Corporate Governance and the Plight of Minority Shareholders in the United States before the Great Depression

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Naomi R. Lamoreaux and Jean-Laurent Rosenthal

> The promoters . . . had their reasons for celebration. . . . [T]hey had set up the Crédit Mobilier, into whose chest the gains from contracts for the whole Union Pacific building had flowed. . . . The proceeds from government bonds, security sales, and sales of lands and town sites had all been swallowed up in the mounting costs of building or in other ways. For this work the directors of the Union Pacific had ingeniously contracted with themselves at prices which rose from $80,000 to $90,000 and $96,000 a mile, twice the maximum estimates of engineers. . . . Hence the jubilation of the Union Pacific ring. For what profits could they have awaited, if they had confined themselves purely to trafficking in freight or passengers through the empty prairies?
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> —Matthew Josephson (1934, 92)

The Crédit Mobilier manipulation was a spectacular scandal. Directors of the Union Pacific Railroad had organized their own construction company and had awarded themselves the contract to build the transcontinental railroad. Although historians have long debated whether or not this arrangement yielded participants an exorbitant rate of return, there is no doubt contemporaries thought that it did.[1] What made headlines, however, was less this siphoning off of profits than the involvement of the federal government, which had granted the Union Pacific

[1] Compare, for example, the accounts in Josephson 1934 and Bain 1999 with those of Kirkland 1961 and Summers 1993.

extensive tracts of public lands and also loans to finance construction. Newspaper reports charged that the "railroad ring" had handed out shares in Crédit Mobilier to influential Congressman with the aim of securing additional federal largess, as well as forestalling inconvenient scrutiny (Josephson 1934; Bain 1999).[2]

The hoopla that surrounded these revelations of bribery has obscured for modern observers the extent to which conflicts of interest, like those at the heart of the Crédit Mobilier scandal, were endemic to corporations at the time. Although cases rarely made headlines unless they involved companies, such as major railroad or telegraph lines, that were important to the public welfare,[3] the legal record from the late nineteenth and early twentieth centuries suggests that directors frequently negotiated contracts with other companies in which they had a financial interest,[4] elected themselves to corporate offices at lucrative salaries that they themselves set,[5] arranged mergers that earned themselves impressive capital gains while leaving other shareholders in the lurch,[6] and engaged in a wide variety of other actions that benefited

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[2] Intriguingly, details of the Crédit Mobilier manipulation had been reported in the press since at least 1869, but attracted little attention until the *New York Sun*, which opposed the reelection of President Ulysses S. Grant, broke the bribery story in September, 1872 (Bain 1999, 599-600, 602, 627-28, 676).

[3] Examples include "The Telegraph Combination," *New York Times*, 22 Aug. 1877, p. 8; "More Trouble for Gould: Metropolitan Stockholders to Have an Inning," *New York Times*, 5 Nov. 1882, p. 7; "He Shot Me Like a Dog," *New York Time*s, 29 Dec. 1883, p. 4; "Accused of Conspiracy: A Blow at Jay Gould and his Friends," *New York Times*, 3 Mar. 1885, p. 2; "The Pennsylvania Interested: The Fight for the Cincinnati, Hamilton and Dayton," *New York Times*, 3 May 1885, p. 2.

[4] For examples of cases involving such contracts, see *Smith v. Poor*, 40 Me. 415 (1855); *March v. Eastern Railroad*, 40 N.H. 548 (1860); *Flint and Pere Marquette Railway v. Dewey*, 14 Mich. 477 (1866); *Ashhurst's Appeal*, 60 Pa. 290 (1869); *Brewer v. Boston Theatre*, 104 Mass. 378 (1870); *Faulds v. Yates*, 57 Ill. 416 (1870); *European and North American Railway Co. v. Poor*, 59 Me. 277 [1871]; *Kelly v. Newburyport and Amesbury Horse Railroad*, 141 Mass. 496 (1886); *Warren v. Para Rubber Shoe Co.*, 166 Mass. 97 (1896); and *Burden v. Burden*, 159 N.Y. 287 (1899). See also the much more extensive list of cases in Marsh 1966 and Mark 2003.

[5] For examples of cases involving charges of excessive compensation, see *Dunphy v. Traveller Newspaper Association*, 146 Mass. 495 (1888); *Brown v. De Young*, 167 Ill. 549 (1897); *Von Arnim v. American Tube Works*, 188 Mass. 515 (1905); *Abbott v. Harbeson Textile Co.*, 147 N.Y.S. 1031 (1914); *Cole v. Wells*, 224 Mass. 504 (1916); *Almy v. Almy, Bigelow & Washburn*, 235 Mass. 227 (1920).

[6] For examples of cases involving such charges, see *Peabody v. Flint*, 88 Mass. 52 (1863); *Converse v. United Shoe Machinery*, 185 Mass. 422 (1914); and *Bonner v. Chapin National Bank*, 251 Mass. 401 (1925). For a more extensive list of cases, see Carney 1980. These kinds of manipulations were more likely to make the newspapers, as, for example, when the directors and controlling shareholders of the Brush Electric Company of

themselves at the expense of their associates. Examples included lending themselves corporate funds, issuing themselves additional shares of stock, and settling law suits against their companies that they themselves had helped to bring.[7]

Minority shareholders had only limited ability to protect themselves against abuses of these types. Standard corporate governance rules based on the principle of one-vote-per-share majority wins meant that shareholders who possessed enough stock to decide elections were effectively dictators.[8] If the majority pursued policies that members of the minority thought were wrongheaded or detrimental to their interests, in the absence of outright fraud there was little that the latter could do. Minority shareholders could not make the majority change their policies. Nor could they force a dissolution of the enterprise. Nor could they easily exit by selling their equity. Even if their firm's shares were publicly traded, they would only be able to sell off their holdings at a price discounted to reflect the majority's behavior. Moreover, in the case of closely held corporations, often the only buyers for their shares were the same majority shareholders with whom they were in conflict.

Nonetheless, business people kept forming corporations and minority shareholders kept investing in them. George Heberton Evans, Jr., has counted the number of corporate charters granted in a sample of key states and found a steady rise between the Civil War and the Great

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Cleveland, Ohio, arranged to sell their stockholdings to businessmen who controlled the Thomson-Houston Electric Company for $75 a share. The par value of the stock was $50, and its market price was estimated at that time to be $35. Minority shareholders were outraged that they were not included in the deal. *New York Times* (21 Jan. 1890), p.1.

[7] For examples of cases involving such charges, see *Hersey v. Veazie*, 24 Me. 9 (1844); *Smith v. Hurd*, 57 Mass. 371 (1847); *Abbott v. Merriam*, 62 Mass. 588 (1851); *Leslie v. Lorillard*, 110 N.Y. 519 (1888); *Continental Securities v. Belmont*, 133 N.Y.S. 560 (1912); *Dunlay v. Avenue M Garage & Repair Co.*, 253 N.Y. 274 (1930). A less venal example involved Col. Elliott F. Shepard, who bought control of the Fifth-Avenue Transportation Company for religious regions in order to stop the running of stages on Sundays, evoking protests from minority shareholders who objected to the loss of revenues. *New York Times*, 10 May 1888, p. 5.

[8] For a more extensive discussion of these issues, see Lamoreaux and Rosenthal 2004. In that paper we show that the courts made it difficult for firms in the U.S. to adopt non-standard governance rules. For a comparison of voting rules in U.S. corporations with those in corporations in other countries, see Dunlavy 2004.

Depression. The increase was so steep that Evans's index of incorporations (1925=100) had a value of only about 5 in 1870. In Ohio, for example, the number of charters increased from an average of 305 per year during the 1870s, to 1166 per year from 1895-1904, to 4047 per year during the 1920s. Although the growth was most rapid in the smallest categories of firms, investors were increasingly willing to risk their savings in large corporations as well. The authorized capital of new Ohio corporations valued at over $1 million averaged $37.6 million per year in the 1870s. By the turn of the century, large corporations were increasingly organizing in New Jersey where the authorized capital of firms valued at over $1 million averaged $928.4 million per year from 1895-1904, and by the 1920s in Delaware where the comparable annual average was $18,814.2 million (Evans 1948, Appendix 3). As Mary O'Sullivan has shown, relative to GDP the value of new corporate equity issues on the New York Stock Exchange rose between the late nineteenth and early twentieth centuries and, indeed, reached their highest levels in U.S. history during the late 1920s—that is, before investors in publicly traded corporations secured the protection of the Securities and Exchange Commission (O'Sullivan 2004).

Of course, it is possible that fear of minority oppression kept some corporations from forming that would otherwise have been profitable. In order to investigate this possibility, we broaden the scope of our inquiry to consider the main alternative organizational form—partnerships. The literature has generally treated partnerships as inferior to corporations, but many businesses nonetheless adopted the form during the late nineteenth and early twentieth centuries. Reliable data are not available until 1900, when the Census of Manufacturers reported information on organizational form, but at that time, 67 percent of all U.S. manufacturing establishments owned by more than one person were organized as partnerships and only 29 percent as corporations, with the remaining 4 percent consisting mainly of cooperatives (U.S.

Census Office 1902, 503).[9] The high proportion of partnerships raises the question of whether business people were deliberately choosing a suboptimal form in order to avoid the governance problems associated with corporations.

In this paper we attempt to answer this question by exploring the decision to organize a new firm as a corporation or a partnership. In the first section of the paper, we show that the legal rules governing these two forms meant that each alternative was subject to a different organizational problem. In the case of partnerships, the ability of any member of the firm to force a dissolution meant that partners were potentially subject to holdup. In the case of corporations, the power that controlling shareholders possessed to make decisions unilaterally meant that they could capture more than their fair share of the enterprise's returns. We develop a simple model of these alternative problems in the second section of the paper and show that the willingness of investors to participate in corporations, as opposed to partnerships, was indeed affected by the extent to which their returns could be expropriated by controlling shareholders. We also show that investors' willingness to join a partnership, rather than not participate in the enterprise at all, was a function of the probability that a dispute among the partners would lead to a premature dissolution of the firm.

In Section 3 we move on to explore the limits that the legal system placed, on the one hand, on partners' ability to hold each other up and, on the other, on the share of profits that controlling shareholders could engross. We find that, if anything, these restraints became laxer over the course of the nineteenth century. Nonetheless, as we suggest by way of conclusion,

[9] Economy-wide counts are not available until after 1916, when the Internal Revenue Service began to collect the income tax. In 1920, there were approximately 314,000 corporations in the United States compared to about 241,000 partnerships, but it is likely that these figures understate the total number of partnerships because all corporations, however small or unprofitable, were required to file tax returns whereas partnerships only had to file if their income exceeded the threshold for the tax (U.S. Internal Revenue Service 1922, 8-10).

these changes probably had little effect on the pace of economic growth. The implication of our model is that organizational problems really only affected investors' decisions about firms whose expected profitability was low. Because there was an abundance of good projects in the U.S. in the late nineteenth and early twentieth centuries, investors willingly participated in the formation of large numbers of new firms, including an increasing number of corporations.

1. Conceptualizing the Differences between Partnerships and Corporations

We start with the assumption that business people who join together in a multi-owner firm have two, somewhat contradictory goals: they all want the enterprise to succeed; and they all want to increase their own individual wealth. Although the first of these goals encourages associates to cooperate with each other, the second is a potential source of conflict because each associate would like to be able to tilt the flow of returns in his or her direction, or a least prevent other members of the firm from doing the same thing. How the business is organized goes a long way toward determining what they will and will not be able to do.

Nineteenth-century American business people had three basic choices of organizational form: sole proprietorships, partnerships, or corporations.[10] Sole proprietorships did not suffer from the organizational problems that plagued multi-owner enterprises, but the size of the firm was constrained by the wealth and human capital of its proprietor. We make the standard assumption that neither wage nor debt contracts could fully alleviate these resource constraints.

[10] In most states businesses also had the legal option of organizing as limited partnerships, but restrictive features of the law made the form relatively unattractive, and it was seldom used. Also rare in the U.S. were hybrid forms, such as the unincorporated joint-stock company. See Howard 1934; Lewis 1917; Warren 1929; and Lamoreaux and Rosenthal 2004.

The way to form larger firms was to organize them as partnerships or corporations, but both these forms involved problems of joint ownership.

The literature has long distinguished between the kinds of problems that afflict partnerships and those that beset corporations, but it has generally done so in a way that implies that nearly all firms should be corporations (see Grossman and Hart 1986, Hart 1995, and, for a different view, Cai 2003). Such an approach may help us understand why most very large firms organize as corporations. It does not, however, help us understand why the majority of all multi-owner firms in the late-nineteenth-century U.S. were partnerships. For the latter purpose, we must develop a theory that does not automatically privilege corporations over partnerships, or vice versa. We proceed by supposing that partnerships and corporations suffered from distinctly different organizational problems.

The defining characteristic of partnerships was that they were not legal persons and thus had no existence or identity that was independent of the specific individuals who formed them. Each partner possessed full ownership rights and, without consulting the other members, could enter into contracts that were binding on the firm so long as those contracts were within the scope of the firm's normal business activities. Not only was this right to act unilaterally in and of itself a potential source of conflict within the firm, but it also meant that partners (all of whom were unlimitedly liable for the firm's debts) faced obligations that were beyond their control or perhaps even beyond their knowledge. Because business people would not willingly enter into such relationships unless they could extricate themselves when their partners proved untrustworthy, partnerships typically existed only "at will." That is, any member of the firm

could force a dissolution simply by deciding that he or she no longer wanted to be part of the enterprise.[11]

Partnerships thus potentially suffered from two different organizational problems. The first, which we call "opportunism," arose because each partner could act independently, as if he or she were the sole owner of the firm. The second, "holdup," followed from the principle that partnerships were dissolvable at will—that is, any partner could attempt to extract a greater share of the firm's revenue by threatening dissolution and potentially forcing the costly liquidation of firm-specific assets. Because the ability to withdraw from the firm was an important defense against opportunism, we give greater weight to the second problem in our analysis and assume that partnerships potentially suffered from holdup but not opportunism.[12]

Unlike partnerships, corporations were by definition legal persons whose existence was in no way dependent on the ongoing participation of the people who founded them. Indeed, the identity of each and every one of a corporation's members could change without affecting the continuance of the enterprise. Of course, if an associate who had critical human capital withdrew, the business might be more likely to fail. Hence corporations too were potentially subject to holdup. But we assume that this problem was small for corporations compared to partnerships and ignore it in our subsequent analysis.

Shareholders in corporations did, however, face serious problems of opportunism. Because the only members of a corporation who could enter into contracts that were binding on the firm were officers who had been duly elected by the shareholders, any coalition that

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[11] As will be discussed in Section 3, partnerships could be organized for a specified period of time, but even fixed-term partnerships were increasingly dissolvable at will. Partners could, of course, contract among themselves to limit the extent to which one member could bind the firm without the others' consent, but the remedy for violations of the agreement was essentially dissolution (Story 1868; Gilmore 1911).

[12] Indeed, the opportunism of a partner was always grounds for dissolution, even of fixed-term partnerships (Story 1868; Gilmore 1911).

determined the election of officers also effectively controlled the firm. This coalition could then use its power to benefit its members at the expense of other shareholders. Although the latter were only limitedly liable for the enterprise's debts and thus, in most cases, stood to lose no more than their investments, they had no means of preventing the controlling shareholders from expropriating some of their share of the firm's returns.

That our assumptions about the relative incidence of holdup and opportunism capture the essential differences between partnerships and corporations, as they were understood during the late nineteenth century by both business people and the courts, is confirmed by the case of *Burden v. Burden*, decided by the New York Court of Appeals in 1899 (159 N.Y. 287). The disputants were brothers who had inherited an iron factory from their father in 1871. The brothers operated the business as a partnership for the next ten years, but increasingly disagreed about its management. By 1881, their relationship had deteriorated to the point where, in the words of the court, they "ceased to hold any personal conversation with each other and discussed their grievances in written communications only" (159 N.Y. 295). Finally, James A. Burden, the one of the brothers who had been trained as an iron master, could no longer bear the conflict and decided to force either a dissolution of the firm and a division of the property or the reorganization of the firm as a corporation that he would control. His brother, I. Townsend Burden, agreed to the latter option, and the business was incorporated as the Burden Iron Company. James held 1000 shares in the new concern and Townsend, 998. The remaining two shares were given to James's associate, John L. Arts, who held a managerial position in the enterprise. In other words, in order to avoid the costs of dissolving a profitable enterprise, Townsend consented to become a minority shareholder in a corporation controlled by his

brother. Although he continued to receive half of the profits that the firm paid out in dividends, he was completely frozen out of the management.

Townsend brooded over this outcome for three and a half years and then sued in equity, complaining that his lack of influence in the company had enabled his brother and Arts to run it in a way detrimental to his interests. In particular, he charged that "James and Arts [had] combined and conspired together, in violation of their duties as trustees, to the great damage of the Burden Iron Company, and to build up and sustain their own private interests" (159 N.Y. 306). Both the trial court and the appeals court were unsympathetic. Writing for the latter, Justice Bartlett acknowledged that "the plaintiff is doubtless quite right when he insists that he has been ignored in the management of the Burden Iron Company, and has no control, save to vote his stock, over properties of great value in which his interest is nearly one-half." But, he pointed out, Townsend "apparently fails to appreciate that his troubles are inherent in the situation." He had voluntarily agreed to give his brother control in order to prevent the untimely dissolution of enterprise that was profiting them both. Generalizing from Townsend's situation, Bartlett explained that "the plaintiff is in the position of all minority stockholders, who cannot interfere with the management of the corporation so long as the trustees are acting honestly and within their discretionary powers." The plaintiff, he declared, "must submit" (159 N.Y. 308).

2. A Model of the Choice Between Partnerships and Corporations

Given this starkly posed choice between partnerships and corporations, we imagine a set of very simple firms, each of which undertakes a project whose expected aggregate return is $[p\Pi+(1-p)\alpha\Pi]K$. K is the amount of capital invested. The project that the firm undertakes

succeeds with an exogenously given probability of p ($0<p<1$), which we take to be the same for all firms. If the project succeeds, the firm earns Π. If the project fails, the return after liquidation is $\alpha\Pi$, where $0<\alpha<1$. One might think of α as determined, among other things, by the specificity of the firm's capital (which is likely to vary across enterprises as well as across industries), and by legal rules that affect how firms are liquidated. For the purposes of this paper, however, we assume without loss of generality, that α is the same for all firms. In other words, we assume that the only variable that distinguishes one firm from another is Π. Because profits are linear in K, the return per unit of capital $R = p\Pi+(1-p)\alpha\Pi$.

In order to highlight the governance issues involved in the choice of organizational form, we assume that members of firms are not risk averse and that there is no asymmetric information. The only transaction costs are the potential for holdup associated with partnerships and the possibility of opportunism associated with corporations.[13] We also assume that it is socially efficient to create all firms—that is, that $\alpha\Pi<(1+r)< p\Pi+(1-p)\alpha\Pi$, where r is the market rate of interest which we assume is fixed.

The firm will have two associates, an entrepreneur who contributes K_e to the enterprise, and an investor who contributes K_i. For now, we assume that $K_e>K_i$ and that equity stakes (that is, income and voting rights) reflect investment stakes. We will relax both of these assumptions later. E_e, the equity stake of the entrepreneur, is simply $K_e/(K_e+K_i)$, and E_i, the equity stake of the investor is $K_i/(K_e+K_i)$. If the enterprise is organized as a corporation, the entrepreneur has control. If it is organized as a partnership, however, both members of the firm have managerial authority.

[13] For a more general model that also includes shirking, see Lamoreaux and Rosenthal 2003.

We model the formation of the firm as a two-step process in which the entrepreneur first chooses the organizational form of the enterprise and then the investor decides whether or not to participate. In the second stage, the investor chooses whichever option offers the highest return: either 1+r (the investor does not participate); or his return from participating in the firm given the entrepreneur's choice of organizational form (R_{Ci} if the enterprise is a corporation or R_{Pi} if a partnership). We solve the model backwards and begin by exploring the conditions under which the investor would be willing to participate in a partnership and in a corporation.

2.1. Participation in a Partnership

Because partnerships, for all practical purposes, existed only at the will of their members, disputes among partners over the conduct of the business could lead to the dissolution of the enterprise. This possibility did not much matter if the firm was a failure, for exit would occur in any case. If the firm was a success, however, disputes that resulted in dissolution could be costly—both to members of the firm and to society.

We assume that a dispute will arise among participants in a successful enterprise with probability d ($0<d<1$), and that a dispute will always lead to the dissolution of the firm. The magnitude of d is determined exogenously and is partly a function of legal rules and partly of the existence other social institutions, such as family and community, that help govern relations among partners.

The partnership's return per unit of capital is $p(1-d)\Pi+pd\alpha\Pi+(1-p)\alpha\Pi$. It should be noted that this formulation implies that partnerships are second-best organizations, because there is a

loss of efficiency associated with the probability that disputes among partners will lead to the dissolution of otherwise successful enterprises.

The investor participates in the firm if and only if:

$$R_{Pi} = p(1\text{-}d)\Pi + pd\alpha\Pi + (1\text{-}p)\alpha\Pi > (1+r) \text{ or } \Pi > (1+r)/(\alpha + p(1\text{-}\alpha) + dp(\alpha\text{-}1))$$

The threshold profits required for a partnership to form thus increase exponentially in d and α. We denote the highest value of d given Π for which the investor will be willing to join a partnership as $d^*(\Pi)$. One can show that $d^*(\Pi)$ is increasing in p and α and decreasing in r.

2.2. Participation in a Corporation

As noted above, because we assume that $K_e > K_i$, if a corporation is formed the entrepreneur has control. The entrepreneur, therefore, can extract more of the enterprise's returns than she would obtain simply by dint of her investment share. To keep the model simple, we assume that she is able to get away with stealing a fraction ω of the expected return of the firm. The magnitude ω is determined exogenously, in large measure by the legal system which defines the boundary at which private benefits of control become fraud and therefore punishable. We assume further that the entrepreneur's thievery is efficient—that is, the aggregate return of the firm is the same as it would have been if there were no private benefits of control. Hence, unlike partnerships, corporations are first-best organizations.

Because the entrepreneur's private benefits of control reduce the investor's return, the investor participates if and only if:

$$R_{Ci} = (p + (1\text{-}p)\alpha)(1\text{-}\omega)\Pi > (1+r) \text{ or } \Pi > (1+r)/(p + (1\text{-}p)\alpha)(1\text{-}\omega)$$

This equation leads to a simple cutoff rule: there is a unique Π^* such that corporations are

feasible if and only if $\Pi \geq \Pi^*$. One can show that Π^* is decreasing in p and α and increasing in r and ω.

2.3. Choosing Organizational Form

Now that the entrepreneur knows the conditions under which the investor is willing to participate in her enterprise, she chooses the organizational form that maximizes her personal return. Under the partnership form, the entrepreneur's return on capital is the same as the firm's return ($R_{Pe}=R_P$). Because the threat of dissolution in a partnership leads to inefficiency, the corporation's return on capital is higher than the partnership's ($R_C>R_P$). Hence the corporation's return on capital is higher than the entrepreneur's return from a partnership ($R_C>R_{Pe}$). Moreover, because the entrepreneur obtains private benefits from control, her return on capital in a corporation is higher than the return on capital of the firm as a whole ($R_{Ce}>R_C$). The entrepreneur's return from a corporation is thus always higher than her return from a partnership ($R_{Ce}> R_{Pe}$), so the key question becomes whether the investor will be willing to join her in a corporation. Holding r, p, α, and ω fixed, we consider the effect of movement along the profit dimension (Π) on the choice of organizational form.

A. If $\Pi < \Pi^*$, then only partnerships can form. Given that governance problems are multidimensional, therefore, *it is socially efficient to have more than one organizational form*. Nonetheless, *it will not always be possible to form a firm*. Partnerships will only form if:

$$(p(1-d)+((1-p)+dp)\alpha)\Pi > (1+r) \quad (1)$$

Or: $d(\Pi) < ((1+r)-\Pi(p+(1-p)\alpha))/\Pi p(\alpha-1)$

Let $d^*(\Pi) = ((1+r)-\Pi(p+(1-p)\alpha))/ \Pi p(\alpha-1)$. Given Π, partnerships form, if $d \leq d(\Pi)^*$; if not they do not. Because the left-hand side of the equation (1) is increasing in Π, it follows that d^* is increasing in Π. For the same reason, d^* is also increasing in p and α.

B. If $\Pi \geq \Pi^*$, then corporations are feasible and first best. Given that the entrepreneur owns a majority of the equity, she will always set up the business as a corporation. Nevertheless, the investor does not necessarily have the same preference because he does not enjoy the benefits of control. This conflict in preferences is central to our analysis of minority oppression. The investor prefers a corporation if $R_{Ci}>R_{Pi}$. Or:

$$(p+(1-p)\alpha)(1-\omega)\Pi > (p(1-d)+((1-p)+dp)\alpha)\Pi \qquad (2)$$

We can simplify (2) to :

$$(p+(1-p)\alpha)\omega<pd-dp\alpha \quad \text{or} \quad \omega<dp(1-\alpha)/(p+(1-p)\alpha)$$

Recall that if $\Pi= \Pi^*$, $R_{Ci}=1+r$. Also, at $d^*(\Pi^*)$, $R_{Pi}=1+r$. In other words if $\Pi=\Pi^*$ and $d=d^*(\Pi^*)$, $R_{Ci} =R_{Pi} =1+r$. Hence 2 binds exactly, implying that $d^*(\Pi^*)=\omega(p+(1-p)\alpha)/(p(1-\alpha)$.

B.1. If $d > \omega(p+(1-p)\alpha)/(p(1-\alpha)$, the investor prefers a corrupt corporation to a partnership, so only corporations are organized.

B.2 If $d \leq \omega(p+(1-p)\alpha)/(p(1-\alpha)$, the investor clearly prefers a partnership, but the entrepreneur always picks a corporation (because she gets the benefits of control).

The resulting distribution of organizational forms is displayed in Figures 1 and 2. In Figure 1 we hold ω fixed and allow d to vary. The vertical line indicates Π^*, the threshold value of Π below which corporations cannot form, and the upward sloping line, $d^*(\Pi)$, demarcates the boundary above which partnerships cannot form. Similarly, in Figure 2 we fix d and allow ω to vary. In this case, Π^* refers to the threshold value below which partnerships do not form

(variation on the vertical axis does not affect them), and the upward sloping line, $\omega^*(\Pi)$, defines the feasible area for corporations.

The figures underscore two important implications of our model: First, in equilibrium there is likely to be a demand for both organizational forms. Second, some firms do not form simply because of organizational difficulties. These are the firms where $\Pi<\Pi^*$ and where either d or ω is large. Clearly, then, it would be efficient to reduce d and even more salutary to reduce ω. Hence, in societies with high transaction costs of these types, improvements in institutions can have an important impact on growth. Nonetheless, it should be noted that the only firms that do not form are those with relatively low returns. For firms with high returns, organizational difficulties are a nuisance but do not affect entry.

2.4. The Case of the Poor Entrepreneur.

Suppose that the entrepreneur is the owner of a scarce asset (for example, an invention), but that she is poor, so $K_e<K_i$. This reversal does not change the model so far as partnerships are concerned, because for partnerships the participation constraint is the same for both the entrepreneur and the investor and does not depend on ownership shares. For corporations, however, the change in relative equity stakes means that the investor will now have control. As a result, the investor's return will always be greater than that of the entrepreneur, and it is now the entrepreneur's participation constraint that binds. Because the entrepreneur's participation constraint is identical to that of the investor in the original model, reversing the relative equity stakes of the entrepreneur and investor does not alter the boundary of the region where corporations are feasible. It does, however, alter the entrepreneur's choice of organizational

form in the region where both partnerships and corporations are feasible, that is, where $\Pi \geq \Pi^*$ and $d \leq \omega(p+(1-p)\alpha)/(p(1-\alpha))$. In this region, the entrepreneur will now opt for a partnership instead of a corporation. The partnership is less socially efficient than the corporation, but it is the only way, in the environment that we have constructed, for the entrepreneur to protect herself from the expropriation that loss of control entails. The consequence is that she, the investor, and society will have to bear the cost of dissolution that the partnership form entails.

2.5. The Case of Endogenous Equity Stakes

The assumption that investment and equity stakes are identical seems reasonable in light of what we know about business practices in the nineteenth-century U.S. It would also seem to be justifiable on theoretical grounds. If two members of a firm are similar in all respects except for the relative size of their investments, Nash bargaining would lead them to split the equity according to their contributions. The assumption of equal investment and equity stakes does, however, have two important implications. The first is that the investor earns above market rates of return in nearly all of the firms that form. Hence the entrepreneur could increase her rate of profit if she could reduce the investor's equity stake until his return approached that of the market. Second, some firms that do not form could have done so if the entrepreneur had been able to offer the investor a higher equity stake in order to raise his rate of return.

In this section, we explore the consequences of relaxing the assumption of equal equity and investment stakes so that the entrepreneur can make a take it or leave it offer to the investor. We assume throughout that $K_p > K_i$ and $E_i = K_i/(K_i + K_e)$.

In a partnership, the investor and the entrepreneur earn the same rate of return on equity. Setting the investor's equity stake so that his participation constraint binds exactly implies that the investor's equity stake should be $E_{Pi}=E_i(1+r)/R_{Pi}$, where $R_{Pi}=(p(1-d)+((1-p)+dp)\alpha)\Pi$. Given K_i, allowing the entrepreneur to adjust equity stakes endogenously will mean that the investor's stake will decline as Π increases, all other things being equal. Allowing such adjustments, however, has no effect on entry decisions for partnerships. Indeed, if $d<d^*(\Pi)$, $R_{Pi}<1+r$. But because $R_{Pe}=R_{Pi}$, $R_{Pe}<1+r$, the entrepreneur will not want to enter. Hence investors in a partnership *never* have an equity stake that is larger than their investment stake.

In corporations, returns per unit of equity are not same for the investor and for the entrepreneur because the latter enjoys the benefits of control. Setting the investor's equity stake so that his participation constraint bind exactly implies that $E_{Ci}=E_i(1+r)/R_{Ci}$, where $R_{Ci}=(p+(1-p)\alpha)(1-\omega)\Pi$, or $E_{Ci}=E_i(1+r)/R(1-\omega)$. As in the case of partnerships, when $\Pi>\Pi^*$, investors earn above market returns, so allowing entrepreneurs to set equity stakes would lead to declining shares for investors as Π increases. Unlike the case of partnerships, however, entrepreneurs can affect entry decisions by varying equity stakes. Because the entrepreneur enjoys the benefits of control, some firms do not form because the investor's return would be less than the market's even though the firm's return would have been greater than the market's. In these cases, the entrepreneur can transfer some of her return to the investor by increasing his equity stake just enough to encourage participation. There is, however, an important constraint on this strategy: the entrepreneur must not loose control. This constraint implies that, holding r, p, α, ω, and K_i, and K_p fixed, there will be a unique Π^{*m} below which corporations will not form. Because $\Pi^{*m}<\Pi^*$, allowing the entrepreneur to set equity stakes will increase the range of profits over which corporations form.

The entrepreneur wants to transfer just enough equity to the investor to make him indifferent between participating in the firm or investing in the market. If the investor's equity stake becomes larger than a half, he gains not just more income rights but also the private benefits that come with control. This non-linearity makes the entrepreneur's problem difficult with K_i is close to one half of K. As Figure 3 illustrates, if the profitability of the firm (Π) is too low, the entrepreneur may find it difficult to satisfy the investor's participation constraint if she forms a corporation. Each line in the figure charts, for a given magnitude of private benefits (ω), the maximum contribution of the investor (K_i) for each value of Π that satisfies both his participation constraint and the constraint that the entrepreneur retains control. Investment levels below a given line are feasible, those above the line are not. Each line has a positive slope, because the investor's maximum contribution is increasing in Π. That is, as the firm's return rises, the equity stake that has to be given to the investor in exchange for a given contribution declines. The lines shift downwards as ω increases, because as the entrepreneur's private benefits of control increase, the investor must get a larger share of the equity for a given contribution in order to satisfy his participation constraint. This larger share in turn makes it more difficult for the entrepreneur to insure that she retains control.

Because both constraints must be satisfied, the comparative advantage of the partnership form increases when the two members of the firm have relatively even investment stakes. When the cost of untimely dissolution is low, therefore, the entrepreneur will form a partnership instead.

3. Legal Limits on d and ω

In our model, the untimely dissolution of successful partnerships is a source of inefficiency whose costs are shared by both entrepreneurs and investors, partly in the form of lower expected profits and partly in the form of foregone opportunities. Reducing the likelihood that partnerships will dissolve, therefore, benefits both parties and also increases the number of firms that will form. In the basic model, reducing the probability of untimely dissolution has no effect on the number of corporations (which depends on ω, not d). But if the model is modified to allow entrepreneurs to be poor, reducing d will make partnerships more attractive to the entrepreneur for some levels of Π above Π* and, therefore, will lead to a decline in the relative number of corporations. Reducing ω, conversely, will decrease the relative number of partnerships, and by lowering Π* will increase the number of firms that are formed by expanding the range over which socially efficient corporations are feasible.

The magnitudes of both d and ω are likely to be affected by the existence of social institutions (for example, kinship networks) capable of mediating disputes between partners and restraining rapacious behavior. The magnitudes of these variables are also likely to be a function of the existence of legal rules that limit the gains from holdup or from opportunistic behavior by permitting afflicted parties to sue for damages. Because the increasingly impersonal character of economic activity over the course of the late nineteenth and early twentieth centuries probably operated to increase d and ω, the direction of change in legal rules is of considerable interest. In the next two subsections we argue that, if anything, legal changes probably also worked in the direction of increasing d and ω.

3.1. Changes in the Legal Rules Affecting the Untimely Dissolution of Partnerships

Before states began to adopt the Uniform Partnership Act during the second decade of the twentieth century, partnerships were governed almost exclusively by common law rather than by statute. The basic common-law principal was that partnerships could be dissolved at will by any member of the firm unless the partners had agreed on a fixed term for their enterprise. Even if a term was specified, partnerships could always be dissolved by mutual consent. The only knotty issue was whether a member of a firm could force the dissolution of a fixed-term partnership over the objections of the other partners. By the early twentieth century, the courts were increasingly answering this question in the affirmative, and this view was written into the Uniform Partnership Act (Story 1868; Gilmore 1911; Richards 1921).

The issue was a knotty one because the courts were acutely aware that the threat of dissolution could be used as a weapon by one member of the firm to hold the others up. For example, in the New Jersey case of *Birdsall v. Colie*, the chancery court concluded that the complainant who had brought suit to dissolve the firm was attempting "to embarrass the partnership and to defraud the defendant." Because the case involved a partnership at will, the court could not prevent dissolution. But it did attempt to limit the damage that the complainant was able to inflict by refusing to appoint a receiver to wind up the firm's business. Why, the Chancellor asked rhetorically, "should an honest and competent man, for no other reason than to gratify the whim, caprice, or ill-nature of another, with whom he had been connected in business, be suddenly deprived of the management of his affairs, and be subjected to the delay and expense of a protracted settlement in this court?" (2 Stockton 63 [N.J. Eq. 1854]).

Equity courts had somewhat more leeway in the case of partnerships with specified terms, but there was considerable disagreement about just how much until state legislatures resolved the issue by adopting the uniform law.[14] Some courts refused to allow dissolution if the complaining party was the cause of the dispute among the partners. In the words of an Illinois justice, "it would be inequitable to allow [such a person] advantage from his own wrongful acts," especially because "the results flowing from the premature dissolution of a partnership might be most disastrous to a partner who had embarked his capital in the enterprise" and who had been innocent of any "wrongful act or omission of duty" (*Gerard v. Gates*, 84 Ill. 121 [1876]). Other courts only allowed dissolution in cases where the complainant was the victim of serious misconduct by another member of the firm. Joseph Story had laid out the criteria needed to establish such a finding in his *Commentaries on the Law of Partnership*: "It is not sufficient to show, that there is a temptation to such misconduct, abuse, or ill faith; but there must be an unequivocal demonstration, by overt acts, or gross departures from duty, that the danger is imminent, or the injury already accomplished" (Story 1868, 462-4). Rigorous adherence to these standards became a device that some courts attempted to use to prevent holdup in partnerships. Thus, in *Hannaman v. Karrick*, a Utah justice insisted that a partner should not be "allowed to ruin the business of the firm from mere caprice, or of his own volition, without cause, and in violation of his agreement, and sacrifice the entire object of the partnership" (9 Utah 236 [1893]).

This device, however, could only work against the most egregious attempts at holdup because the courts also generally agreed that firms should be dissolved in situations where,

[14] Fifteen states adopted the law by the early 1920s. ##Find out which and also pattern of subsequent adoptions.

regardless of the cause, "want of confidence and distrust [among the partners] has arisen . . . , provided it has become such as cannot probably be overcome" (*Sieghortner v. Weissenborn*, 20 N.J. Eq. 172 [1869]). Because "a copartnership is in its essence a contract of agency" in which "each partner is the general agent of the firm, and the firm is the agent of each partner, with power to bind him to a personal liability in favor of partnership creditors," its success necessarily depends on "personal confidence, and when this is wanting [a partnership] can seldom be long maintained with advantage to any party in interest" (*Lapenta v. Lettieri*, 72 Conn. 377 [1899]). For this reason, many judges thought that it made little sense to force a partner to continue in business with his associates against his or her will. Indeed, some courts worried that restrictions on dissolution might themselves be pernicious and went so far as to declare that the right to dissolve a partnership at will could not be contracted away. Quoting an early New York decision, for example, the Michigan Supreme Court asserted that "there can be no such thing as an indissoluble partnership." To rule otherwise would be to be to expose a member of the firm to the opportunism of his or her associates. "The power given by one partner to another to make joint contracts for them both is not only a revocable power, but a man can do no act to divest himself of the capacity to revoke it" (*Solomon v. Kirkwood*, 55 Mich. 256 [1884], citing *Skinner v. Dayton*, 19 Johns. 513 [N.Y. 1822]).

Partners victimized by threats of untimely dissolution were not without legal recourse, but the remedy offered by the courts promoting this view—and that subsequently was written into the Uniform Partnership Act—was to sue for breach of contract rather than to force a continuation of the firm. A partnership agreement was thus to be treated like any other contract; it could "be broken at pleasure, subject, however, to responsibility in damages" (*Solomon v. Kirkwood*, 55 Mich. 256 [1884]). The Utah court complained that this remedy could never

provide "complete justice" to the aggrieved party for, not only was "this mode of redress . . . usually slow and unsatisfactory," but the resulting "damages, in many cases, must necessarily prove to be utterly inadequate to compensate for the destruction of a profitable and growing business" (*Hannaman v. Karrick*, 9 Utah 236 [1893]). Although this criticism was undoubtedly correct, it did not carry the day. Indeed, the U.S. Supreme Court criticized the Utah justice's position, asserting that the only difference "so far as concerns the right of dissolution by one partner" between partnerships at will and those for specified terms was that "in the former case, the dissolution is no breach of the partnership agreement, and affords the other partner no ground of complaint," whereas in the latter "such a dissolution before the expiration of the time stipulated is a breach of the agreement, and as such to be compensated in damages" (*Karrick v. Hannaman*, 168 U.S. 328 [1897]).[15]

By defining some attempts to dissolve partnerships prematurely as illegitimate breaches of contract punishable by an award of damages, the legal rules embodied in the Uniform Partnership Act put limits on partners' ability to increase their wealth by holding each other up. Short of a systematic study of damage awards at the lower-court level, there is no way of knowing exactly what these limits were in actual practice. Nonetheless, it is doubtful that they declined over time.[16] Indeed, if anything, it is likely that the net effect of this change in rules

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[15] This case is particularly interesting for Justice Gray of the U.S. Supreme Court went out of his way to criticize the Utah court's decision in *Hannaman v. Karrick*, even though he admitted that it was not necessary for the adjudication of the appeal for him "to express an opinion upon this point." After reviewing the relevant case law, Gray concluded that he was "not prepared . . . to assent to the opinion of the court below that a partnership for a definite time cannot be dissolved by one partner at his own will, and without the consent of his copartner" (*Karrick v. Hannaman*, 168 U.S. 328 [1897]). Although partnerships were normally matters of state rather than federal law, this case was appealed to the U.S. Supreme Court because Utah was still a territory under federal authority. It should be noted that in such matters, unlike Constitutional issues, the U.S. Supreme Court did not make law for the nation. Nonetheless, the decision of such a prestigious court carried enormous weight.

[16] The relatively few cases involving damage assessments reported at the appeals-court level suggest that there was no significant change over time in the legal principles that governed such awards. For example, in the 1913 case of *Zimmerman v. Harding* (227 U.S. 48), the U.S. Supreme Court approvingly cited a New York case

was to increase the magnitude of d by establishing with greater certainty the principal that all partnerships, even those to which the members had committed themselves for a fixed term, were dissolvable at will.

3.2. Changes in the Legal Rules Affecting Private Benefits of Control in Corporations

The legal system also put limits on ω by defining the point at which private benefits of control turned into fraud. During the late nineteenth and early twentieth centuries, this boundary was for the most part drawn and maintained by the courts. It was not until Congress passed the Securities Act of 1933 and the Securities Exchange Act of 1934 that statutes played much of a role (McCraw 1984). Even then, however, only a relatively small number of large companies were affected. The vast majority of corporations did not market their shares publicly, and their stockholders still depended on the courts for protection.

The central problem that the courts faced in putting bounds on ω was how to limit the magnitude of private benefits of control without creating opportunities for minority shareholders to engage in rent seeking. Their basic method was to restrict the circumstances under which individual shareholders had access to the courts. The general parameters were set by two early cases. The first, *Smith v. Hurd*, denied shareholders standing to sue their officers or directors in a court of common law (53 Mass. 371 [1847]). The principle underpinning the case was an old one, but it was stated forcefully by Chief Justice Lemuel Shaw of the Massachusetts Supreme

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decided in 1853 (*Bagley v. Smith*, 10 N.Y. 489) as precedent for its assertion that "if one member assumes to dissolve a partnership before the end of the term, the other may bring an action for damages for the breach and recover not only his interest, but also his share of the profits which might have been made during the term."

Court.[17] Not only did "the individual members of the corporation, whether they should all join, or each severally, have no right or power to intermeddle with the property or concerns" of the firm, they also had no power to "call any officer, agent or servant to account." If there was an injured party, it was the corporation, the legal person whose rights were at stake, and only the corporation itself could take action to redress the damage (53 Mass. 371 at 384-87).

The problem, of course, was that majority shareholders, if they were the source of the problem (as they often were), were unlikely to support any suit by the corporation against themselves. Hence, the second case, *Robinson v. Smith*, offered an alternative course of action (3 Paige 222 [1832]). Recognizing that the circumstances that enabled directors to abuse their power were also circumstances that made the corporation unable to act to protect itself, New York's Chancellor explicitly extended to business corporations principles of trusteeship that had been previously used to protect beneficiaries of charitable entities. The Chancellor posited that the directors of a corporation were equivalent to trustees and that the stockholders, having a joint interest in the corporation's property, were "cestui que trusts." Declaring that equity courts never permit wrongs "to go unredressed merely for the sake of form," he indicated that the stockholders might, after demonstrating that the corporation was controlled by those were abusing their trust, file a bill in their own names, "making the corporation a party defendant."[18]

[17] For example, Chief Justice John Marshall of the U.S. Supreme Court had based part of his *Dartmouth College* decision on this principal (*Dartmouth College v. Woodward*, 17 U.S. 518 [1819] at 641-43). Shaw thought the point so obvious that he did not cite any case law in support of it: "[T]hat similar grievances have existed to a great extent, and in numberless instances, where such an action would have presented an obvious and effect remedy, affords strong proof, that in the view of all such suffering parties, and their legal advisers and guides, there was no principle on which such an action can be maintained" (*Smith v. Hurd*, 53 Mass. 371 at 383). For a more complete discussion of this case and its legal antecedents, see Bloch and Lamoreaux 2004.

[18] *Robinson v. Smith*, 3 Paige 222 at 233. The court reiterated the point in *Forbes v. Whitlock*, 3 Edw. Ch. 446 (1841).

But what constituted an abuse of trust? For a time, there was considerable uncertainty about how this question should be answered, with the courts sometimes interpreting the *Robinson v. Smith* precedent narrowly and sometimes broadly.[19] However, the courts soon settled on the principle that shareholders could not sue officers and directors of corporations simply because they pursued policies that the former thought were wrongheaded or disadvantageous. Such policies were matters of business judgment and, as such, beyond the purview of the courts. Hence when Thomas A. Edison sought to force the Edison United Phonograph Company to adhere to his own sense of how business should be conducted by suing in equity to have the directors removed, the court rebuffed his request: "No rule of law is better settled than that which declares that so long as the directors of a corporation keep within the scope of their powers, and act in good faith and with honest motives, their acts are not subject to judicial control or revision" (52 N.J. Eq. 620 [1894]).

Unless the directors had clearly exceeded their statutory powers, for the courts to be willing to intervene in the affairs of a solvent corporation there had to be compelling evidence that those in control had engaged in fraudulent or illegal acts that had inflicted damage on the corporation or its shareholders. The U.S. Supreme Court summarized in 1881 the criteria that would enable "a stockholder in a corporation to sustain in a court of equity in his own name":

> [A] *fraudulent* transaction completed or contemplated by the acting managers, in connection with some other party, or among themselves, or with other shareholders as will result in *serious injury* to the corporation, or to the interests of the other shareholders; Or where the board of directors, or a majority of them, are *acting for their*

[19] For examples, see *Hodges v. New England Screw Co.*, 1 R.I. 312 (1850); *Abbott v. Merriam*, 62 Mass. 588 (1851); *Smith v. Poor*, 40 Me. 415 (1855); *Dodge v. Woolsey*, 59 U.S. 331 (1856); *Peabody v. Fint*, 88 Mass. 52 (1863).

> *own interest, in a manner destructive* of the corporation itself, or of the rights of the other shareholders; Or where the majority of shareholders themselves are *oppressively and illegally* pursuing a course in the name of the corporation, which is in violation of the rights of the other shareholders, and which can only be restrained by the aid of a court of equity. Possibly other cases may arise in which, to prevent *irremediable injury*, or a *total failure of justice*, the court would be justified in exercising its powers, but the foregoing may be regarded as an outline of the principles which govern this class of cases (our emphasis, *Hawes v. Oakland*, 104 U.S. 450 [1881] at 460).[20]

As the italicized phrases indicate, in order to secure the intervention of the courts, minority shareholders had to demonstrate that the actions taken by those in control were both fraudulent and injurious. Moreover, the burden of proof was on the shareholders bringing the suit. As the Massachusetts Supreme Court explained in the case of *Dunphy v. Traveller Newspaper Association*, "it is always assumed until the contrary appears, that [directors] and their officers obey the law, and act in good faith towards all their members" (146 Mass. 495 [1888]).

That this interpretation of the *Robinson v. Smith* precedent operated to increase the magnitude of ω—that is, of the private benefits that controlling shareholders could extract from their associates—is suggested by the changing way in which courts responded to situations in which directors had conflicting interests. There was a long-established principle of law that contracts tainted by conflicts of interest were voidable. This rule was an absolute one and applied even to contracts that otherwise were completely reasonable, so that, in the words of a

[20] In this decision the Supreme Court was deliberately qualifying a more liberal standard that it had articulated in the 1856 case of *Dodge v. Woolsey* (59 U.S. 331). The qualification was a response to a flood of lawsuits that the earlier decision had stimulated and hence a good example of how the courts attempted to balance, on the one hand, their effort to limit the extent of the private benefits of control with, on the other, their desire not to encourage rent seeking by minority shareholders.

Michigan justice, it is "immaterial . . . whether there has been any fraud in fact, or any injury to the company" (*Flint & Pere Marquette Railway Company v. Dewey*, 14 Mich. 477 [1866] at 487-88). Moreover, there was no question that the principle applied to corporations, as the U.S. Supreme Court emphatically affirmed in 1880 in *Wardell v. Railroad Company*, a case that arose as a result of a contract that officers of the Union Pacific Railroad had negotiated with a coal company that they themselves had organized. Writing for the Court, Justice Field declared:

> Directors of corporations, and all persons who stand in a fiduciary relation to other parties, and are clothed with power to act for them, are subject to this rule; they are not permitted to occupy a position which will conf[l]ict with the interest of parties they represent and are bound to protect. They cannot, as agents or trustees, enter into or authorize contracts on behalf of those for whom they are appointed to act, and then personally participate in the benefits (103 U.S. 651 [1880] at 658).

In this particular case, however, the action to void the contract was taken in the name of the corporation, whose directors had never formally approved it (the agreement had been drawn up and executed by the road's executive committee and had not been submitted to the board). Hence the justices did not have to consider what the outcome of their decision would have been if the suit had been brought by a minority shareholder. The cases Field cited in his decision suggest the outcome might well have been different,[21] and, indeed, state courts were already applying what was in effect a reasonableness standard in such circumstances. For example, in the frequently cited case of *Hodges v. New England Screw Company*, the Rhode Island Supreme

[21] For example, *Flint and Pere Marquette Railway v. Dewey* was brought by a corporation whose directors had ratified a contract proposed by the company's president without knowing that the president stood to profit from the arrangement. In its decision, the court raised the possibility that the contract might possibly be construed as binding if it had been ratified by the board "after a full explanation and knowledge of their interest and of all the circumstances" (14 Mich. 477 [1866] at 487).

Court refused to invalidate the sale of assets by one corporation to another controlled by essentially the same people, determining that the plan was "judicious, and for the interest of the Screw Company" [1 R.I. 312 [1850] at 343-44).

Not only did the courts burden complaining shareholders with the task of proving that a contract tainted by conflict of interest was unreasonable, but there is evidence that they tended to give the controlling group the benefit of the doubt on the grounds that its members were unlikely deliberately to take actions that eroded the value of their own stock. Hence the Rhode Island court asserted, "we are the more confirmed in [our conclusion that the sale of assets was appropriate], when we recollect that the directors owned a large majority of the capital stock of the Screw Company, and could not reduce the plaintiff's stock, without, at the same time, and in the same proportion, reducing the value of their own" (*Hodges v. New England Screw Co.*, 1 R.I. 312 [1850] at 343-44). Similarly, in *Faud v. Yates*, the Illinois Supreme Court found nothing wrong with a partnership agreement entered into by three stockholders of the Chicago Carbon and Coal Company. Collectively the three held a majority of the corporation's stock, and their agreement committed them to cast their votes in a block so that they could control the election of the board of directors. The partnership also leased the company's coal lands and operated its mines. In the view of the court, "The record wholly fails to disclose any injury to the other shareholders—any waste of the property," and therefore there was no reason to invalidate the agreement. But the court went even further and asserted that there was no conflict of interest involved because the incentives of the partners and of other shareholders were aligned. The partners, according to the court "had a double interest to protect,—their interests as shareholders, and their interests as lessees. . . . As shrewd, skillful and prudent men, they were desirous of

increasing the investment, and making the stock more valuable. Their interests were identical with the interests of the minority shareholders" (57 Ill. 416 [1870] at 420-21).[22]

The courts were willing to intervene in cases where conflicts of interest led to contracts that were demonstrably fraudulent. This willingness clearly placed limits on ω, but, again, it is difficult to get a clear idea of what these restrictions amounted to in practice without systematically studying the dispensation of cases at the lower-court level. We can, however, obtain some sense of the standards the courts applied from the case law. For example, one way in which plaintiffs could make the case that contracts tainted by conflicts of interest were fraudulent was to submit evidence that the resulting payments were substantially in excess of market levels. Hence Townsend Burden lost his case against his brother James in part because he was not able to show that James had paid too much for iron ore purchased from another company that he controlled. The trial court concluded that there was no evidence that these purchases were "made in bad faith or with any intent to defraud," but to the contrary that they had saved the Burden Iron Company money" (*Burden v. Burden*, 159 N.Y. 287 [1899] at 306-7).

Even with such proof, complaining stockholders were in a much stronger position if they could also show that the controlling group had knowingly behaved improperly. Otherwise, their grievance was liable to be dismissed, because the courts agreed that "mere errors of judgment are not sufficient as grounds for equity interference; for the powers of those entrusted with corporate management are largely discretionary" (*Leslie v. Lorillard*, 110 N.Y. 519 [1888]). In *Brewer v. Boston Theatre*, the plaintiffs were able to make their case that several of the directors were fraudulently extracting profits from the corporation by showing that the latter had deliberately concealed their involvement in contracts from the other members of the board (104 Mass. 378

[22] For additional discussion of these cases, see Bloch and Lamoreaux 1904.

[1870]). Similarly, in *Almy v. Almy, Bigelow & Washburn*, the plaintiff was able to document that, after she had refused to sell them her stock, the controlling shareholders had tried to force her out of the company by, among other things, voting an excessive salary "to each and every member of the board, except the plaintiff Almy," as well as voting themselves other "gifts and gratuities" (235 Mass. 227 [1920] at 232).

As these last cases suggest, the courts did intervene in corporations and punish controlling shareholders who exploited their position to the detriment of other owners. Before they were willing to act, however, judges demanded compelling evidence of misdeeds. Such a requirement was clearly necessary. If minority shareholders had too easy access to the courts, the threat of legal action would itself have become a means of rent seeking. Moreover, the corporation had emerged as an important business form in large measure because it solved the problem of untimely dissolution that plagued partnerships. The courts could not allow disagreements among owners to disrupt the functioning of corporations the way they did partnerships. The cost of this constraint, however, was that majority shareholders were able to extract private benefits of control. Although ω was bounded, it was positive and nontrivial.

4. Conclusion

Partnerships, as we have modeled them, suffered from the probability (d) that profitable enterprises would be dissolved because of disputes among members of the firm. In corporations, on the other hand, controlling shareholders could use their power to engross a proportion (ω) of the firm's returns. Our analysis of the legal rules suggests that, if anything, the magnitude of both d and ω probably increased over the late nineteenth and early twentieth centuries. Hence,

according to our model, that these changes should have increased the proportion of firms for which the corporate form was not feasible and also the proportion of firms that simply could not form. Our model also suggests, however, that business people would have weighed the costs associated with d and ω against the available opportunities for profit. In economies where there were lots of highly profitable projects for entrepreneurs to undertake, many firms could form despite relatively high levels of d and ω. Conversely, in economies where profit-making opportunities were generally poor, levels of d and ω had to be much lower for there to be comparable numbers of new firms.

The high rates of firm formation and economic growth that characterized the United Statues during the late nineteenth and early twentieth centuries, therefore, could have resulted from large numbers of good projects, low levels of d and ω, or both. Everything that we know about this period—the rapid population growth, fall in transportation and communications costs, settlement of the continent, discovery of raw material resources, and dramatic pace of technological change—suggests that good entrepreneurial opportunities were abundant. At the same time, the weight of the legal evidence presented in this paper indicates that ω could not have been very low, despite stockholders' ability to resort to equity suits in cases of demonstrable fraud. Further confirmation of the relatively high value of ω is provided by the large numbers of partnerships that continued to be formed, even though, as we have seen, the problem of untimely dissolution was probably getting worse rather than better.

Hence one implication of the U.S. experience for the literature on economic development is that, in recent years, scholars have been overly preoccupied with the problem of limiting private benefits of control and, as a consequence, have devoted too little attention to the equally important problem of how to increase the number of profitable projects in developing economies.

A second important implication is there has been such intense focus on solving contracting problems by regulatory means that scholars have failed to recognize the utility of alternative organizational forms. It should not be forgotten that the vast majority of new multi-owner enterprises organized in the United States during the late nineteenth and early twentieth centuries took the form of partnerships, not corporations. U.S. business people, however, had only two organizational choices. Their European counterparts, first in Germany, then Britain, then France, were able to select a third basic option—the limited liability company (Lamoreaux and Rosenthal 2004). The rapid rate at which business people in all three of these countries adopted this new form as soon as it became available is a powerful indication of the role that alternative organizational forms can play in solving the problems inherent in multi-owner enterprises.

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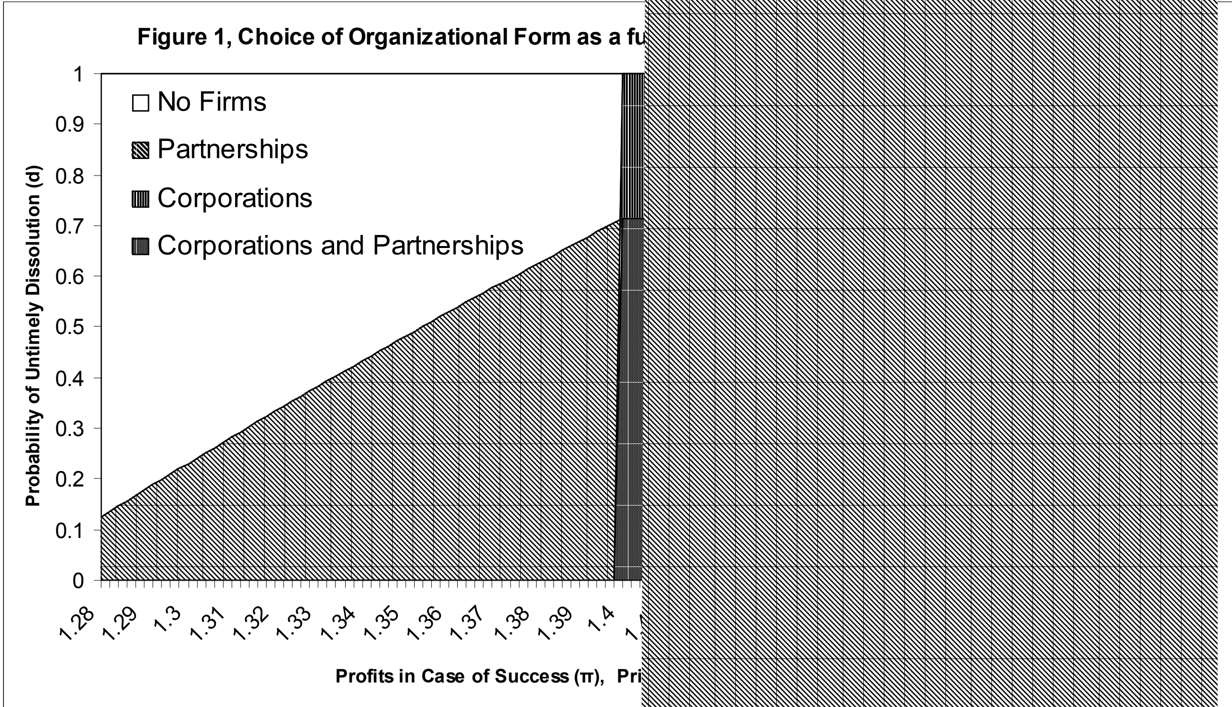

Figure 1, Choice of Organizational Form as a fu
No Firms
Partnerships
Corporations
Corporations and Partnerships
Probability of Untimely Dissolution (d)
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1.28
1.29
1.3
1.31
1.32
1.33
1.34
1.35
1.36
1.37
1.38
1.39
1.4
Profits in Case of Success (π), Pri

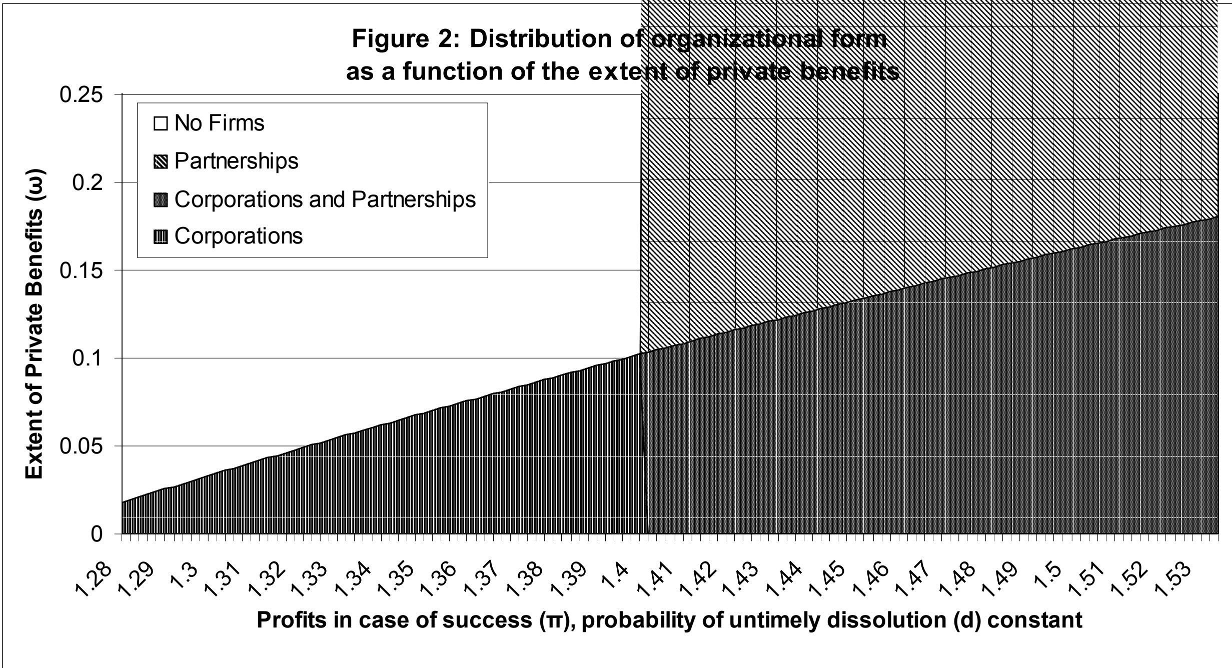

Figure 2: Distribution of organizational form
as a function of the extent of private benefits
No Firms
Partnerships
Corporations and Partnerships
Corporations
Extent of Private Benefits (ω)
0.25
0.2
0.15
0.1
0.05
0
1.28
1.29
1.3
1.31
1.32
1.33
1.34
1.35
1.36
1.37
1.38
1.39
1.4
1.41
1.42
1.43
1.44
1.45
1.46
1.47
1.48
1.49
1.5
1.51
1.52
1.53
Profits in case of success (π), probability of untimely dissolution (d) constant

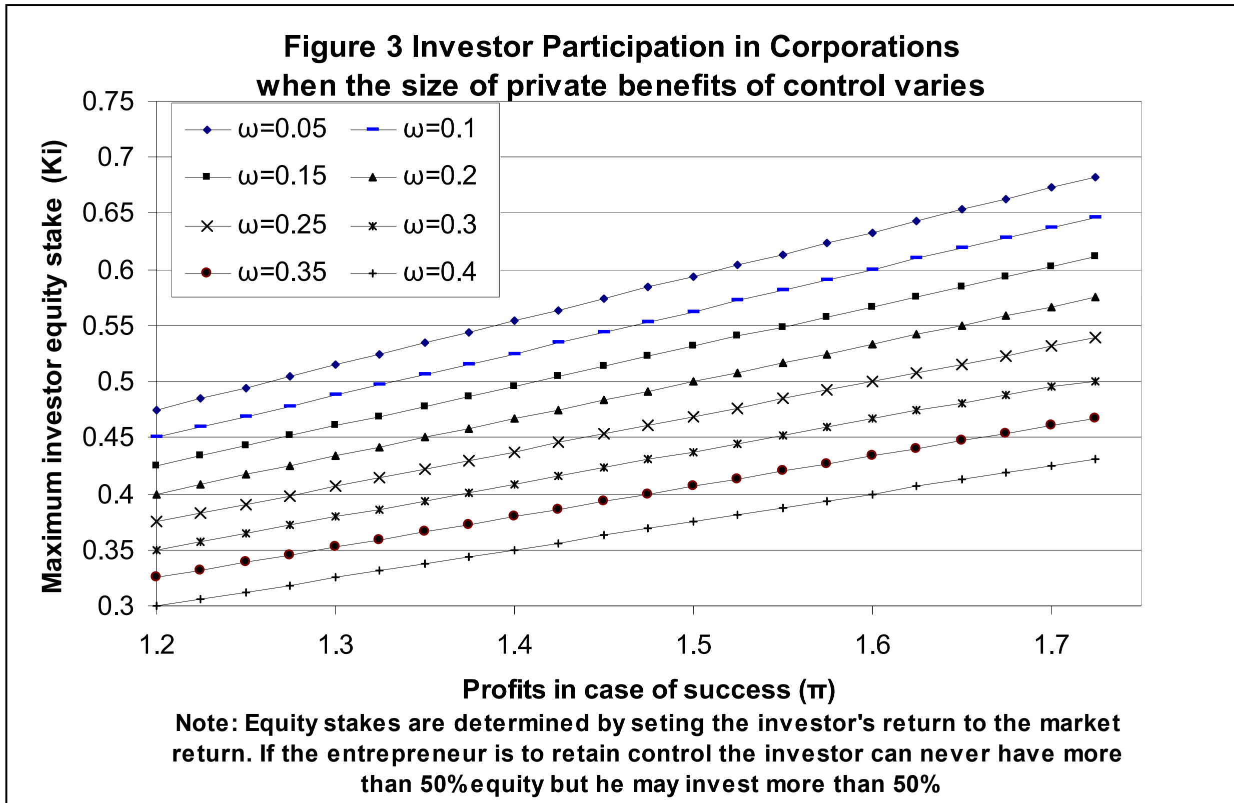
Figure 3 Investor Participation in Corporations
when the size of private benefits of control varies
Maximum investor equity stake (Ki)
Profits in case of success (π)
ω=0.05
ω=0.1
ω=0.15
ω=0.2
ω=0.25
ω=0.3
ω=0.35
ω=0.4
0.75
0.7
0.65
0.6
0.55
0.5
0.45
0.4
0.35
0.3
1.2
1.3
1.4
1.5
1.6
1.7
Note: Equity stakes are determined by seting the investor's return to the market return. If the entrepreneur is to retain control the investor can never have more than 50% equity but he may invest more than 50%