speculates that similar stories were told nationwide during the period of LLC proliferation.

The high level of generality denudes the story of most of its descriptive authority, however. Loss of business to another state is a constant possibility respecting business organizations in a federal system that does not follow a rule of *siège réel*. In such a system, the presence of out-of-state alternatives acts as an intrinsic limit on the zone of any given state's lawmaking discretion respecting business associations. No state enjoys a natural monopoly.[189] Furthermore, in the long run, a state refusing to follow the LLC trend burdens its small firms with an extra level of costs, and, given the long-term possibility of relocation of assets, may even experience a loss of economic activity. But the fact of the projection and the presence of out-of-state alternatives do not by themselves dictate the conclusion that a particular body of law results from the competitive disposition of the state's legislature. In a world of interest group politics, lawmakers' competitive incentives cannot be assumed. In order credibly to draw on the background constant of interstate movement of individuals and production factors in ascribing a competitive origin to particular legislation, therefore, incentives must be described with particularity. In the case of LLCs, such a competitive description can be made with complete plausibility on a domestic basis. The regulatory competition overlay amounts to surplusage.

E. Summary — LLCs, Regulatory Competition, and Evolutionary Efficiency

We conclude that regulatory competition can be accorded no more than a secondary place in a plausible account of the proliferation of LLC statutes. We can account completely for the fact of enactment by reference to the financial incentives of the pertinent domestic interest group, the bar. Between $t = 0$ and $t = 1$, the second-level causal contribution of regulatory competition at most concerns not the fact of adoption, but the timing of adoption. Here, the particular point to be explained is the unusually rapid action taken by bars and legislatures. As to this phenomenon, local scare stories about business lost to lawyers in other states fits neatly into a plausible causation story. But, remembering that money has a time value and that local lawyers have fixed costs of operation to cover, local financial incentives also must figure importantly in the explanation of the velocity of enactment. After $t = 1$, certainty of foreign recognition triggers the special incentives of the bar of State E so that a competitive posture respecting

189. Ribstein, *supra* note 144, at 400. As Ribstein points out, no state has the discretion to raise its franchise taxes above a minimal, competitively set level. *Id.* at 399.

LLC legislation becomes an active possibility. But no federation-wide implication of competitive responsiveness thereby arises.

This account must be sharply distinguished from competing descriptions of the LLC phenomenon that accord regulatory competition and interest group politics co-equal status.[190] Those descriptions tend to be used to support bottom-line efficiency assertions,[191] for in theory regulatory competition serves as a means to efficient ends. Unfortunately, however, a pre-existing need to add support to a problematic efficiency assertion imports no plausibility to a descriptive finding, whether of regulatory competition or of anything else.

Even if there were some specific empirical evidence or a structural factor that justified according regulatory competition a co-equal place in the description of the proliferation of LLCs, support for an efficiency assertion would not necessarily follow. Regulatory competition has a very precise efficiency function: it promotes efficiency by causing citizen preferences to be matched with legislative outcomes and, as a result, is held out as a cure to the problem of legislative capture described in public choice theory. Thus, the efficiency case for the LLC runs into a problem because interest group influence figures prominently in all accounts of the proliferation of LLC statutes. As a result, the exercise of admitting regulatory competition to a co-equal place in the description literally says that competition here serves the perverse function of hastening the rate of adoption of a piece of interest group legislation! If we in addition make the above assumption that LLC legislation causes an inefficient balance between loss externalization and transaction cost reduction for small businesses, the inclusion of actual or potential regulatory competition in the description implies a possible lock-in of the inefficient result.[192] To see this possibility, hypothesize that groups harmed by the adoption of an LLC statute organize politically in a single state to attempt to bring about a roll back. Surely in the resulting political contest the benefitted groups — lawyers and small business — would plausibly counter that a single state cannot effectively take a unilateral position against the trend in a competitive federal system.

Regulatory competition also has a second efficiency function: it promotes efficiency by providing an incentive for innovation by junior level

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190. *See* Macey, *supra* note 14, at 446-47 (arguing that states compete for chartering revenues respecting LLCs); Ribstein, *supra* note 144, at 397 (asserting that LLCs "emerge from a combination of political forces and jurisdictional competition").

191. Macey, *supra* note 14, at 442-43, 446-47; Ribstein, *supra* note 144, at 412.

192. We have made a parallel argument respecting public corporations. *See* Bratton & McCahery, *supra* note 142, at 1885-90.

governments. The LLC story strongly implies the presence of such an incentive to innovate. First, the states have enacted these new statutes in a short period of time, and second, the terms of the statutes they enact (or amend) have changed during that short period of time so as to favor enhanced flexibility.[193] But can we take the existence of innovation, by itself, as sufficient proof of efficient results? No, for given a strong rent-seeking incentive on the part of a dominant interest group, a burst of regulatory (or deregulatory) innovation may signal a deadweight loss to society. Can we furthermore take the existence of innovation, by itself, as sufficient proof of the presence of interstate competition? No, for innovation may be prompted by domestic as well as interstate competitive incentives. With LLCs, domestic rewards by themselves suffice to explain the close attention paid by state lawmakers (and bar associations) to the terms of LLC statutes. The lawyers seek a statute that provides maximum access to the group of firms that otherwise would go into or remain in business in the partnership form. Some trial and error in the achievement of that end is only to be expected. Meanwhile, given that we are talking about small business, it simply does not seem plausible to suggest that nuances in the terms of LLC statutes cause a significant amount of LLC business to flow across state lines. Although the possible appearance of a Delaware LLC "boutique" directed to a small class of firms does, literally, modify the description, it has no bearing on the description's policy implications.

F. Regulatory Competition and Producer Incentives

The foregoing discussion follows from the view that regulatory competition stories cannot be told on a black box basis that avoids inquiry into the incentives of government actors. With regulation, self-interested production does not necessarily imply product entrepreneurship. Governments, unlike firms, do not labor under an immediate threat that bankruptcy results from suboptimal decisionmaking. As a result, agency problems in the production of public goods tend to be more substantial than those within firms.

Certainly, government actors sometimes act entrepreneurially. Presumably, this occurs when the tax revenues, export earnings, jobs, technology, or other positive externalities yielded by the attraction of factors of production also happen to yield appropriate political benefits, either in the form of electoral advantage, satisfaction of the demands of favored interest groups, or the satisfaction incident to enhancing public welfare.[194] It is less

193. Ribstein, *supra* note 144, at 412-28.

194. Or, in the alternative, the particular factor cuts an advantageous deal directly with the responsible government actors.

certain that this incentive relationship can be assumed as a systematic proposition. Indeed, where it does exist it can be ephemeral. Unlike firms, which must hew to the profit incentive, the objectives of government suppliers change over time with voter preferences.

The exercise of opening up regulatory competition's black box and inquiring as to competitive incentives shows that special conditions tend to obtain in those cases in which government entrepreneurship becomes wrought into a lawmaking structure. Consider corporate charter competition in this regard. There we do see recognizable buyer-seller relationships, but it also turns out that corporate charter competition is not a game that every state can play. Significant competitive incentives do not show up across the class of potential suppliers. Small jurisdictions tend to take leading competitive roles: Delaware is the jurisdiction of incorporation of about half of the corporations listed on the New York Stock Exchange. Similar conditions obtain in parallel cases of sale of juridical status — small island-states tend to offer themselves as tax havens; Liberia, Panama, and Greece lead in the registration of ships. The explanation prevailing for Delaware probably applies across the board. Corporate franchise fees amount to fifteen percent of Delaware's tax base; the same cash flow would be a trivial percentage of the tax base of a large state. Given a limited market, competitive success has a larger percentage impact on the smaller government budget of a small jurisdiction. Political and financial incentives to create (or to enter) a legal product market arise when such a significant payoff is held out. The incentive relationship lends plausibility to the product market in turn. The small jurisdiction's propensity to fiscal dependence on its legal business provides a structural assurance that customer interests will take precedence over all competing interests in local political deliberations.[195]

Even when incentives to compete clearly are present, additional incentive problems may inhibit the evolution of first-best legal products. Network externality models,[196] for example, show that a demand-side problem

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195. ROMANO, *supra* note 129, at 6-12. But even given such a clear-cut incentive in favor of the interests of a given customer, integration with the rest of the federal system can create complications. For instance, when enforcement is through private lawsuits, states do not fully control their product because parties are free to sue elsewhere. *See* Hay, *supra* note 162, at 652. In the corporate law context, this incident of federalism has complicated Delaware's incentive picture. It must offer the plaintiff's bar sufficient returns to induce litigation in the state while simultaneously maintaining a reputation for privileging the interests of management. *See* Bratton & McCahery, *supra* note 142, at 1898-1900.

196. For a survey of the literature, see generally Michael Klausner, *Corporations, Corporate Law, and Networks of Contracts*, 81 VA. L. REV. 757 (1995).

can cause suboptimal equilibria to evolve and product innovation to be choked off in situations of intense product competition. Supply-side problems also may arise. Product innovation presupposes an incentive to invest in research and development. With industrial competitors, prospects of a patent monopoly bolster the incentive. The patent deters entry by competitors, assuring a potential return on investment in research and development.[197] Conversely, if an innovation easily can be copied by a rival, then new technologies will not efficiently replace old technologies. Legal innovation leads to the production of a public good and carries no patent protection. Ian Ayres, applying this point to corporate law, suggests that competing states will have insufficient incentives to invest the resources in product innovation.[198] State legislatures will see no point in entering a race to innovate if any resulting lead will be exhausted in a very short period of time. Under this approach, the efficient rate of legal innovation will depend on the probability of a state having the optimal degree of patent protection.[199] If the response to this suggestion is that legal innovations intrinsically belong in the public domain, then law turns out to be quite different from product.

Conclusion

Domestic incentives, taken alone, support a presumption that the LLC is evolving so as to provide a cost-effective limited liability shell for small firms. Any further conclusion respecting the development's overall efficiency obviously depends on an absent factor — a clear-cut basis for assuming that limited liability itself is efficient.

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197. The basic patent model assumes that there is an optimal way of stimulating firms to invest in research and development, which is deemed to be necessary for product innovation. The patent prevents a rival from introducing a sufficiently close product, and thus makes the rival's entrance into the market more costly. The patent will completely deter such entrance under certain assumptions — for example, in a homogenous-goods industry in which the monopolist is the only firm able to outbid the entrant to acquire the innovation. *See* R. Gilbert & D. Newberry, *Preemptive Patenting and the Persistence of Monopoly*, 72 AM. ECON. REV. 514, 524-25 (1982). *See generally* John Vickers, *Concepts of Competition*, 47 OXFORD ECON. PAPERS 1 (1995). But patentability does not by itself foreclose entrance into the product area.

198. Ayres, *supra* note 178, at 241-46.

199. Ayres also suggests that an especially fast race between states will result in rent dissipation. *Id.* at 246-51. In this leader-follower model of entry deterrence, if only the leader state adopts the new technology, it receives all the profits from the innovation. But the rents decrease if imitators can free ride. The larger the spillover to competitors, the larger the incentive problem. *See generally* JEAN TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 400 (1988).