Summary
Can Growth Forecasts Be Improved?

We test the growth forecasts of the OECD, the European Commission and the Belgian analysts (the consensus) for rationality. To this end we check whether the forecast errors could be reduced by information available when the forecasts were published. The results indicate that the errors of the 18 and 12 month horizon forecasts could, indeed, have been reduced by correcting the forecasts. The quality of these forecasts could, therefore, have been improved easily. In this way the number of important errors is reduced. However, the correction also introduced some new large forecast errors.

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Employee Governance and the Ownership of the Firm **

Employee governance, which includes employee ownership and employee participation in decision making, is regarded by many as morally preferable to control of corporations by shareholders. However, employee governance is rare in advanced market economies due to its relative inefficiency compared with shareholder governance. Given this inefficiency, should employee governance be given up as an impractical ideal? This article contends that the debate over this question is hampered by an inadequate conception of employee governance that fails to take into account the difference between employees and shareholders. It offers a different, more adequate conception of employee governance that recognizes a sense in which employees currently have some ownership rights. The argument for this conception of employee governance is built on an expanded understanding of the ownership of a firm. The article also suggests new strategies for strengthening the role of employees in corporate governance.

A major moral criticism of the prevailing system of corporate governance is that it places control of publicly held corporations in the hands of shareholders. By law, shareholders have an exclusive right to

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make certain corporate decisions, and this arrangement is generally justified by the shareholder's role as the owner of the firm. However, many thoughtful observers hold that such a privileged position for shareholders is morally objectionable, in part because it neglects the important role played by employees. Some of these critics contend that employees should also have a voice in corporate decision making and perhaps be owners themselves.

Current corporate law might be said to uphold a system of shareholder governance, in which the corporation is governed by shareholders. The main alternatives that have been advanced are employee participation in decision making and employee ownership of firms. Examples of such employee governance include works councils and employee representation on supervisory boards that are legally mandated in Germany, the more informal, nonlegal forms of collaborative decision making found in Japan, and worker cooperatives, the most prominent example of which is perhaps the Mondragon system in Spain.

The popular support for employee governance stands in stark contrast to the absence of employee participation and employee ownership in developed free-market economies. Virtually every discussion of the subject notes the rarity of durable forms of worker control in modern business enterprises, except when it is mandated by law, as in Germany, or when special market conditions prevail, which is the case in Japan and Spain. The major reason for a lack of employee governance appears to be the relative inefficiency of worker-managed and worker-owned firms. As a consequence, we face a critical question: Should employee governance be given up as an impractical moral ideal, or should we attempt to secure it by following the examples of Germany, Japan or Spain?

The discussion of this question has been hampered by an inadequate conception of employee governance. The usual understanding takes the ownership rights of shareholders as a paradigm of governance and seeks to make employees more like shareholders, if not actually shareholders. Advocates of employee governance assume, in other words, that employees have no share in governance unless they participate in the kinds of decisions generally reserved for shareholders. However, this conception of what governance means for both shareholders and employees fails to take account of the differences between these two corporate constituencies.

Shareholders are equity capital providers with a claim on a firm's residual revenues, and their governance rights are safeguards for this kind of investment. Labor, which is provided by employees, is as important as capital as a factor of production, and employees also need governance rights to protect their stake in a firm, which is largely a claim for wages. The rights of both shareholders and employees include decision-making power over certain aspects of a firm's activities. Indeed, these two matters – namely, protecting assets and allocating decision-making powers – are the major tasks of corporate governance. As a result, we should expect that employees have a right to some measure of control over a corporation but also that their specific rights are different from those of shareholders.

This article offers a new conception of employee governance, one that takes account of the differences between shareholders and employees and is appropriate for the distinctive situation of employees. On this conception, employees already possess certain decision-making powers that are not commonly recognized as matters of corporate governance because they differ from the kind of control rights exercised by shareholders. However, the ways in which employees have ownership of a firm serve to protect their particular claims on a firm's revenues, just as the rights of shareholders protect their claims. The current role of employees in corporate governance is not wholly satisfactory, though. It is still possible to claim that employees' interests are inadequately protected and that employees should have more power in comparison with shareholders.

This article yields two practical conclusions about the possibilities for strengthening employee governance, one negative and the other positive. The negative thesis is that the main traditional strategies for realizing employee governance, such as participatory management, employee stock ownership, and employee representation on boards of directors, are not likely to be effective. These measures, which seek to make employees more like shareholders, again, fail to appreciate the differences between equity capital providers and employees, who provide labor. The positive outcome is that there are more promising strategies that can be built on this new, more adequate conception of employee governance. However, these strategies can be developed only by understanding what interests employees have in a firm and how these interests can be protected in ways that are acceptable to other constituencies.

The first section of this article observes that the main arguments in support of employee governance generally assume that worker-managed and worker-owned firms can be relatively efficient and thus can compete in a free-market economy. However, the explanation of economists for the rarity of these forms of employee governance, which is presented in the second section, reveals the causes of their inefficiency. The analysis proceeds largely from a contractual perspective that models the firm as a nexus of contracts among its various constituencies and employs concepts from financial economics, including transaction and agency costs, asymmetric information, and risk preferences. The conclusion to be drawn from this analysis is that employee governance, as commonly conceived, is largely incompatible with a free-market economy and is prevalent only when there is a legal mandate or else public support.

However, the same analysis provides the basis for a different conception of employee governance. The argument, which is presented in section three (Labor and Capital as Determinants of Ownership), applies the analysis for shareholder ownership to the employee's provision of labor. The crux of the argument is the claim that every firm-specific asset provided to a firm is accompanied by a set of rights that constitutes a form of ownership. Thus, employees' relation to a firm, like that of shareholders, includes decision-making powers that serve to protect the assets that employees provide. Such employee governance is not incompatible with control by shareholders and coexists with it. The final two sections of this article further elaborate the new conception of employee governance and discuss the practical implications.

1. The Arguments for Employee Governance

The term 'employee governance' covers various proposals for increasing the control of employees over matters that affect them. This control may

Although the term 'employee governance' is not in common use, it is employed here to cover a wide range of proposals for greater employee involvement in the workplace. This usage agrees with that of Rock and Wachter (1999: 150-151), who use the term to describe the range of decisions that employees "discuss with the firm". In this usage, employee governance is not incompatible with shareholder governance inasmuch as both groups participate in decision making, although the range of decisions is different for each group.

be exercised either directly through participation in decision making or indirectly through representation in decision-making bodies, such as a seat on the board of directors. Control could also be delegated, for example, by appointing managers who are then accountable to the workers. Some advocates of employee governance include in their definition the replacement of hierarchical structures with cooperative arrangements, so that the workplace is more egalitarian and democratic or participative (Putterman, 1982).

Employees who own a majority of a company's stock have legal control of a firm, but their ownership rights as shareholders do not thereby increase their participation in corporate decision making unless they use their control as shareholders to change the decision-making process, which is rarely the case. Although the employees of many American corporations own significant minority stakes through Employee Stock Ownership Plans (ESOPs) and pension plans, including 401(k) accounts, they are generally entitled only to share in the profits of an employer and to exercise the rights accorded to all shareholders. Their position is little different from that of employees in firms with profit sharing. Participatory decision making and employee ownership are thus logically distinct in that one can obtain without the other. However, in practice, employees are unlikely to have significant decision-making power without substantial stock holdings.

That workers should have control over matters that affect them is advanced on two principal grounds. One argument is the need to justify authority, and the other is the right of individuals to freedom and autonomy. The first kind of argument is made by Robert Dahl (1985; see also Pateman, 1970), who holds that the modern corporation is a political system in which power is exercised by one group over another. Such power must be justified in a state, usually by requiring a democracy, and similarly, Dahl says, a firm must "satisfy the criteria of the democratic process" (Dahl, 1985: 134). Christopher McMahon (1994) rejects Dahl's contention that managers exercise political authority on the grounds that they lead voluntary associations that do not depend on coercion. However, he also concludes that the authority relations in an economic organization can be legitimate only if managers are accountable in some way to employees. Thus, both Dahl and McMahon agree that employees have a right, similar to that of citizens, to participate in decisions that affect them.

The second line of argument holds that the treatment of employees in modern corporations fails to respect the dignity of individuals and denies a right to freedom (Brenkert, 1992; McCall, 2001). The result for Marxists is the alienation of labor, whereas others prefer to describe this condition as a denial of autonomy (Schwartz, 1984). However the case is made, participatory decision making is presented by its advocates as something morally desirable and perhaps as a right to which we are entitled.

These arguments generally hold that a presumption exists in favor of employee governance and that the main task is to defend this presumption against objections. Thus, Dahl and McMahon argue at length that employee-governed enterprises would not violate a superior right to property. However, advocates also condition this conclusion on the economic viability of employee governance. They assume, in other words, that worker-managed and worker-owned firms can exist and prosper in a free-market economy without any significant loss of efficiency or any need for radical political or legal change.

For example, McMahon (1994: 266-272) considers the possibility that democratic firms might not be able to attract sufficient investment because of a lack of efficiency, but he dismisses this as "a question for economists" that he will not attempt to answer (McMahon, 1994: 271). He concludes weakly that a society concerned with "increasing social prosperity" might not want to mandate that all firms be democratic but that, for the sake of freedom, legal provision should be made for some to be. He disregards the possibility that in a free-market economy, workers might overwhelmingly prefer employment in nondemocratic firms for the sake of higher wages, which the empirical evidence suggests is the case.

McCall admits that his argument for a right to participate in decision making has only "presumptive force", because it "depend[s] on beliefs that strong employee participation will not have seriously harmful economic consequences" (McCall 2001: 210). Similarly, Brenkert says that the right of workers to participate in decision making is *prima facie* inasmuch as it can be overridden by more compelling reasons (Brenkert,

2 Such a dual system of traditional capitalist and worker-controlled firms is explored in Krause and McPherson (1986). Some would argue that the law provides adequate provision for worker-controlled firms (Hansmann, 1996) and that their rarity is due to a refusal by workers to take part. However, Krause and McPherson consider the current legal provision to be inadequate. 1992: 262). Although he does not consider the possibility that employee participation may impose considerable costs due to inefficiency, such a factor might well be an overriding reason. Dahl also observes that his proposal for corporate democracy requires a trade-off "between two conflicting visions of what American society is and ought to be" (Dahl, 1985: 162), namely political equality versus wealth and prosperity. Thus, he recognizes that his argument for corporate democracy may not be persuasive to people who value wealth and prosperity over equality.

Part of the argument of this article is that employee governance is inefficient and is, for this reason, unlikely to be chosen by workers or any other group in a free-market economy. Some rights, such as those involving minimum wage, discrimination, and worker health and safety, ought to be secured regardless of cost. Other rights or goods ought to be mandated by law or otherwise realized only if the cost is not too great. (Even recognized rights involve standards, the minimum wage level, for example, that are set with some regard to the cost.) Advocates of employee governance have offered compelling arguments that participation in decision making and employee ownership are worthy moral ends other things being equal, but they have generally admitted that any right to employee governance is limited by economic considerations.

The relevant question, therefore, is not whether employee governance is of some value – it clearly is – but whether the value is so great that it ought to be secured by law or other means, given that it is unlikely to arise from the choices people make in a free market. In order to answer this question, we need to understand the reasons for the rarity of employee governance.

2. Reasons for the Rarity of Employee Governance

Economists have sought to explain not only the relative rarity of worker participation and worker ownership but also the distribution of firms with these characteristics (Ben-Ner, 1988a, 1988b; Dow, 1993; Dow and Putterman, 1999, 2000; Putterman, 1984). Worker cooperatives, in particular, are clustered in a few countries – including Italy, France, and Spain – and in certain industries, such as construction, printing, and small craft manufacturing (Ben-Ner, 1988a). In the United States,

worker-owned firms are prevalent only in narrow market niches, such as plywood manufacturing and waste hauling, and in some distressed industries, most notably steel.

However, if worker-owned firms are defined so as to include sole proprietorships, partnerships, and close corporations, then they are very prominent, especially in professional services and technology startups. Indeed, partnership is the most common form of organization in law, accounting, and investment, which are fields that involve highly specialized skills and knowledge. Although numerous, such "workerowned" enterprises constitute a small percentage of firms measured by total assets. Moreover, they are rare among heavily capitalized industrial enterprises, which employ the vast proportion of workers. Discussions of the lack of employee governance have focused, therefore, on the kinds of corporations that dominate our economy. However, the prevalence of partnerships in professional areas is due to the same factors that account for the rarity of employee governance in the rest of the economy.

The economists' explanation has also focused primarily on worker ownership rather than worker management. However, ownership is a bundle of rights that includes control, along with a right to certain revenues and a claim on physical assets. Insofar as worker management involves the exercise of decision-making powers over matters that would otherwise be left to shareholders, it includes a central element of ownership. Therefore, the same factors that militate against worker ownership operate with equal force against worker management.

The question confronting economists is often stated in the form: Why does capital usually hire labor?³ If capital and labor were similar inputs, then, in a competitive market, it should not matter which hires which (Samuelson, 1957). The theoretical explanation of why capital usually hires labor identifies a large number of related factors that work together to reduce the efficiency of employee-governed firms. These factors can be grouped under three main heads: (1) problems of incentives and monitoring, (2) problems of obtaining adequate financing, and (3) problems of collective choice.

3 The question is also stated in the economic literature as "Why do hierarchies exist?" See Coase (1937); Alchian and Demsetz (1972); and Williamson (1980). This question is similar to "Why does capital usually hire labor?" because capitalist bosses generally operate by command whereas employee owners are assumed to be more cooperative. Assuming that a firm brings together people with assets to realize the benefits of joint production, it is important that workers, as well as other input providers, have incentives to increase the value of the output. The alternative is a situation in which some groups are able to increase their own return at the expense of overall wealth creation. Workers can pose such a risk with respect to the effort they expend and to their utilization of assets.

Alchian and Demsetz (1972) observe that in joint production it is difficult to determine each worker's contribution and to pay accordingly. However, if workers are paid only on the basis of total output, then each one has an incentive to shirk. The root of this problem is asymmetric information and monitoring costs: each worker knows more about his or her effort than anyone else, and any manager would have to expend resources in gaining this information. The solution, according to Alchian and Demsetz, is ownership by an outside party who is motivated to monitor because of a right to the residual revenues and who can use the information gained from monitoring to improve production.

The problem of shirking also arises in the maintenance of a firm's physical assets. If workers collectively owned plants and machinery, they would have an incentive to overuse these assets and reduce their effort to maintain them. Again, information asymmetry and monitoring costs are at the root of this problem, and the solution is for the outside monitor who receives the residual to be the owner to the physical assets of a firm as well. Such a person has an incentive to monitor not only individual effort but also the utilization of assets.

There are some theoretical and empirical objections to this explanation.⁴ Workers generally have better information about each other's effort than do managers, and so they could, with sufficient incentives, engage in self-monitoring. Such incentives might be provided by bonuses and profit sharing. These objections show that employee ownership might be viable if monitoring problems were the only obstacle, which is not the case, though. The force of the Alchian and Demsetz's account, moreover, is to identify problems about incentives and monitoring that any form of governance must address. In particular, governance structures should create incentives for increasing the value of the firm that overcome the obstacles of information asymmetry and monitoring costs.

⁴ For a fuller account of these objections, see Putterman (1984: 173-175).

More serious difficulties arise in connection with obtaining adequate financing. A common explanation for the lack of worker ownership is that workers generally lack sufficient wealth to finance a cooperative enterprise. Redeployable assets, such as machinery, can be financed with debt, but debt financing is limited by the problems of moral hazard and adverse selection. That is, lenders' investment would be limited due to fears that workers would take undue risks or would misrepresent their level of effort. The moral hazard faced by lenders is increased by the fact that the human capital provided by workers cannot be used to secure loans because workers can walk away from a failing enterprise and leave the lender without sufficient assets to satisfy claims (Dow and Putterman, 1999; Hart and Moore, 1990). Capital for firm-specific assets and startup financing could not easily be raised from lenders, then, without some assurance of the workers' commitment to the firm. Workers can signal this commitment by making a significant capital investment themselves, but this solution highlights the difficulty of obtaining external financing.

Although workers individually may lack significant wealth, they often have enough wealth collectively through pension funds and ESOPs to take a substantial stake in an employing firm (Drucker, 1976). The rarity of worker ownership, then, may be due less to a lack of wealth than to risk aversion. Shareholders not only provide equity capital but also assume residual risk, which provides insurance for employees' wages. With less wealth, workers are understandably more risk averse than outside shareholders and more in need of diversification. Consequently, employees may be reluctant to assume residual risk and to forgo this kind of insurance.

Risk aversion plays another role in explaining the lack of employee governance. Because of workers' limited wealth and inability to diversify, the optimal level of risk for a labor-managed firm is lower than for a comparable shareholder-controlled firm. Workers' preference for a lower level of risk is of little consequence as long as all equity capital is generated internally, but it becomes significant when a firm turns to external capital providers, who would demand a premium, thus raising the cost of capital for the firm. Workers could offer to raise the level of risk, but, as Herbert Gintis (1989) argues, the level of risk cannot be guaranteed by a legally enforceable contract and is difficult and costly to monitor. Gintis argues further that shareholders prefer a hierarchical firm because providing incentives to a few top managers and

monitoring their performance is less costly than attempting to motivate and monitor all employees.

The third set of problems, those of collective choice, is concerned with the difficulty and resultant cost of making decisions. Decision making itself incurs costs in acquiring and processing information. For this reason, costs are reduced when decision-making power is limited to a small group with the requisite skills. Costs are further limited when there is a single objective (Jensen, 2002). Unlike shareholders, who have the unitary goal of profit maximization, employees pursue multiple ends, including job satisfaction, security, advancement, and, of course, compensation. Thus, decisions made by employees are likely to involve some balancing of these goods through a process that increases decision-making costs.

Moreover, individuals and groups vary considerably in the importance that they attach to various interests, so that decisions made by employees may involve protracted bargaining, which further increases the costs of decision making. Henry Hansmann (1996) observes that collective decision making by employees not only increases costs but encounters indeterminacy. That is, different outcomes are possible depending on the choice of procedures. Not only is it more costly, then, for workers to make decisions than it is for shareholders, but also the decisions made are less likely to pursue a consistent objective that satisfies everyone.

Worker-managed firms are subject to two specific problems. One – known as the horizon problem – results when employees have different time horizons (Dow and Putterman, 1999; Furubotn and Pejovich, 1974; Jensen and Meckling, 1979). For example, a choice between higher immediate wages and internal capital accumulation for the sake of higher wages in the future is apt to be viewed differently by younger employees and those closer to retirement. Although diversified shareholders also have different time horizons, they can usually adjust their portfolio to match their preferences. The second problem is the community property problem, which is due to the reluctance of

5 The cost of decision making is a major theme in Hansmann (1996).

⁶ A horizon problem also results if, as Jensen and Meckling (1979) claim, worker-owned firms have less incentive than shareholder-owned firms to make investments that will yield profits only in the distant future. However, Hansmann (1996: 80) does not believe that this is a significant impediment to employee ownership.

employees who have contributed to the accumulated capital of a firm to admit new workers, who would benefit from the returns without having made a contribution (Dow and Putterman, 1999; Jensen and Meckling, 1979). Although these problems admit of solutions, such as individual capital accounts and markets for membership, these mechanisms are costly and unwieldy and, consequently, have not been widely adopted (Dow, 1986, 2001; Dow and Putterman, 1999, 2000; Fehr, 1993).

These theoretical problems correlate with what we know empirically about the distribution of worker-managed and worker-owned firms. Such enterprises exist in any great number only when workers are highly skilled, have significant personal wealth, and are relatively risk averse or are able to diversify (Ben-Ner, 1988a). Industries in which worker-controlled firms are numerous generally do not require large capital investment, especially for nonredeployable or firm-specific assets (Dow and Putterman, 1999). They also tend to be in less competitive, slow changing industries that demand less risk taking. In addition, firms with a democratic decision-making structure tend to be small in order to overcome collective choice problems.⁷

The conclusion to be drawn from this examination of the economic literature on why capital usually hires labor, rather than vice-versa, is that worker-managed and worker-owned firms involve considerable inefficiencies. This finding does not diminish the moral desirability of employee governance except insofar as they indicate the trade-off with efficiency that would be necessary to promote it. This trade-off is especially significant if firms are to be financed with private capital in competitive financial markets. Both theory and empirical evidence indicate that private investors shun worker-managed and worker-owned firms or demand a premium that significantly increases the cost of capital. This result can be countered only by other sources of capital, such as public investment, by legal mandate, such as German codetermination, or by economic conditions that reduce the comparative inefficiency of employee governance.⁸

7 For a list of the conditions under which labor-managed and labor-owned firms may be expected to perform well, see Dow (2001: 214-215).

In economic terms, employee governance has the features of a public good – that is, something desirable, like parks, roads, and police protection, that cannot generally be secured by market exchange. If employee governance is sufficiently desirable, then arguably the tradeoff with efficiency ought to be made. However, the benefit of financing large economic enterprises with the private assets of individuals is of sufficient value that we should be wary of making this trade-off. Countries that lack well-developed capital markets or that cannot attract foreign capital are at a significant competitive disadvantage in a world of global competition. Countries in Europe with legally-mandated employee governance are under great pressure to weaken or eliminate these structures in order to be more competitive.

3. Labor and Capital as Determinants of Ownership

The concept of ownership is central to an understanding of governance. Underlying the assumption that employee governance consists primarily in employee ownership or a significant role in corporate decision making is the view that governance is the kind of control exercised by shareholders. The rights of shareholders, in turn, are those that are considered to constitute ownership. Thus, it is generally held that employees can have a governance role only if they are owners of a firm or share some of the rights of ownership.

However, ownership of a firm is a complex concept that can be expanded to include employees in their relation to a publicly held corporation. Ownership of a firm is more extensive than the shareholders' right of control, and many groups can be said to exercise ownership or control of a firm. The key to developing a different conception of employee governance, then, is an expanded understanding of what it means to have an ownership role in a firm.

The ownership role of shareholders is due to the fact that they provide an input, namely equity capital, in return for certain guarantees for their

⁸ Countries in which worker-owned and worker-managed firms are prominent, such as France, Italy, and Spain, are also characterized by inefficient capital markets, so that these kinds of firms are at less of a competitive disadvantage relative to similar firms in countries with more efficient capital markets.

⁹ Employee governance is a public good only if it has social benefits that affect other groups besides employees. However, Pateman (1970), Dahl (1985), and Bowles and Gintis (1986) all stress the importance of corporate democracy in developing a democratic society.

claim on a firm's revenues. However, employees also provide an input, namely labor, and they do so with guarantees for *their* claim on a firm's revenues. Although shareholders and workers differ in their inputs, they are alike in that each group has a bundle of rights that includes, first, a claim on a firm's revenues. However, a claim on residual revenues as opposed to the fixed revenues is not an essential feature of ownership. Moreover, control, the second right held by shareholders, is not a single, undifferentiated right. Many groups have different kinds and degrees of control over a firm. True, the control rights of shareholders are much stronger than those of any other constituency, but there is no reason to say that only the holders of these rights are owners of a firm.

Accordingly, ownership should be conceived not as a specific set of rights, such as the rights to residual revenues and to ultimate control, but as a set of rights that secures a claim on revenues of whatever kind. If this definition is adopted, then other groups besides shareholders are owners of a firm. On this proposed new definition of ownership, employees exercise a form of ownership that is different from that of shareholders but is appropriate for their contribution to the productive process. A development of this claim requires, first, an examination of the concept of ownership as it applies to a firm.

Ownership of a firm is conventionally defined as the rights of shareholders to the ultimate control of a firm's assets and to the residual revenues of a firm (Hansmann, 1996: 11). These rights are conferred in return for providing equity capital. However, shareholders provide more than capital. By settling for a claim on residual revenues, they assume the role of risk bearer, and with control goes the role of decision maker. Both of these roles – risk bearer and decision maker – are services that are needed by a firm for production. That is, in addition to securing financing, a firm must obtain the services of individuals who are willing to assume the risk of an enterprise and to make decisions. Although these roles are *separable* in the sense that they could be filled by different groups, equity capital providers generally assume the other two roles, in part because decision-making rights enable shareholders to secure their claim on a firm's residual revenues.

This conventional view of ownership is complicated by the fact that each component of ownership is *divisible* in the sense that they could be, and commonly are, shared among various groups (Putterman, 1993). Typically, a firm has many sources of capital, each of which entails some form of ownership. With respect to equity capital, different classes of stock and other investment vehicles, such as convertible bonds, lead to different forms of ownership. Debt, like equity, involves some ownership claims. Thus, Oliver Williamson (1988) has argued that equity and debt are best viewed not as alternative financial instruments but as different governance structures. More important, risk bearing and decision making are not borne by shareholders alone but are widely distributed among a firm's other constituencies.

Ownership is also *variable* inasmuch as the roles of capital provider, risk bearer, and decision maker can be assumed in different proportion by various groups. That is, ownership structures vary depending on whether these roles are served by many or few and on the proportion of each source of financing.

Many different ownership arrangements are possible, but the particular arrangement for any given firm will generally reflect the factors already noted: (1) the needs of a firm for capital providing, risk bearing, and decision-making services, and (2) the preferences of the capital providers, especially with respect to risk, and the agency problems that these preferences create. In short, ownership arrangements depend crucially on the features of capital providers as well as the firm itself.

For example, corporations in the United States typically have a diffuse group of risk-averse, highly diversified shareholders, who delegate virtually all decision making to directors and executive officers. The well-known phenomenon of the separation of ownership and control, noted by Berle and Means (1932), is thus due to the fact that American corporations obtain capital largely from private individuals who seek diversification. The resulting ownership arrangements are different from those found in Germany, which reflect highly concentrated ownership by banks and other financial institutions that actively participate in decision making. The differences show the importance of who provides capital to a firm.

Ownership of a firm is not like ownership of an asset (Schrader, 1996). Rather, the firm is itself a collection of assets that are owned by those

¹⁰ It is in virtue of having a claim only on residual revenues that shareholders seek control as the most effective means of protecting this claim, but one can imagine a system of corporate governance in which the owners have nonresidual claims as well. Indeed, in bankruptcy, bondholders and creditors, who do not have a claim on residual revenues, become the owners of firm.

who provide them for joint production, although the firm as a legal entity also owns assets. Thus, investors own the capital they provide, and in return for providing this crucial asset, as well as for assuming residual risk and providing decision-making services, they receive a certain bundle of rights that includes a claim on residual revenues and certain decision-making powers.

The sense in which shareholders own a firm can be generalized as a claim on a firm's revenues accompanied by a set of means for protecting this claim. The claim on revenues is the return for providing some asset needed by the firm. For shareholders, the means for protecting their claim consist of control rights that include certain decision-making powers and the benefit of management's fiduciary duties.

On this definition of ownership, bondholders are owners inasmuch as they have a claim on firm revenues for payment of interest and principal. They also have whatever decision-making powers are provided in the bond covenants, and in the event of bankruptcy, they take control of the firm from shareholders. Indeed, bankruptcy may be described as corporate governance under conditions of insolvency. Admittedly, the rights of shareholders are very extensive and overshadow those of other groups. They key point, however, is that shareholder rights do not constitute the whole of ownership. Ownership is shared by other corporate constituencies.

In particular, this definition of ownership can be applied to labor. The conventional view of ownership tends to assume that labor is purchased like equipment and raw materials in a market. However, labor shares some critical features with capital. Most notably, it often has great asset specificity, especially when workers acquire skills and knowledge that make their services of greater use to their current employer. Such asset specificity produces quasi-rents, which can be appropriated by either workers or the employer, thus leading to bargaining over wages.

Because employees' wages constitute a fixed claim, unlike the residual claim of shareholders that creates residual risk, it is commonly assumed that employees bear little risk. However, the insurance that risk bearing by shareholders provides is not complete. Not only do employees face the possibility of job loss, but future raises depend on the prosperity of the firm. Because of their limited wealth and their inability to diversify their job-related income, workers are generally risk averse, and so

considerations of risk influence their willingness to provide labor to a firm and especially to undertake specialized training. In short, risk preferences are factors for the providers of both capital and labor.

Labor is most like capital in providing decision-making services to a firm. Although some shareholders, especially in close corporations, have superior knowledge and skill, decision making on major matters is usually delegated to executive officers and high-level managers, who are accountable to the shareholders. Large business organizations could scarcely function, however, without decision making on myriad matters at all levels. In general, who makes what decisions in a firm is determined by two factors, namely *information* and *incentives*.

First, the allocation of decision-making powers depends on who has the relevant information – or alternatively on what it would cost for others to acquire that information. Although shareholders usually prefer that information flow upward so that decisions can be made by managers who are accountable to them, a cost is incurred that can be avoided by leaving decisions to lower-level employees who already possess the information. Although hierarchy generally serves to reduce information costs (Williamson, 1975), some savings can be realized by adopting less hierarchical structures. This has led in recent years to so-called "flattened" organizations in which decisions are pushed down to lower levels.

A second, more critical factor is employees' incentives. Decision-making powers will be allocated not only to those members of an organization with superior information but also to those with incentives to increase the value of the firm. The danger of pushing decision making down in an organization is that employees will be unable to make decisions due to conflicts among their various interests or that they will seek to benefit themselves at the expense of other groups and the firm as a whole. These problems can be addressed, first, by selecting the decisions to be made by employees and, second, by creating incentives for employees to make decisions that increase firm value.

From the point of view of the firm, then, labor and capital are both inputs that because of their asset specificity can be secured only with credible commitments that the providers' claims on a firm's revenues will be satisfied. For shareholders this means that they will receive all residual revenues and that the firm will be operated to maximize the residual. For

employees this means that wages will be paid, that they will receive some portion of the quasi-rents created by their acquisition of firmspecific knowledge and skills, and that they will share in the prosperity of the firm.

Furthermore, both shareholders and employees bear some of the risk of the enterprise, although shareholders bear the preponderance and provide insurance for employees. In addition, both shareholders and employees provide decision-making services, which are allocated according to the information and incentives that each possesses. The guiding principle is: Who in a firm is in the best position to make decisions that increase the value of the firm at the lowest cost?

From the point of view of each input provider there are two concerns. One is to satisfy individual risk preferences, and the other is to secure the claims on a firm's revenues. Because shareholders have a claim on residual revenues, their claim is at risk unless they have control, which is to say decision-making power over the utilization of a firm's total assets. Although employees have no claim on residual revenues, they have a fixed claim on revenues for the payment of wages. Moreover, a firm's total revenues are variable in the sense that they can increase or decrease depending in part on employees' efforts. Employees are often motivated with an implicit understanding that wages will rise with revenues. Sometimes this agreement is explicit in the form of productivity bonuses. Thus, employees have some claim on a firm's variable revenues that is similar to the shareholders' claim on residual revenues.

Employees benefit, then, by having decision-making power over decisions that bear most directly on their claim on revenues. Some decisions of greatest concern to employees may be reserved for shareholders, such as the question of whether to relocate production that could result in job loss. However, many decisions of importance to workers are ones that they are in a position to affect. This is true, most notably, for decisions about the terms and conditions of work. Decisions about such matters are also ones where employees have superior information, which, if utilized, reduces information costs. However, the allocation of decision-making rights must also reflect the agency costs of employee decision making.

In summary, ownership of a firm is not confined to shareholders alone. Every asset that is contributed to production is accompanied by some

ownership arrangement. Each arrangement serves to secure the claim on a firm's revenues that constitutes the return for providing an asset. It also allocates the risk-bearing and decision-making functions that must be fulfilled by some individuals in a firm. The form that ownership takes will be determined, first, by the risk preferences of the input provider and, second, by the various transaction and agency costs of the allocation.

Specifically, the provision of labor creates a form of ownership that defines the relation of employees to a firm. This form of ownership is different from that of shareholders and coexists with it. Thus, employee ownership and shareholder ownership are not mutually exclusive alternatives. Employee-owned firms are commonly understood as those in which employees assume the role of shareholder, but in all firms, the rights of ownership, including decision-making powers, are distributed among many groups. The matters over which employees and shareholders have decision-making powers reflect each group's need to secure its claims and its ability to contribute to the value of the firm.

4. A Conception of Employee Governance

That employees have a form of ownership and hence a governance role has been obscured by the assumption that ownership and governance concern the kinds of decisions over which shareholders ordinarily have control. Employee governance consists largely of control over the workplace and, in particular, the terms and conditions of employment. These matters are generally treated in law as labor relations rather than corporate governance (Charny, 1999: 93). However, the economic analysis of the relations of shareholders and employees to the firm reveals many structural similarities.

Most notably, both relationships are formed by market transactions. Corporate governance can be characterized as the terms that firms offer investors in order to obtain capital on favorable terms. The relevant

¹¹ Rock and Wachter (1999: 124) speak of employee and shareholder governance as parallel and say that they "should not be thought of as opposites but rather as deeply complementary activities".

transactions take place in a competitive financial market. Although firms obtain employees in a competitive external labor market, all subsequent transactions take place in an internal market (Rock and Wachter, 1999). In this internal market, firms must induce workers to exert maximum effort and to acquire specialized knowledge and skills. Employees with firm-specific assets are more valuable to a firm than workers in the external market, but they are also locked into a firm because they usually cannot obtain the same wages elsewhere. The internal labor market thus has the features of a bilateral monopoly with an accompanying lack of competition (Rock and Wachter, 1999).

The problems facing firms, then, is how to structure the relationship with both shareholders and employees in their respective markets so as to enhance the value of the firm. In solving this problem, a firm must provide sufficient inducement to each group, allowing for the factors of asymmetric information, risk aversion, and transaction and agency costs. Although different governance structures emerge from transacting with employees and shareholders in an internal labor market and a capital market respectively, the same factors are operative.

The resulting governance structures differ to some extent in their legal status. Corporate governance is largely embodied in statutes and explicit contracts, which have legally enforceable provisions. Although labor law and union contracts have a legal status similar to that of corporate governance, many of the elements of employee governance are the subject of implicit contracts or are merely entrenched practices. Because employees are more deeply involved than shareholders in the day-to-day operations of a firm and have a much more complex set of interactions with it, their governance role is not easily codified in law and must rely more on informal mechanisms.¹²

The matters which are subject to employee governance are primarily the terms and conditions of employment that bear on workers' claims on a firm's revenues. Although employees rarely make actual decisions on

12 Charny (1999: 117) argues that because employees have the power to withhold cooperation, they "may be largely indifferent to whether their commitments are enforced by legal or nonlegal sanctions and may rely on nonlegal sanctions even when legal ones are in place." This suggests, he says, that "the decision to embody [employee] governance devices in legally enforceable form is of secondary importance." Rock and Wachter (1999: 127) note that relationships in an internal labor market tend to be self-governing or norm-governed as opposed to being subject to legal arrangements.

such matters, the managers who do must offer terms and conditions that employees are willing to accept inasmuch as both parties are engaged in market transactions. Similarly, shareholders do not typically make decisions about corporate governance, many details of which have already been established in corporate law and in the charter and bylaws of a corporation. Many specific decisions that affect shareholders, such as the dividend policy, are also made unilaterally by managers. Nevertheless, we can understand all of these decisions as the result of bargaining in a market that allows both parties to contribute to the outcome.

The roles played by both shareholders and employees in the operation of a corporation are confined largely to specific features of their respective relations that have been established over a long period of time and are not easily subject to change. In truth, shareholders are rarely called upon to make decisions about significant issues. Their control over a firm lies more in the governance structures that they have accepted, including the delegation of most powers to a board of directors. Similarly, the control exercised by employees lies less in making specific decisions and more in their contribution to establishing the general features of the employment relation that prevails in most firms. And insofar as there are marked differences between the employment relations in different countries, these can be attributed to the different choices that have been made during a long history of development.

Employee governance is perhaps most evident in the patterns of compensation that prevail in business organizations (Rock and Wachter, 1999). Generally, wages are based on job categories and seniority with little attempt to assess the differences between individual worker's performance. Increases are gradual, except for promotions, which increase the level of responsibility. Wages are usually maintained in periods of declining profits and increased only slightly when profitability improves. In times of distress, some workers are laid off rather than subjecting all to pay cuts. In addition, the penalty for inadequate performance is usually termination rather than a reduction of wages.

The overall effect of these patterns is to stabilize employees' compensation by insulating it from changes in the fortunes of a firm and the vagaries of production. If the contributions of workers could be precisely measured and pay calculated accordingly, then compensation

would be more closely correlated with profitability, which would expose them to more residual risk. Thus, pay for performance and profit sharing schemes make employees more like shareholders. Under prevailing compensation patterns, employees are more like bondholders than shareholders in the security of their return, although they still bear more risk than bondholders. However, they are unlike both in the respect that the only investment at risk is their development of firm-specific knowledge and skills, whereas capital providers can lose the whole of their investment. (Workers may be exposed to greater risk, though, because they cannot diversify as easily as investors.)

In addition to the role that employees play in determining the terms and conditions of employment, they also make specific decisions about the utilization of a firm's assets. Although this control is more limited in scope than that of shareholders, who have decision-making power over a firm's total assets, workers have a degree of active involvement that shareholders lack. That is, shareholders and top management may make the major strategic decisions, but employees handle most of the operational details where they have superior information. These decisions do not generally bear directly on protecting the firm-specific assets of employees but are more of the nature of discharging their duties to a firm. However, it is a benefit to employees that they have control over the decisions that they are best equipped to make. Moreover, part of what employees and shareholders offer a firm is decision-making services, for which they are compensated – with wages for employees and with residual earning for shareholders. This compensation is best secured when decision-making power over any given matter is assigned to the party that can best increase the value of the firm.

5. The Practical Implications

Those who advocate employee governance as a morally preferable alternative to shareholder governance generally assume that any trade-off with efficiency is minor and easily accommodated. However, an explanation of the lack of worker-managed and worker-owned firms in a free market economy reveals the significant problems that they encounter. The fact that workers could take control of many firms but almost always choose not to suggests that the benefits are not worth the

costs.¹³ In particular, employees are understandably reluctant for their pay to vary with the fortunes of an enterprise.

Advocates also assume that these two forms of organization are in conflict. Indeed, they are incompatible if employee governance is understood to confer on workers the rights of ownership that are commonly accorded to shareholders. However, employee governance need not be in conflict with shareholder governance, given a full understanding of ownership. On such a view, every asset provided to a firm is accompanied by an ownership structure that entails some set of rights. These rights include a claim on a firm's revenues and control of certain assets. The major factors that determine the specific form of ownership are asset specificity, information asymmetries, risk preferences, and transaction and agency costs.

On this view of ownership, employees and shareholders are alike to the extent that they provide some asset to a firm and thus have some form of ownership. However, the differences with respect to the determining factors are substantial. As a result, firms in which workers have the rights that ordinarily belong to shareholders are relatively rare, and the employee governance that firms exhibit is markedly different from shareholder governance. Instead of conflicting, then, the two forms of governance are complementary and mutually beneficial. In particular, decision making is shared in such a way that the two groups make decisions on matters where they have superior information and an incentive to increase the value of the firm. Their respective forms of governance also fit the need of each group to protect their firm-specific assets and to satisfy their risk preferences.

This view of ownership has important practical implications. First, traditional efforts to increase employee governance by promoting worker-managed and worker-owned firms are unlikely to succeed in a free market economy. These kinds of enterprises will continue to exist in

¹³ As Drucker (1976) has observed, employee pension holdings would be sufficient, in many cases, to take control of the employing company. However, Drucker's prediction of "pension-fund socialism" has not come to pass, in part due to the risk that employees would be taking. Moreover, any time employees could operate a firm more efficiently than the current managers, they should be able to find investors willing to back them in a takeover. The fact that such employee buyouts seldom occur suggests that few groups of employees could make a convincing case to investors, even if they were willing to assume the risk (which most would not).

niches where they are economically viable, but their numbers cannot be easily expanded without legal mandates or public investment. Moreover, increasing employee stock ownership through pension plans and ESOPs serves primarily to increase workers' risk without conferring significant power.

The impetus for these changes comes from a conception of ownership that is modeled on shareholder rights. The underlying assumption is that employees can play a role in governance only if they become more like shareholders. However, this view overlooks the differences between shareholders as capital providers and employees, who provide labor, and fails to appreciate the interests of employees and the best means for protecting those interests.

Second, a far more effective strategy for enhancing the governance role of employees in publicly held corporations is to build on the new conception of ownership developed in this article. In addition to recognizing the extent to which employees already exercise a form of ownership in a firm, steps can be taken to strengthen the bargaining position of employees and enlarge the sphere of their decision-making power.

One possibility is increasing the investment in human capital, which is the asset that gives rise to employees' ownership rights. Just as corporate governance is the set of rights that firms offer investors in return for equity capital, employee governance consists of the terms that workers require for providing skilled labor. Consequently, the more essential capital and labor are for production, the greater the ownership rights that the provider of each can command. Economists have focused primarily on wages as a means for attracting labor, but doing so neglects the bargaining that takes place in the internal labor market over matters of concern to employees. Investors are concerned with good corporate governance because of its bearing on their expected return. Similarly, employees consider employee governance as a factor in the security of their wages.

Employee governance can also be enhanced by reducing the transaction and agency costs and the information asymmetries that currently stand in the way. This can be achieved, in part, by creating conditions that solve the problems of collective choice and give workers the right incentives. David Charny (1999) suggests that these conditions can be

produced only by "culture," which he defines as the shared beliefs and social norms that influence members of a firm. A supportive culture may also require background institutions and social welfare entitlements that can be created only by political action. Consequently, the market alone may not be sufficient to generate significant employee governance.

Whether employee governance is a moral ideal remains an open question. It may be that workers are better served by a prosperous economy in which they can easily change jobs and have other sources of support. However, to the extent that employee governance is morally desirable, we should abandon traditional strategies to increase worker management and worker ownership and seek out innovative means that are built on a concept of ownership that is appropriate for the assets that workers provide. Instead of assuming that a firm can be owned only by one owner and asking whether it should be employees or investors, we should recognize the ownership rights that both have in a firm and seek forms of governance that benefit both groups.

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