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Team Production in Business Organizations: An Introduction

Margaret M. Blair

Lynn A. Stout

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For nearly two decades, legal and economics scholars who study business organizations have tended to view those organizations through the lens of a *principal-agent* model of the firm.[1] This model rests on the assumption that the equity holders in a business (for example, the shareholders in a corporation) are the firm's residual claimants, entitled to all profits left over after the firm's contractual obligations have been paid. Thus the equity holders are in a sense the ultimate owners of the firm. Officers, directors, and employees are viewed as agents whom the equity holders hire to manage the business on their behalf.

Because the principal-agent approach assumes that the corporation is the shareholder's "property," it implies that corporate officers' and directors' primary duty is to generate wealth for shareholders. Yet in a publicly-held corporation with widely-dispersed shareownership, it can be difficult for shareholders to monitor managers and ensure that they run the firm in a fashion that serves the shareholders' interests. The resulting separation of ownership from control has led many corporate scholars who adopt the principal-agent approach to assume that the central economic problem to be faced in a public corporation is the "agency cost" problem of monitoring managers and motivating them to act as faithful agents.[2] Not surprisingly, the solutions that come out of principal-agent analysis often involve strengthening shareholders' control rights and ability to negotiate contractual restraints on manager opportunism.[3]

It is difficult to overstate the influence that the principal-agent approach has had on modern thinking about business organizations. Although the language of agency costs

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* Dr. Blair is a Senior Fellow at the Brookings Institution and a Visiting Professor at the Georgetown University Law Center; Professor Stout is a Professor of Law at the Georgetown University Law Center. This Symposium finds its origins in a roundtable conference on the topic of Team Production in Business Organizations that was held at the Georgetown University Law Center in March of 1999 and supported by the Alfred P. Sloan Foundation. We would like to express our gratitude to the Sloan Foundation for its support, and to the conference participants for their many helpful comments and insights.

1. *See, e.g.*, FRANK EASTERBROOK & DANIEL FISCHEL, THE ECONOMIC STRUCTURE OF CORPORATE LAW (1991); FOUNDATIONS OF CORPORATE LAW (Roberta Romano ed., 1993); *see also* Andrei Shleifer & Robert W. Vishny, A *Survey of Corporate Governance*, 52 J. FIN. 737, 738, 740-48 (1997) (stating that the central problem of corporate governance is the agency problem).

2. This focus can be traced back at least to Adolf Berle's and Gardiner Means' classic book, THE MODERN CORPORATION AND PRIVATE PROPERTY (1932).

3. We associate the principal-agent model with the "contractarian" tradition of describing the corporation as a nexus of explicit and implicit contracts, because leading contractarian scholars have generally adopted the position that shareholders are the firm's residual claimants. Thus, shareholders are assumed to act as principals in the set of agency contracts that make up the firm, just as if they were the owners. Contractarian scholars have accordingly focused on the principal-agent relationship between shareholders and managers as the most important "contract" in the nexus that makes up the firm. *See, e.g.*, sources cited *supra* note 1.

finds it origins in the economic literature of the 1970s and early 1980s, in the years since it has become standard in business schools, finance departments, and law schools. Law professors in particular have come to adopt the principal-agent model as the dominant paradigm for understanding the modern corporate enterprise.[4] Thus, a generation of law students schooled in principal-agent analysis have gone on to become judges, legislators, and business leaders who also incorporate this model into their way of thinking.

The principal-agent model offers important insights into corporations and, more generally, business organizations. In many ways, however, it paints a potentially misleading portrait of the modern business firm. The problems start with the underlying assumption that shareholders own the corporation. As a legal matter, shareholders do not "own" the assets of a corporation. These are owned by the firm itself. Moreover, over the past few decades an increasingly large portion of the value of U.S. firms has come to be attributable to assets that may not even be "ownable" in the traditional sense. Intangibles, including employees' human capital, account for a rapidly growing share of total corporate value, while tangible assets such as property, plant, and equipment have steadily diminished in importance.[5]

Consider also the principal-agent model's implication that corporate directors' sole task is to maximize shareholder wealth. Most corporate officers and directors (and a significant subset of legal scholars) describe the corporate director's job as a much more complex balancing act in which they must serve not just shareholders' interests, but also those of other "stakeholder" groups such as managers, creditors, and employees.[6] Similarly, the principal-agent model assumes that the behavior of the individuals who participate in firms is best described by a narrow economic model of self-interest reined in by legal sanctions (for example, the requirements of corporate law and contract law). This emphasis does not fit well with the perceptions of those who actually participate in business firms, who regard legal sanctions as remedies of last resort, and who often describe themselves as pursuing joint objectives beyond their own self-interest.

These and other limitations of the principal-agent approach have led to a growing sense of unease among many corporate scholars, a sense that the principal-agent model may not tell the whole story. Although agency problems certainly exist in business firms, the firm itself may have been organized to solve other kinds of economic and contracting

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4. This influence is readily apparent from a quick perusal of almost any corporate law casebook. *See, e.g.*, WILLIAM CARY & MELVIN EISENBERG, CORPORATIONS: CASES AND MATERIALS 24 (7th ed. 1995) (discussing agency costs); *id.* at 213-220 (discussing managers' obligation to run the firm for the benefit of the shareholders); LEWIS SOLOMON ET. AL, CORPORATIONS: LAW AND POLICY 348 (4th ed. 1998) ("the shareholders are considered to be a corporation's ultimate owners"); *id.* at 620 (discussing the agency costs problem that results from the separation of ownership and control).

5. As recently as 1978, the book value of property, plant, and equipment of publicly-traded corporations in the United States accounted for 83% of the market value of the financial claims on firms (that is, market value of outstanding debt and equity). By the end of 1997, the book value of property, plant, and equipment accounted for less than one-third of the market value of firms' financial claims. *See* Margaret M. Blair & Thomas A. Kochan, *The New Relationship: Human Capital in the American Corporation* (forthcoming 1999, Brookings) (manuscript on file with authors).

6. *See* Margaret M. Blair & Lynn A. Stout, *A Team Production Theory of Corporate Law*, 85 VA. L. REV. 247, 286 n.82 (1999), *reprinted in* 24 J. CORP. L. 751, 777-78 n.82 (1999) (discussing this perspective); Steven M.H. Wallman, *Understanding the Purpose of a Corporation: An Introduction*, 24 J. CORP. L. 807, 809-10 (1999) (same).

problems.[7] Identifying and exploring those other problems can provide important new insights into the nature and function of business organizations and of business law.

One of those alternate economic problems—the problem of *team production*—is the subject of this Symposium. Team production problems arise in situations where three conditions are met. The first condition is that economic production requires a team. In other words, production requires the combined inputs (of time, money, or other valuable resources) of two or more individuals. The second condition is that at least some of the resources the team members must invest to produce are "team-specific," meaning they have a significantly higher value when used in the team than in their next best use. The third condition is that the gains resulting from team production—the economic "rents"—are joint or nonseparable, making it difficult to attribute any particular portion of the gains to any single team member's contribution.

Business organizations provide classic examples of team production. Successful businesses often require inputs from large numbers of individuals, including shareholders, creditors, managers, and rank-and-file employees. Many of the resources these "team members" invest are team-specific, in the sense that they have a much higher value when used in the team than outside the enterprise. Most obviously, managers and employees invest firm-specific human capital. But financial investors' contribution also often becomes team-specific, as investors cannot easily recover the full value of their money after it has been spent on specialized equipment and salaries. Thus, both types of investors—those who invest human capital, and those who invest financial capital—must wait until team production begins before they see a return on their investment. And once those returns begin to come in, there is no obvious way to decide what portion of the profit is due to each member's investment.

Participants in team production thus often find themselves in the following dilemma. Each has made an essential contribution of resources. None can recover the full value of that contribution outside the team. If their venture is successful, how should they divide the profits among themselves? Particularly when production is ongoing, when inputs are difficult to monitor, when the future is uncertain—in other words, in the everyday business environment—explicit contracts that accurately dole out the benefits of production according to contribution and merit are difficult or impossible to draft. Suppose team members agree ex ante to a sharing rule (for example, "divide all gains from team production equally"). Such a rule creates incentives for individual team members to shirk because each member will enjoy the full benefit of her shirking while sharing the cost with the rest of the team. On the other hand, if the team decides to wait and divide up the gains ex post, they may succumb to wasteful "rent-seeking," squabbling over which member is entitled to claim a bigger share. Uncontrolled shirking and rent-seeking can reduce and even destroy the economic gains that flow from team production.[8]

7. As Ronald Coase pointed out, if markets can also efficiently organize production, the fundamental question is why firms exist in the first place. Ronald H. Coase, *The Nature of the Firm*, 4 ECONOMICA 386 (1937), *reprinted in* RONALD H. COASE, THE FIRM, THE MARKET, AND THE LAW 35 (1988) ("[I]n view of the fact that it is usually argued that coordination will be done by the price mechanism, why is such organization necessary?").

8. *See* Blair & Stout, *supra* note 6 , at 265-76; *reprinted in* 24 J. CORP. L. 751, 763-71 (1999) (discussing the team production problem).

Participants in business organizations who make team-specific investments accordingly often find themselves exposed to the opportunistic behavior of other team members. Sometimes such opportunism can be controlled through contract. Often, however, contract does not work very well. Team members may need to find *extracontractual* means of protecting themselves enough to encourage the team-specific investment necessary for team production.

In the following collection of nine papers, eleven authors examine various aspects of business law from a team production perspective. In the process, they offer a way of thinking about the nature and purpose of business organizations that is often startlingly different from the traditional principal-agent approach.

The collection opens with our paper, *A Team Production Theory of Corporate Law.*[9] In this article we argue that a public corporation is best understood as a nexus of team-specific assets invested by shareholders, managers, employees, and others who hope to profit from team production. Property rights over these assets are held by a legal entity—the corporation—that is separate from any of its participants. And control over that entity rests not with the shareholders, but with a board of directors that serves as a trustee for the firm as a whole. While the board is nominally elected by the shareholders and in practice often heavily influenced by management, as a matter of law it remains insulated from the direct command and control of these or any other corporate constituents. We argue that this otherwise puzzling arrangement can be explained as a solution to the problem of team production. In particular, by putting control over the firms' assets and outputs in the hands of the board (whose members are precluded by law from using that control for their own personal benefit), corporate law prevents shareholders, managers, and other team members from using such control to opportunistically expropriate rents from the team. Thus, team members who feel they deserve a larger share of the gains from team production must ultimately either appeal to the directors or abandon their team-specific investment by exiting the firm. The net result, we argue, is that team members who cannot easily contract with each other over how to divide up the gains from team production instead agree to give up control over that decision, and over their team-specific assets, to a "mediating hierarchy" dominated by the board of directors. Although this second-best solution imposes its own costs (most obviously, the costs associated with placing ultimate control of the firm in the hands of a board whose members do not have a significant economic stake in its success), those costs may be worthwhile when it is otherwise impossible to protect team-specific investment from other team members' opportunism, and so encourage team production.

Unlike the conventional principal-agent model, the mediating hierarchy model of the public corporation as a response to team production problems provides theoretical support for those who argue that corporate law should not require the board of directors to ruthlessly maximize shareholder wealth at the expense of other stakeholders' interests. This argument is developed further in the Honorable Steven M.H. Wallman's essay, *Understanding the Purpose of the Corporation.*[10] In this essay, former Securities and Exchange Commissioner Wallman lays out the case against "shareholder primacy" as the appropriate corporate governance norm. He points out that while the idea that directors

9. Blair & Stout, *supra* note 6, *reprinted in* 24 J. CORP. L. 751 (1999).

10. Wallman, *supra* note 6.

should maximize shareholder wealth has gained currency among academics, it is not and has never been an accurate depiction of U.S. corporate law. Rather, the law generally grants directors discretion to consider the interests of other corporate constituencies, in addition to the interests of the shareholders, in shaping business strategy. He goes on to suggest that the genius of U.S. corporate law is that it gives directors and officers this flexibility, thereby improving the economic performance of the corporate team as a whole, while providing powerful protections to investors through the securities laws.

If directors of public corporations are and should be free to balance shareholders' interests against those of other stakeholders (as the mediating hierarchy model suggests), the question naturally arises: how do directors determine what share of the joint output from team production should be given to each team member? When should corporate profits be paid out to shareholders in dividends, when should they be used to provide employees with a more attractive workplace, and when should they be retained to expand managers' empires? From an efficiency perspective, all that is required to protect team production is that the board make sure each member of the team receives enough of a return over opportunity cost that he or she remains willing to stay in the team. Beyond that minimum, the question of who gets what portion of the corporate surplus may be determined simply by relative political power. This idea is explored in greater detail in Professor Viet D. Dinh's essay, *Codetermination and Corporate Governance in a Multinational Business Enterprise.*[11] Professor Dinh reviews how the combination of industrial unions, works councils at the firm-level, and worker representatives on the supervisory boards of German firms provides one kind of solution to the problem of protecting firm-specific human capital investments. He then contrasts that solution, which he identifies as a relatively cooperative one, to the U.S. approach, which he argues relies more on adversarial bargaining agreements between local unions and individual firms to provide protection for workers' investments. He explores the relative strengths and weaknesses of the two approaches in terms of their ability to allow employees to extract a greater share of the gains from corporate team production, and then goes on to consider the political problems raised when the two systems meet and mix in the multinational corporation.

As these discussions of the roles of hierarchy and relative political power suggest, team production analysis highlights the potential weakness of formal contract as a means of encouraging investment in team-specific assets. The limits of the "contractarian" approach to corporate law are explored still further in Professor Melvin Eisenberg's essay attacking the idea that a corporation should be understood as a "nexus of contracts." While Professor Eisenberg remains committed to the idea of shareholder primacy, he argues in *The Conception That the Corporation is a Nexus of Contracts, and the Dual Nature of the Firm*[12] that the conventional notion that a corporation is a nexus of contracts is wholly inadequate as either a positive or normative guide to understanding corporate law. By failing to provide any insights into the boundaries of a firm—which transactions, relationships and contracts are to be understood as within the firm, and which are outside the firm—the contractarian view basically does away with the idea of

11. 24 J. CORP. L. 975 (1999).

12. Melvin A. Eisenberg, *The Conception That the Corporation is a Nexus of Contracts, and the Dual Nature of the Firm*, 24 J. CORP. L. 819 (1999).

firms altogether. It also fails to provide a good account of the roles of hierarchy and bureaucracy, or an explanation for why there are mandatory rules in corporate law. Finally, Eisenberg argues that contractarian rhetoric undermines loyalty and trust, which he believes are essential to efficient organizational performance.

The idea of trust and loyalty as an extracontractual solution to the problem of opportunism in team production is developed further in Professor Lawrence E. Mitchell's article, *Trust and Team Production in Post-Capitalist Society*.[13] As a general rule, principal-agent analysis assumes that the behavior of the individuals who participate in firms conforms to a narrow economic model of rational self-interest channeled by the requirements of contract and corporate law. Professor Mitchell argues that this approach overlooks important components of human behavior—including behavior driven by trust, loyalty, and notions of duty—which can be critical to business success. Thus, Mitchell argues that business institutions need to be understood not just as collections of contracts linking hyper-rational individuals with each other, but as social institutions within which people form more or less cooperative relationships that help encourage team production.

Yet another extracontractual solution to the problem of opportunism in team production is explored in Professor D. Gordon Smith's contribution to the Symposium, *Team Production in Venture Capital Investing*.[14] Professor Smith's article emphasizes that the business relationship between an entrepreneur who puts in time, effort, and expertise, and a venture capital firm that contributes not only financial capital but also much advice, monitoring, and help in finding additional human and financial capital, is not so much a principal-agent relationship as a team production relationship in which both sides invest team-specific resources. Because these inputs are often unobservable, both sides have to worry about "moral hazard," or opportunism. Smith reviews some of the complex contracting solutions that have been developed by venture capital firms to control opportunism and encourage team production. But he also suggests how reputation—in particular, a venture capital firm's reputation for dealing fairly with entrepreneurs—can discourage opportunistic behavior that is not prohibited by the terms of the venture capital contract.

In addition to exploring the role of reputation in protecting team production, Smith's article also illustrates another important aspect of team production analysis: its broad applicability to many business situations. Team production can be an important source of economic gains not just in public corporations, but also in private companies, partnerships, and (as Smith points out) venture capital deals. Two contributions to the Symposium—Professor Eric Talley's paper and Professors Edward B. Rock and Michael L. Wachter's article—apply a team production analysis to close corporations in which shareholders also are likely to be actively involved in the management of the firm.

In *Taking the "I" Out of Team: Intra-Firm Monitoring and the Content of Fiduciary Duties*,[15] Professor Talley tackles the question of what should be the appropriate standard of fiduciary duty in different forms of organization, asking in particular about whether fiduciary standards ought to be stricter or more relaxed for officers in close corporations

13. 24 J. CORP. L. 869 (1999).

14. 24 J. CORP. L. 949 (1999).

15. Eric Talley, *Taking the "I" out of "Team": Intra-Firm Monitoring and the Content of Fiduciary Duties*, 24 J. CORP. L. 1001 (1999).

than for those in publicly-held firms. Talley uses a game theoretic approach to argue that strict fiduciary duties could be counterproductive in close corporations. The reason is that strict duties, with severe penalties, might create incentives for members of the close corporation team to expend excessive resources monitoring each other, to the detriment of productivity. He contrasts this problem of close corporations with the situation in a publicly-traded company, in which independent directors elected by shareholders who do not themselves participate in the productive activities of the firm can specialize in monitoring and devote their time to it without sacrificing productivity.

In *Waiting for the Omelet to Set: Match-Specific Assets and Minority Oppression in the Close Corporation*,[16] Professors Rock and Wachter similarly argue that the heart of the economic problem in close corporations is encouraging investment in what they call "match specific assets." They also argue that to protect match specific investment in close corporations, courts need to refrain from applying a broad vision of fiduciary duty in the close corporation context, with one exception: they should make sure that all distributions, other than salaries, are strictly pro rata. Thus, Rock and Wachter focus on how team production can be protected in close corporations where shareholders are active participants in the business and the mediating hierarchy model of the board of directors does not apply.

As these articles illustrate, team production problems can be found in both public and close corporations. However, public and close corporations adopt very different strategies for dealing with those problems. This observation raises the question of where, exactly, the boundary between public and private firms lies. This question is addressed more fully in Professor John C. Coates IV's article, *Measuring the Domain of Mediating Hierarchy: How Contestable are U.S. Public Corporations?*[17] Professor Coates focuses on the variable of director freedom from shareholder and managerial control to argue that the mediating hierarchy model applies most clearly to publicly-held corporations in which no single shareholder owns a controlling block of shares, rather than to closely-held firms or public firms with a controlling shareholder. He then goes on to question whether directors even in publicly-held firms can be said to be free of various team members' control. He reviews empirical evidence that suggests that even in public corporations with widely-dispersed shareownership, managers and/or shareholders are likely to be able to exert substantial influence on the board of directors. He concludes that the domain of the mediating hierarchy model (and, by implication, the truly "public" corporation) may be accordingly limited.

As this brief survey suggests, team production analysis offers a variety of insights into the modern business firm that are different from the insights offered by the traditional principal-agent approach. It also raises issues and questions that are different from the issues and questions raised by the principal-agent model. The articles in this Symposium provide a useful introduction to some of those insights, issues, and questions. But they are only a beginning. Team production analysis offers to advance the frontiers of corporate scholarship, guiding scholars who want to explore important issues, ideas,

16. Edward B. Rock & Michael L. Wachter, *Waiting for the Omelet to Set: Match-Specific Assets and Minority Oppression in the Close Corporation*, 24 J. CORP. L. 913 (1999).

17. 24 J. CORP. L. 837 (1999).

and methodologies that have been hitherto neglected. The result should be a fundamental improvement in our basic understanding of the nature and functions of business firms.