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## Some economic aspects of limited liability laws

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SOME ECONOMIC ASPECTS  
OF LIMITED LIABILITY LAWS

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## 1. Introduction

The last two decades have witnessed the growing interest of economists in analysing the impact of alternative legal arrangements on the efficiency of economic systems. With the singular exception of 'institutionalist' economics, in the present century at least, such issues had previously had little bearing on the mainstream of economic theorising, most models being constructed in an explicitly institution-free context. In this recent development economic theorists brought to bear, on a field which was previously the almost exclusive province of lawyers and of legal historians and philosophers, the familiar analytical tools of price theory and the then newly refurbished 'property rights' paradigm.

The burgeoning literature which chronicles this development covers a wide variety of interesting, and at times improbable, issues ranging from the efficiency of different land tenure systems to the consequences of alternative allocations of liability in motor accidents. It is all the more surprising to note, given the breadth and volume of this literature, that laws limiting liability

for business losses do not appear to have attracted the attention of academic economists. Notwithstanding neglect from this quarter, these laws have been the subject of considerable discussion in the British press in the context of recent company liquidations. They, and issues related to them, also constituted a major discussion topic at the Acton Society Trust's International Seminar held at Siena in September 1979; indeed, this paper was conceived as a result of those seminars.

In this essay I attempt to examine the extent to which limited liability arrangements underlie theoretical conceptions of the way in which corporations and financial capital markets work. I am concerned particularly with the nature of transactions costs generated by corporate systems which are embedded in a limited liability environment as compared with systems which are not. I do not try to construct formal models in which agents do not have the benefit of limited liability. My purpose here is merely to underline the role of such legal arrangements in economic theory and to indicate some of the problems that arise when they do not apply.

In what follows I wish to focus attention mainly

upon the relationship between the holders of debt and equity claims in the company under different allocations of responsibility for business losses. Although many different types of creditor are likely to be affected by the failure of a business, I shall assume here that its only creditors are its bondholders. Again in order to maintain this focus, I abstract from all problems of control of the company by its shareholders and assume that it is managed wholly in accord with their interests.

To simplify the exposition, I consider a two-period firm which invests in a project in the first period and makes its return in the second whereupon it is wound up. This allows the use of a very straightforward definition of company bankruptcy: the firm is bankrupt if its income (including proceeds from the sale of corporate assets) is insufficient to meet its fixed commitments to creditors<sup>(1)(2)</sup>. Limited liability is only relevant if there is some positive probability of default on a loan and it refers to legal provisions for shareholders in a company to limit their losses, in this event, to their investment therein. It is the holders of equity capital, not the corporation, whose liability is limited.

This essay, which concentrates on the polar cases of limited and unlimited liability, is divided into three main parts. In the first I consider the allocation of bankruptcy risks as between shareholders and bondholders viewed as one aspect of the rights associated with the purchase of a financial asset. In the second part I discuss the nature of the agency relationship and of agency costs associated with asset holding in companies with and without limited liability. Finally, in the third part, I examine the informational requirements of capital markets under each of the two liability arrangements. The paper is rounded off with a section in which I touch briefly on the incentive structures implied by limited liability and by full liability, and on the possibility of developing alternative institutions allowing partial limitation of liability.

## 2. Property Rights and Bankruptcy Risks

The first, and perhaps the most obvious, point to be made about liability arrangements is that they affect the initial distribution of risk-bearing as between the owners of a company and its creditors. Without limited liability, each shareholder is ultimately responsible for all the consequences of corporate decisions. If the firm is declared bankrupt and liquidated, he is fully liable for its outstanding debts up to the full extent of his personal wealth. If his resources are insufficient to meet his contribution to the settlement of these debts, his liability ends only when he is himself declared bankrupt and his assets are liquidated. So, up to that limit, and in common with all other shareholders, he bears all risks of the company's policies.

The bondholder, in contrast, bears only the residual risk that the total assets of all of the company's shareholders at the time of its liquidation will not be sufficient to meet any outstanding claims he has on it. The magnitude of the risk carried by him, and indeed by each shareholder, will depend partly on the degree to which information regarding shareholders'



wealth is freely available and the extent to which its disposition can be monitored and controlled. This point will be examined in greater depth later in this essay.

Incorporation with full limited liability for shareholders represents a reallocation of bankruptcy risks from shareholders to bondholders. Whereas in the previous situation bondholders bore only the risk that the sum of company income and shareholders' wealth would be less than their claims, now these claims are covered only by company income. In any investment, owners now stand to lose, at most, their stake in the company and are fully insured against any further consequences of bankruptcy.

Legal arrangements allocating initial responsibility for company losses, and thus bankruptcy risks, are one aspect of the right to capture returns from an asset. Provided wealth effects are ignored, it can be shown that, if such property rights are freely transferable and well-defined and all transactions are effected costlessly, the initial allocation of these rights does not affect the allocation of resources<sup>(3)</sup>. In other words, in this idealised context, economic efficiency would be unaffected by laws assigning liability for company failures

and, in either case, economic agents would only take cost-justified measures to protect their investments.

To usefully compare the two institutional settings in question, it is necessary to broaden the context of analysis to account for important factors ruled out by the stringent assumptions just outlined. In the remainder of this paper, I first examine the relationship between the shareholder and the bondholder, both with and without limited liability, and the nature and extent of the incentives each faces to safeguard his interests. This leads directly to a discussion of differences in the costs of carrying out transactions. Although here I deal with only two aspects of such costs, the concept of transactions costs covers a wide variety of factors, ranging from the costs associated with formulating unambiguous contracts to those stemming from communication difficulties<sup>(4)</sup>.

### 3. Agency Relationships and Costs

The distribution of risk-bearing between holders of equity and of debt raises the closely connected question of the compatibility of their interests in determining company policy. The relationship between the owners of a company without limited liability and its creditors is of the same general form as that between the owners and the management. Both are examples of principal-agent relationships, or contracts by which a principal delegates some decision-making authority to an agent acting on his behalf. In a limited liability company, suppliers of debt and equity capital both act as principals in relation to the company's management which is authorised to take decisions concerning the disposition of the funds they have provided.

When both parties to a contract are utility-maximisers, it is reasonable to expect that conflicts of interest will arise and that the principal will have some incentive to try to check the activities of his agent and bring them into line with his own goals. This may involve setting up incentive structures for the agent, observing his behaviour or constraining it in various ways. These and other forms of agent

monitoring all involve the expenditure of resources. Conversely, there may be some inducement for the agent to provide guarantees that he will not transgress the wishes of the principal in certain matters. Such 'bonding' by the agent also involves costs and these, and the costs of monitoring are both attributable to the agency relationship. Whatever the optimal levels for monitoring and bonding activity decided upon by principal and agent, there will always exist some divergence between the policies adopted by the agent and those which would be optimal for the principal in a hypothetical world without agency costs. This difference is also subsumed under the heading of agency costs.

Agency costs are always associated with equity ownership unless the firm is wholly owned and managed by the same individual. Here we abstract from these costs in order to focus on the relationship between holders of different types of security. For owners of debt such costs arise only when there is some probability of default. Jensen and Meckling<sup>(5)</sup> have outlined the agency costs of debt in the context of an owner-managed corporation with limited liability and they divide these into three categories<sup>(6)</sup> :

- "(1) the opportunity wealth loss caused by the impact of debt on the investment decisions of the firm,
- (2) the monitoring and bonding expenditures by the bondholders and the owner-manager (i.e. the firm),
- (3) the bankruptcy and reorganisation costs."

Of these costs, the first two are the most significant for the present discussion. They arise because the limited liability of equity stakes in a firm engenders a potential conflict between the interests of shareholders and those of bondholders. After the sale of bonds, the corporation, whether it is owner-managed or a firm with diffuse ownership run in the interest of shareholders, is concerned mainly with returns in those states of the world in which it does not go bankrupt. Bondholders, on the other hand, wish to avoid those states in which it does. Owners, or managers acting on their behalf, may be induced to accept projects that are riskier than bondholders would like or than the projects they would adopt if there were no debt in the capital structure. The more highly levered the firm the stronger this incentive is likely to be. This divergence of interest requires buyers of bonds to protect their wealth by constraining and monitoring corporate decision-making. In marketing its debt, the management

also faces incentives to give assurances that bondholders' wealth will be protected when policy proposals lead to conflicts of interest.

Monitoring and bonding activities of this kind are costly and are partly necessitated by the existence of limited liability provisions which benefit shareholders. Without these the individual investor cannot isolate those portions of his wealth which he wishes to put at risk, along with finance raised by bond issues, on the chance of high returns <sup>(7)</sup>. With each participation, however small, in a company comes the possibility of losing a part or all of the wealth which he had not initially earmarked for investment in that venture. Shareholders can then be presumed to be concerned with returns in all states of the world, including states in which the company is declared bankrupt and liquidated, up to those which entail his personal bankruptcy. Thus, under a regime of completely unlimited shareholder responsibility for company losses, we might anticipate a closer congruence between the interests of holders of different types of company security.

However, just as in the case of limited liability conflicts are greater the higher is the corporate

debt-equity ratio, so, in this case, the degree to which interests are compatible depends on the personal debt-equity ratio of the shareholder. The smaller is his personal wealth<sup>(8)</sup> in relation to his own potential debts<sup>(9)</sup>, the greater are the incentives for him to act as if he were gambling with someone else's money. This highlights the fact that, although the abolition of limited liability can be expected to reduce certain agency costs by making the goals of bondholders and shareholders more consistent, it also engenders other costs. The ultimate guarantor of the creditor's investment is now the owner and this creates incentives for the former to monitor the latter's assets, his financial transactions and even his lifestyle. There might also be incentives for shareholders to undertake bonding activities, such as offering collateral for corporate debts in the form of secured claims on specific personal assets. Furthermore, since the shareholder's ultimate liability depends partly on the wealth of his collaborators in the venture, he faces the same inducement to monitor them as bondholders do.

Monitoring problems of the kind just outlined arise because of an important difference in the parties to a principal-agent relationship in an

environment without limited liability provisions. It is often useful to regard the corporation, constituted under limited liability laws, as "simply one form of legal fiction which serves as a nexus for contracting relationships"<sup>(10)</sup>. However, this view does understate one aspect of the corporate form which is significant in the present discussion. In acting as a nexus for contracts, the company performs the function of agent in all agreements involving suppliers of finance as principals, be they buyers of equity or of debt; it acts as principal in all contracts with employees. In these circumstances the domain for monitoring activity by shareholders and bondholders alike is well defined. It covers the range of activities which take place within the firm, or the performance of their agents.

The removal of limited liability also eliminates the corporate personality which stands not only between financiers and employees, but also between shareholders and bondholders and between individual shareholders. Principal-agent contracts which concern funding are then ultimately between two classes of financier, between suppliers of debt capital as principals and suppliers of equity capital as agents since the latter are finally responsible



for the consequences of 'company' ventures. The relevant domain for monitoring by principals, and by agents of the kind just described, is greatly increased. It encompasses not only the activities of employees acting on behalf of the company but also those of owners insofar as they affect outcomes after the company's liquidation.

#### 4. Liability, Information and Company Valuation

The role of bankruptcy risks and limited liability in the theory of finance have been the subject of much recent discussion. The most notable instance of this is in the debate engendered by the Modigliani- Miller (1958) theorem concerning the significance for company valuation of corporate financial structures. This states that, in a world without personal and company taxation and in which bonds are issued free of the risk of default, the firm's debt/equity ratio has no bearing on the market valuation of its securities, provided that capital markets are perfect and that individuals are dealt with on exactly the same terms as those available to firms. The theorem implies that, since investors are then indifferent to corporate financial decisions, the firm's production decisions and its financing decisions can be arrived at quite separately.

Once the possibility of corporate bankruptcy is recognised, bonds are no longer riskless and the Modigliani-Miller theorem can only be maintained under a set of rather restrictive assumptions, one of which is the availability of limited liability on all securities, including those

issued by private individuals<sup>(11)</sup>. This condition merely translates, into a context where default risks do exist, the previous requirement that individuals be treated on a par with firms in capital market transactions.

The attraction of this theorem, in any of its forms, is that it permits a company to be valued without any information regarding its financing decisions and without any need for investors to control them, thus generalising a separation theorem available in the simpler model of certainty choices. So, the only data relevant to a valuation exercise are those concerning expectations about the income-generating capacity of the projects adopted by the firm. When limited liability provisions do not apply to securities issued by individuals, corporate capital structure does become an important policy variable and plays an important part in determining the value of a company's securities<sup>(12)</sup>.

When, in addition to this, a company's shares do not carry limited liability, the value of that company would seem to depend not only on its income prospects and its debt-equity ratio, but also on those of its shareholders. The rationale

for this connection between a company's market value and its shareholders' portfolios is a simple extension of the arguments of the previous section; it stems from the proposition that, without limited liability, shareholders stand as joint guarantors of any loans made to their company. Thus, the prospects of any company security, if there is some risk of default, depends partly on the wealth of its shareholders and on the possibility of monitoring and controlling it. Put differently, in the absence of limited liability, the identity of shareholders is relevant to any valuation exercise since the value of a company would then alter as shares changed hands.

While this argument does not necessarily imply that capital markets would not be competitive, it does suggest an additional dimension to the definition of any company security, namely a list of its shareholders along with the relevant characteristics of their wealth portfolios. Thus, comparing a stock market in which shares are issued with limited liability to one in which they are issued without it, the informational requirements for price formation are likely to be higher in the latter. To the extent that information is only available imperfectly in

any market, this would manifest itself in greater (cost-justified) expenditure on information-gathering and -processing activities and on a variety of devices designed to protect individual investors against each other's portfolio policies.

## 5. Some Concluding Remarks

On the basis of the arguments presented in the two sections immediately preceding, it would seem reasonable to suggest that the costs of transacting in an institutional environment without limited liability would be considerably greater than in one that had such provisions. Empirical evidence on this question is not available and it is difficult to imagine how it might be acquired, except through some rather dubious exercise in counter-factual history. However, the fact that, in almost all western industrialised societies, the dominant type of business organisation, in one form or another, is the limited liability company might be taken as evidence supporting this proposition.

Another important aspect of a comparison of the two systems concerns the incentives each offers to entrepreneurship and to shareholding in general. The limited liability status of equity claims insures the entrepreneur, and any shareholder, against the possibility of crippling losses while allowing him to capture his share of any exceptional gains. It creates strong incentives for both large- and small-scale

investment and risk-taking and for portfolio diversification, but it provides much weaker inducements to care about the possibility of large company losses. The removal of limited liability provisions would strengthen the latter type of incentive but erode the former. As Manne (1967) has put it<sup>(13)</sup>:

"It is perhaps less obvious that the concept of limited liability also flows logically from the concept of the corporation as a capital-raising mechanism. One of the great advantages of the large corporate system is that it allows individuals to use small fractions of their savings for various purposes, without risking a disastrous loss if any corporation in which they have invested becomes insolvent. In any given promotion there may be substantial investors and small investors, and clearly each of them cannot be made equally liable for all the debts of the business operation, as in a partnership. If this were the case, small investments in corporations would tend to come only from individuals who were nearly insolvent already. Wealthy individuals would never make small investments in a corporation."

Throughout this essay I have concentrated almost exclusively on the two polar cases - no shareholder

liability for business losses and full liability for them. It should be borne in mind, however, that in the latter case there would be economic inducements to develop cost-minimising arrangements which involved a more manageable specification of shareholder responsibility. Measures of this kind might include bonding agreements, such as the securing of company debts on specific items in a shareholder's wealth portfolio, the formulation of risk-sharing contracts between owners and creditors and the agreed limitation of liability to predetermined sums. More explicit market responses might involve the sale of insurance contracts which enabled owners to restrict their personal liability to specified amounts, thus restoring some of the incentive properties of limited liability while maintaining pressures for shareholders to exercise due supervision over all aspects of the company's affairs.<sup>(14)</sup> Possibilities of this kind which result in partial limitation of liability offer interesting avenues for further investigation.



Footnotes:

1. In contrast to a two-period firm, an ongoing firm is only bankrupt when the value of its equity is zero. For a full discussion of this definition, and the problems it raises, see J.E. Stiglitz (1974).
2. It is also assumed that there are no costs involved in instituting bankruptcy proceedings and liquidating the company.
3. See for example R.H. Coase (1960) as the seminal paper demonstrating this proposition. For a review of more recent developments see E.G. Furubotn and S. Pejovich (1972).
4. For a detailed discussion of the concept of transactions costs see A.A. Alchian, Some Implications of Recognition of Property Right Transactions Costs, in K. Brunner (1979).
5. M.C. Jensen and W.H. Meckling (1976). The approach adopted in this section owes much to their paper.
6. *ibid.*, p.342.
7. An interesting point relates to the definition of the investor's budget constraint in portfolio theory. Without corporate limited liability, it cannot be regarded as a constant since any equity investment, however small, involves the possibility of losing more than the capital the investor decides to devote to financial securities.

8. It should be remembered that, even without limited liability, there are well-tried ways of restricting one's commitment to a venture by nominally reducing one's personal wealth - such as the transfer of assets to one's wife or other close, and presumably trusted, relations.
9. I use the term 'potential debts' advisedly. Any shareholder not protected by limited liability is potentially responsible for all corporate debts. His actual debt burden is determined not only by the severity of the company's bankruptcy but also by the wealth of his fellow shareholders.
10. M.C. Jensen and W.H. Meckling (1976), p. 311.
11. For an exposition of this point see J.E. Stiglitz (1969).
12. See J.E. Stiglitz (1972). For an interesting review and synthesis of recent developments see A.H. Chin and E.H. Kim (1979).
13. H.G. Manne (1967), p.262.
14. This possibility was suggested by J.A. Mirlees and explored by him and others at the Siena seminars. A synopsis of his line of argument is contained in his conference paper, Consequences of the Allocation of Liability.

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