When Should Control Be Shared?

Eva Meyersson Milgrom, Paul Milgrom, and Ravi Singh

Preliminary Draft

October 25, 2005

Abstract

We analyze the costs and benefits of allowing stakeholders in a firm to share control. In our model, there are conflicts among stakeholders and bargaining does not always lead to efficient decision-making. Although the logic of the Coase Theorem is such that bargaining problems lower the efficiency of decision-making regardless of who has control, we show that conflicts among parties favor undivided control over shared control. Shared control is particularly problematic when the redistributive consequences of decisions are difficult to assess. Our model thus provides a theoretical basis for the observation that ownership is typically shared by those with homogenous interests. Finally, when a party has undivided control, we show that it is necessary to place limits on the controlling party’s ability to engage in extortionate negotiations.
1 Introduction

The right to participate in control is one of the primary instruments for protecting stakeholder interests in a firm. A basic question is how control should be allocated across a firm’s various stakeholders, including investors, employees, customers, and suppliers. Although economists commonly focus on investor ownership, Hansmann (1996) persuasively argues that there is significant diversity in the ownership structure of firms, and that the traditional corporation is just one type of supplier cooperative in which the suppliers of capital own the firm. For example, labor-controlled firms are common in the form of partnerships. Hansmann observes that a common property across these diverse ownership structures is that the control group has relatively homogenous interests.

However, this emphasis on ownership obscures the fact that control structures vary not only across firms, but across types of decisions within a firm. While there is usually at least one group that retains a broad set of rights (effectively management in widely held corporations), other stakeholders often have the targeted right to intervene in certain classes of decisions. Examples include loan contracts that restrict the ability of management to sell assets or increase dividends without the explicit approval of the lender and labor contracts that limit management’s ability to reassign workers or reduce employment. This line of reasoning suggests that control is in fact frequently shared by diverse stakeholders.

In the preceding examples, bondholders and workers have veto rights over specific classes of management proposals. Likewise, shareholders in a widely held corporation (whom most economists would term a firm’s owners) as a group have limited veto rights over certain key management decisions. For instance, shareholders must approve a merger or sale of the firm. However, shareholders have extremely limited ability to directly intervene in most decisions. The current debate over whether shareholders should have greater power to select directors highlights both the limited powers of shareholders and the fact that securities laws explicitly balance the benefits of protecting shareholders against the cost of shareholder interference in managerial decision-making.

These examples suggest a pattern of control in which there is a central decision-making
group (management) and stakeholders who have veto rights over certain decisions. In this paper, we adopt this conceptualization of control within firms and explore the costs and benefits of allowing a stakeholder to share control with management. Following the property rights theory of the firm (Grossman and Hart, 1986 and Hart and Moore, 1990), we assume that the parties cannot specify in advance the appropriate decision in every contingency, but instead give either the manager the unfettered right to implement proposals or the stakeholder the right to block proposals.

In the property rights theory of the firm, the allocation of control affects the bargaining power of parties and consequently how any surplus is divided. The distribution of the surplus has efficiency consequences only insofar as it affects the parties’ incentives to make non-contractible investments in the firm. Hansmann’s analysis suggests that the allocation of control has important consequences not only for stakeholders’ incentives to make such investments, but also affects the quality of ex post decision-making.\(^1\) In particular, Hansmann suggests that shared control among parties with diverse interests results in collective action and bargaining problems, frequently leading to deadlock and poor decision-making.

Although compelling, this intuition is incomplete. Efficiency requires that parties act collectively and bargain over decisions regardless of the configuration of control. The logic of the Coase Theorem is such that the allocation of control affects the direction of transfers among parties, but does not necessarily eliminate the need for stakeholders to collectively bargain. For this reason, it is not clear that collective action problems or bargaining frictions favor one constellation of control over another.

To analyze the relationship between control and bargaining frictions, we consider a situation in which management is better informed than the stakeholder about the distributional consequences of proposals. Even when the parties agree that a proposal is efficient, they may not agree on the appropriate compensation for any adverse impact a proposal has on the stakeholder. When control is shared and there is disagreement over the distributional consequences of a proposal, the stakeholder inefficiently blocks the proposal. In contrast,

\(^1\)Similarly, Williamson (1985) emphasizes the critical role of governance structures in improving ex post decision-making.
with undivided control, management can simply implement the proposal without worrying about the appropriate compensation for the stakeholder. However, undivided control may also lead to inefficient decision-making in some circumstances. When a proposal benefits management, but is inefficient, the stakeholder has to compensate the manager not to take the decision. As before, the parties cannot always reach agreement, and management may opt to implement a value-destroying proposal.

A key result of the analysis is that as the interests of the parties diverge and proposals lead to greater redistribution, the likelihood of disagreement increases and decision-making is less efficient. This result holds regardless of whether control is shared or undivided, suggesting that bargaining problems have no clear implications for the optimal allocation of control. This analysis hinges on the fact that negotiation takes place whatever the allocation of control. However, we argue that certain types of negotiations are in fact unlikely.

For example, suppose there is a loan covenant in place and a project that management would like to pursue that would cause the firm to violate the covenant. If the project is value-increasing, then it is natural to expect that management will engage in negotiation with the relevant bank. Now suppose there is no such covenant, and management has a proposal that destroys more value for the bank than it creates for the firm. Efficiency dictates that management present this proposal to the bank and demand transfers to compensate for not implementing the proposal.

Such a demand is essentially extortion, and management has an incentive to seek out value-destroying proposals to the extent that such negotiations yield rents for managers. In particular, we show that when the manager can invest in generating either value-destroying or value-increasing proposals, ruling out “extortionate negotiations” improves the types of projects in which the manager invests. Limits on bargaining sometimes lead managers to implement bad proposals when it would be efficient to bribe them to do otherwise, but can increase efficiency overall by reducing rent-seeking activity. For this reason, we argue that these types of negotiations are commonly ruled out either explicitly or implicitly. Managers may have an explicit legal obligation to refrain from demanding rents in exchange for not engaging in harmful activities, as when management has a fiduciary duty to shareholders or
a duty of good faith and fair dealing with other stakeholders. Managers may also refrain from demanding such rents to preserve their reputation.

When control is shared, the stakeholder has veto power over proposals and there is no need to limit negotiation. It is only when management has undivided control that there must be limits on the transfers that management can demand. Given these limits, it is no longer the case that bargaining frictions affect different configurations of control symmetrically. In particular, as bargaining becomes more efficient, it is optimal to have greater sharing of control. Bargaining costs decline if there is greater agreement over the distributional consequences of projects and as the stakeholder has better information. We thus should observe sharing of control among parties that either have homogenous interests or are well-informed if they have conflicting interests.

We introduce the model in the next section and analyze the effect of bargaining frictions on different governance structures in section 3. In sections 4 and 5, we show that it may be efficient to limit bargaining among parties in the firm and analyze the manager’s incentives to invest in proposals. In section 6, we explore the impact of incentive contracts. Finally, section 7 concludes.

2 The Firm and Its Governance Structure

Consider a firm with two risk-neutral parties: a manager who generates a proposal and a stakeholder that has an interest in whether the proposal is implemented. In the baseline model, the manager always successfully generates a proposal and its quality is independent of the manager’s effort. The state is “good” (g) and the project increases joint surplus with probability $q$; otherwise, the state is “bad” (b) and the project is unproductive. In state $i$, the manager’s payoff is $m_i = \pi_i + r$ and the stakeholder’s payoff is $s_i = \pi_i - r$, where $\pi_g > 0$ and $\pi_b \leq 0$. The proposal redistributes a positive amount $r$ of wealth from the stakeholder to manager, where the support of $r$ has a minimum $r_l \geq 0$ and maximum value $r_h$ (not necessarily finite respectively).

The fact that the redistribution always favors the manager implies that the manager is
biased toward implementing the project and is an important source of conflict in the model. In addition, we assume that the manager is better informed about the redistributive consequences of the project: the manager observes the realized value of $r$ prior to implementing the project, while the stakeholder observes $r$ only with probability $z$. For simplicity, we assume that the parties are equally informed about the proposal’s quality.

Prior to starting the firm, the manager and stakeholder must agree on how decisions will be governed. The parties can either give the manager the unfettered right to implement a proposal or give the stakeholder a check or veto over the manager’s decisions. We refer to the former governance structure as “undivided control” and the latter structure as “shared control.”

Regardless of the governance structure, the parties may bargain ex post over the firm’s course of action. For concreteness, we assume the following protocol: the manager can choose to make a take it or leave it offer to the stakeholder, where any such offer specifies a course of action and transfers between the parties if the stakeholder accepts the offer. If control is undivided, the offer must specify the course of action the manager will take if the proposal is rejected. If control is shared and the stakeholder does not accept the offer, the firm maintains the status quo. Finally, when control is undivided, the manager can choose not to negotiate and simply proceed with a course of action. If control is shared, the manager can opt not to make a proposal.

Finally, we allow the parties to make arbitrary side payments ex ante, implying that the firm’s governance structure is chosen to maximize total surplus. Summarizing the timing of the model: (1) the parties decide on the allocation of control (2) the manager generates a proposal and observes the payoffs associated with the proposal; (3) with probability $z$, the stakeholder observes the redistributive consequences of the proposal; and (4) the parties negotiate over whether to implement the proposal.

**Shared Control**

When control is shared, the manager must obtain the approval of the stakeholder to implement a proposal. When a proposal is unproductive, there is no scope for negotiation.

---

2We assume that the manager has effective control over the firm’s agenda. For this reason, we do not analyze the case in which the stakeholder has undivided control.
and the stakeholder simply blocks it. When the manager’s proposal is good and both parties are equally informed about the proposal’s payoffs, the manager offers the stakeholder a transfer, \( y_s = -s_g \), and the stakeholder approves the project.

However, the stakeholder is not always informed about the redistributive consequences of the proposal. In this case, if the manager offers the stakeholder a transfer to accept the proposal, the stakeholder updates her beliefs and decides whether to accept or reject the offer. In any pure strategy equilibrium, there is a transfer \( t \) such that the manager offers \( t \) only if \( m_g \geq t \) and the stakeholder accepts the offer if

\[
E[s_g + t \mid m_g \geq t] \geq 0
\]

We restrict our attention to the equilibrium in which for any offer \( t \) off the equilibrium path, the stakeholder updates her expectation about the level of redistribution in the same manner, i.e., \( E[r \mid t] = E[r \mid m_g \geq t] \). Let \( t_s \) be the smallest transfer that satisfies equation (1).\(^3\) Given the stakeholder’s beliefs, it is optimal for the manager to offer \( t_s \) whenever \( m_g \geq t_s \) and otherwise maintain the status quo.\(^4\) Using the fact that \( s_g = 2\pi g - m_g \) and rewriting equation (1), we have that

\[
E[m_g - t_s \mid m_g - t_s \geq 0] = 2\pi g
\]

Equation 2 implies that the optimal transfer, \( t_s \), is such that the manager in expectation extracts the entire surplus.

Summarizing the analysis, the parties never implement a bad proposal. When the proposal is productive and stakeholder is informed, the parties bargain efficiently and implement the proposal, generating a surplus of \( 2\pi g \). However, with probability \( 1 - z \) the stakeholder is uninformed. In this case, the proposal is implemented only if \( m_g \geq t_s \). The joint expected

\(^3\)For \( t = -\pi g \), \( E[s_g + t \mid m_g \geq t] \leq 0 \). Similarly, \( E[s_g + t \mid m_g \geq t] \geq 0 \) for \( t \geq r_h - \pi g \). Therefore, a sufficient condition for the existence of \( t_s \) is that \( r \) has a continuous distribution.

\(^4\)For \( m_g < t \), we assume that the manager does not make an offer. An alternative approach is to assume the manager makes an offer that the stakeholder rejects after correctly updating her beliefs.
surplus under shared control is therefore:

\[ S \equiv q[z + (1 - z) \Pr[m_g \geq t_s]]2\pi_g \quad (3) \]

Although we have assumed a particular bargaining protocol and a particular equilibrium given this protocol, the basic structure of equation (3) is the same regardless of the bargaining equilibrium. If bargaining is efficient in the symmetric information case, we can simply replace the term \( \Pr[m_g \geq t_s] \) in the asymmetric information case with some arbitrary probability of approval and proceed with much of the analysis in the same way.

Recall that \( r_l \) is the minimum value of the support of \( r \) and let \( \bar{r} \) denote the mean of \( r \). We have the following proposition:

**Proposition 1** Suppose control is shared. Then, the manager never obtains approval for a bad proposal. The manager always obtains approval for a good proposal if and only if \( \bar{r} - r_l \leq 2\pi_g \).

**Proof.** If a proposal is bad, there is no transfer that the manager is willing to pay, which is sufficient to obtain the stakeholder’s approval. Suppose the proposal is good and that \( \bar{r} - r_l \leq 2\pi_g \). If the manager were to offer the stakeholder a transfer \( t = \pi_g + r_l \), the stakeholder’s expected payoff would be \( 2\pi_g + r_l - \bar{r} \geq 0 \). It follows that the equilibrium offer, \( t_s \), is less than or equal to \( \pi_g + r_l \), and the stakeholder accepts this offer for all realizations of \( r \). Next, let \( 2\pi_g < \bar{r} - r_l \). In this case, the stakeholder would reject the offer \( t = \pi_g + r_l \) and it must the case that \( t_s > \pi_g + r_l \). Therefore, for realizations of \( r \) such that \( r_l \leq r < t_s - \pi_g \), the proposal is not implemented.

Intuitively, the term \( r - r_l \) is the component of the total level of redistribution that is uncertain and difficult to measure. Good projects are blocked with strictly positive probability when this component is expected to be large relative to the total surplus of a good proposal, \( 2\pi_g \). An implication of Proposition 1 is that when proposals either have small distributional consequences or the consequences known in advance, \( S = 2q\pi_g \), and shared control leads to efficient decision-making.
Undivided Control

When control is undivided, the manager can opt to proceed with a proposal unchecked by the stakeholder. Suppose the proposal is productive and the stakeholder is informed. The manager can extract a transfer \( y_u = \max\{s_g, 0\} \) from the stakeholder by threatening not to pursue the project.\(^5\) The stakeholder is just willing to pay such a transfer and the proposal is implemented. Similarly, if the stakeholder is uninformed, the managers can extract a transfer \( y_u = \max\{E[s_g], 0\} \).\(^6\) We therefore have that good projects are always implemented when control is undivided. This result is in contrast to the situation under shared control, in which good projects are sometimes blocked.

The source of inefficiency when control is undivided is that the manager sometimes implements bad proposals. If a proposal is bad, it is efficient for the stakeholder to pay the manager not to undertake the project. If both parties are equally informed, the manager demands a transfer \( y_u = -s_b \) to compensate him for not undertaking the proposal. The stakeholder pays this transfer, and the parties achieve the efficient outcome. However, suppose the stakeholder is not informed. In this case, there may be disagreement over the appropriate payment to the manager. Doing an analysis analogous to that when control is shared, we obtain that the equilibrium transfer is \( t_u \), where \( t_u \) is the largest transfer satisfying:

\[
E[t - m_b \mid t - m_b \geq 0] = -2\pi_b
\]  

(4)

To understand equation (4), note that when the manager demands a transfer \( t \) to not implement a bad proposal, the potential net increase in his payoff is \( t - m_b \). The manager is only willing to accept such a transfer if \( t - m_b \geq 0 \). In equilibrium, the manager demands a transfer such that in expectation he receives all the surplus that is saved by not proceeding

---

\(^5\)The fact that the manager can make credible threats is not at all central to our analysis. We can also proceed by assuming that the manager takes the action that is in his best interest if the stakeholder refuses his offer. Assuming the manager can make such threats slightly simplifies the analysis by reducing the number of cases we have to deal with. For example, when the proposal is bad, we do not need to consider whether the manager actually prefers to pursue such a project or not. In either case, the manager threatens to pursue the project to extract the most rents. In addition, our assumption ensures that the manager is able to extract greater rents from the stakeholder when control is undivided than when control is divided.

\(^6\)As before, we assume that the stakeholder infers that the expected level of redistribution is \( E[r \mid m_g \geq t] \) given an offer \( t \).
with the proposal. If the manager demands more than this amount, the stakeholder rejects the offer. When \( t_u - m_b < 0 \), the manager foresees that the stakeholder will reject any demand the manager finds acceptable and simply implements the bad project.

Given the preceding analysis, we have that the parties always implement good proposals, generating a surplus of \( 2\pi_g \). The parties implement bad proposal only when the stakeholder is both uninformed and bargaining breaks down, generating a negative surplus of \( |2\pi_b| \). The probability of this event is \( (1 - q)(1 - z) \Pr[m_b \geq t_u] \). The joint expected surplus when control is undivided is therefore:

\[
U \equiv q2\pi_g + (1 - q)(1 - z) \Pr[m_b > t_u]2\pi_b
\]  

(5)

The following result is the analogue of Proposition 1 (the proof is along exactly the same lines and is omitted).

**Proposition 2** Suppose control is undivided. Then, the manager always implements a good proposal. The manager implements a bad proposal with some probability if and only if \( r_h - \bar{r} \leq -2\pi_b \).

The manager sometimes implements bad proposals when \( r_h - \bar{r} \) exceeds the surplus saved by maintaining the status quo. When \( r_h - \bar{r} \) is large, the realized value of the redistribution may be significantly greater than the value expected by the stakeholder. In this situation, disagreements arise over the appropriate compensation and bargaining breaks down. Proposition 2 suggests that it is not the magnitude of the redistribution that impacts efficiency, but the variability. We formalize this intuition in the next section. When decisions vary in their redistributive consequences and the manager is better informed about these consequences, there is a nontrivial tradeoff in the choice of the firm’s governance structure. When control is undivided, the manager sometimes implements bad proposals; when control is shared, the stakeholder sometimes blocks good proposals.
3 Bargaining Frictions and Control

We have shown that when decisions vary in their redistributive consequences and the manager is better informed about these consequences, there is a nontrivial tradeoff in the allocation of control. When control is undivided, the manager sometimes implements bad proposals; when control is shared, the stakeholder sometimes blocks good proposals. In this section, we explore the effect of bargaining costs on both the absolute and relative values of shared and undivided control.

Let $P_s \equiv \Pr[m_g \geq t_s]$ and $P_u \equiv \Pr[m_b \geq t_u]$. $P_s$ is the probability a good project is approved when control is shared, and $P_u$ is the probability that a bad project is implemented when control is undivided. From equations (3) and (5), we have that

$$U - S = 2(1 - z)[q(1 - P_s)\pi_g + (1 - q)P_u\pi_b]$$  \hspace{1cm} (6)

Note that $\pi_b < 0$, implying that the sign of $U - S$ is ambiguous. Undivided control yields greater benefits when the bargaining frictions under shared control exceed that under undivided control.

Recall that $z$ is the likelihood that the stakeholder is informed. A direct implication of equations (3), (5), and (6) is the following proposition:

**Proposition 3** As the stakeholder becomes better informed ($z$ increases), there is an increase in the value of both shared control and undivided control. Moreover, an increase in $z$ has no impact on the sign of $U - S$ and thus the optimal governance structure.

As the stakeholder becomes more sophisticated and is better informed about the distributional consequences of decisions, bargaining becomes more efficient, raising the value of both shared and undivided control. However, a change in $z$ does not affect the optimal allocation of control.

As suggested in the previous section, it is the variability in the level of redistribution that results in conflict and inefficiency. To make this intuition precise, we can write the level of redistribution as $r = \bar{r} + \epsilon$, where $\bar{r}$ is the mean of $r$ and $\epsilon$ is mean zero shock. For $\sigma > 0$, ...
define \( r_\sigma \equiv \bar{r} + \sigma \epsilon \); \( r_\sigma \) has the same mean as \( r \), but \( \text{Var}(\sigma r) = \sigma^2 \text{Var}(r) \), implying that \( r_\sigma \) has a larger variance for \( \sigma > 1 \). It is easy to verify that simply shifting the distribution of \( r \) by a constant has no effect on the value of shared control. However, the next proposition establishes that the probability bargaining is inefficient depends on the variability of the redistribution relative to the level of the surplus at stake.

**Proposition 4** If control is shared, then as \( \sigma^2/2\pi_g \) increases, good proposals are blocked with higher probability. If control is undivided, then as \( \sigma^2/|2\pi_b| \) increases, the manager adopts bad proposals with higher probability.

**Proof.** Let \( \tilde{x} = \tilde{\sigma}/2\tilde{\pi}_g \) and \( x' = \sigma'/2\pi'_g \), where \( \tilde{x} = kx' \) and \( k > 1 \). In addition, let \( \tilde{t}_s \) be the equilibrium transfer offered by the manager when the stakeholder is uninformed and \( \sigma = \tilde{\sigma} \) and \( \pi_g = \tilde{\pi}_g \); define \( t'_s \) in an analogous fashion. \( \tilde{t}_s \) is the smallest transfer that satisfies equation (2). In particular, \( E[q(\tilde{t}_s, \pi_g) + \tilde{x} \epsilon \mid q(\tilde{t}_s, \pi_g) + \tilde{x} \epsilon \geq 0] = 1 \) where \( q(t, \pi_g) \equiv (E[m_g] - t)/2\pi_g \). \( t'_s \) satisfies the corresponding condition, implying that \( kE[q(t'_s, \pi_g) + x' \epsilon \mid q(t'_s, \pi_g) + x' \epsilon \geq 0] = E[kq(t'_s, \pi_g) + \tilde{x} \epsilon \mid kq(t'_s, \pi_g) + \tilde{x} \epsilon \geq 0] = k > 1 \). It follows that \( q(\tilde{t}_s, \pi_g) \neq kq(t'_s, \pi_g) \). It must in fact be the case that \( q(\tilde{t}_s, \pi_g) < kq(t'_s, \pi_g) \); if not, there exists an offer satisfying equation (2) that is smaller than \( t'_s \), which would be a contradiction. The preceding inequality implies that \( \Pr[q(\tilde{t}_s, \pi_g) + \tilde{x} \epsilon \geq 0] \leq \Pr[q(t'_s, \pi_g) + x' \epsilon \geq 0] \). The likelihood that a good project is approved is therefore lower when \( \sigma/2\pi_g \) increases from \( x' \) to \( \tilde{x} \). When control is undivided, an argument along exactly the same lines establishes that \( h(\tilde{t}_s, \pi_g) < kh(t'_s, \pi_g) \), where \( h(t, \pi_b) \equiv (t - E[m_b])/|2\pi_b| \). This inequality implies that \( \Pr[h(\tilde{t}_s, \pi_g) + \tilde{x} \epsilon < 0] \geq \Pr[h(t'_s, \pi_g) + x' \epsilon < 0] \), from which it follows that the manager is more likely to implement bad projects given \( \tilde{x} \).

The following result is a direct implication of Proposition 4:

**Corollary 1** As \( \sigma^2 \) increases, the expected surplus associated with both shared and undivided control declines.

As the variability of the redistribution increases, the adverse selection problem grows more severe and the stakeholder is more likely to reject the manager’s terms. Intuitively, the
distributional consequences of proposals becomes more difficult to measure as the variability of redistribution increases. The parties thus are less likely to agree on the appropriate transfers.

Proposition 4 also implies that when control is shared, good proposals are less likely to be blocked as the surplus generated by good proposals increases. However, any given level of blocking becomes more costly as $2\pi_g$ increases. The net effect on $S$, the expected surplus when control is shared, is therefore ambiguous. The effect on the optimal governance structure is also ambiguous, although the value of undivided control unambiguously increases in $2\pi_g$. Similarly, when control is undivided, the manager implements fewer bad proposals when the value destroyed, $|2\pi_b|$, increases. However, whenever the manager does implement such projects, the surplus lost is greater. The net effect on the value of undivided control is therefore ambiguous (a change in $|2\pi_b|$ has no impact on the value of shared control). Correspondingly, the effect of a change in $|2\pi_b|$ has an ambiguous effect on the optimal governance structure.

Thus far, changes in all the parameters we have analyzed have an ambiguous effect on $U - S$ and thus optimal allocation of control. The one exception is the likelihood of a good proposal, $q$. Since the costs of rejecting good proposals or accepting bad proposals are proportional to the frequencies of the two kinds of proposals, it is intuitive that shifting probability from bad proposals to good proposals favors undivided control. The benefit of undivided control increases relative to shared control as the likelihood that proposals are good increases.

In this section, we have shown that changes in bargaining cost due to say an increase in the variability of the redistribution adversely impacts both shared and undivided control. The effect on the optimal governance is thus ambiguous. This result is a natural consequence of the fact that the allocation of control does not eliminate the need for bargaining, but simply alters the direction of transfers between the parties. However, in the following section, we argue that there are important reasons why parties may rule out certain negotiations. In such a scenario, bargaining costs no longer have a symmetric impact on shared and undivided control.
4 Limits on Coasian Bargaining

When control is undivided and the manager generates a bad proposal, efficiency requires that the stakeholder must pay the manager not to implement the project. Although paying off a party to refrain from taking a value-decreasing action is efficient ex post, such payoffs create a perverse incentive for parties to invest in value-decreasing projects. We capture this possibility in a stark manner by assuming that instead of working on a potentially productive proposal, the manager can engage in pure rent-seeking and develop a proposal that imposes a cost of $H$ on the stakeholder and yields no direct benefit to the manager.

If control is undivided and the manager engages in rent-seeking, bargaining yields a transfer of $H$ to the manager (we assume the parties are symmetrically informed about this type of proposal). We thus have the following proposition:

**Proposition 5** If control is undivided and $H$ is sufficiently large, the manager engages in unproductive rent-seeking.

To discourage this form of rent-seeking, it is necessary to prohibit the manager from demanding transfers in exchange for not taking harmful actions. Protection from this form of extortion may be explicit, as when an agent has a legally enforceable duty of loyalty to a principal, or may be implicit, as when there are norms against negotiating in such circumstances. For the purposes of our model, we assume the parties can contractually choose to disallow transfers in any subsequent bargaining over the firm’s course of action. The parties choose whether to impose this additional protection at the same time they choose the firm’s governance structure.

We have the following corollary to Proposition 5:

**Corollary 2** If $H$ is sufficiently large and parties are able to limit transfers, it is optimal to couple undivided control with such limits.

For the rest of the paper, we make the standing assumption that $H$ is large enough for the conclusion of Proposition 2.
When control is undivided and the manager cannot demand transfers, it is in the manager’s interest to generate proposals that are potentially productive. Moreover, the manager chooses to implement a proposal whenever \( m_i \geq 0 \). The cost of restrictions on transfers is that the manager implements unproductive proposals whenever they redistribute sufficient wealth. Let \( \bar{U} \) denote the joint expected surplus when control is undivided. The joint surplus is \( 2\pi_g \) if the state is good, \( 2\pi_b \) if the state is bad and \( m_b \geq 0 \), and zero otherwise. So,

\[
\bar{U} = 2[q\pi_g + (1-q)\Pr[m_b \geq 0]\pi_b]
\]  

(7)

If control is shared, veto power over the manager’s proposals protects the stakeholder from unproductive rent-seeking. There is consequently no need to disallow transfers as such transfers facilitate improve ex post decision-making. Participation in control is therefore a substitute for the protection afforded by restrictions on transfers.

Given the limits on transfers, there is no ex post bargaining when control is undivided. Bargaining costs thus impact shared control and undivided control asymmetrically. Define \( \bar{P}_u \equiv \Pr[m_b \geq 0] \). From equations (3) and (7), we have that

\[
\bar{U} - S = 2[q(1-z)(1-P_s)\pi_g + (1-q)\bar{P}_u\pi_b]
\]  

(8)

An implication of equation (8) is

**Proposition 6** Suppose undivided control is associated with limits on transfers. As the stakeholder becomes better informed \((z \text{ increases})\), there is a corresponding increase in the benefit of shared control and no change in the benefit of undivided control.

Under shared control, the stakeholder has input into the decision-making process and can use his information to improve the quality of decisions by blocking bad projects. In contrast, when control is undivided, the stakeholder has no influence on the manager’s decision-making regardless of how informed she is. The degree to which the stakeholder is informed is therefore an important determinant of the optimal control structure.

Similarly, it is no longer the case that an increase in either the variability of the redistri-
distribution, $\sigma^2$, or in the mean level of redistribution $\bar{r}$ impacts shared and undivided control in similar ways. Recall from Corollary 1 that the value of shared control control is decreasing in $\sigma^2$. In contrast, undivided control may actually increase in the variability of $r$ and decreases in the average level of redistribution:

**Lemma 1** If control is undivided and there are limits on transfers, then as $\sigma^2$ increases, the manager adopts fewer bad proposals, which raises the total surplus from adopted projects if and only if $\bar{m}_b = \pi_b + \bar{r} \geq 0$. In addition, $\bar{U}$ is decreasing in the mean level of redistribution $\bar{r}$.

**Proof.** The impact of $\sigma^2$ on the value of undivided control depends on whether the likelihood the manager pursues a bad proposal, $\Pr[\bar{m}_b + \sigma \epsilon \geq 0] = \Pr[\bar{m}_b/\sigma + \epsilon \geq 0]$ increases or decreases. The manager is less likely to pursue a bad proposal as $\sigma^2$ increases if and only if $\bar{m}_b \geq 0$.

Lemma 1 implies that if the redistributive consequences of proposals are large ($\bar{r} \geq |\pi_b|$), undivided control becomes more favorable relative to shared control as the variance of redistribution $\sigma^2$ becomes large. Intuitively, when the manager has a bias toward implementing the project, increasing the mass in the positive tail of the distribution $r$ has no impact on his decision-making; however, increasing the realizations in the negative tail causes the manager to shift towards maintaining the status quo. As already discussed, simply shifting the mean level of redistribution has no impact on shared control (nor undivided control when there is bargaining). However, when there are limits on transfers, an increase in $\bar{r}$ increases the likelihood that the manager pursues a bad proposal when control is undivided. The following result is a direct implication of Corollary 1 and Lemma 1:

**Proposition 7** If $H$ is sufficiently large and $\bar{r} \geq |\pi_b|$, then an increase in $\sigma^2$ favors undivided control, i.e., $\bar{U} - S$ is increasing in $\sigma^2$. Moreover, an increase in the mean level of redistribution favors shared control, i.e., $\bar{U} - S$ is decreasing in $\bar{r}$.

The comparative statics on the likelihood that projects are good, $q$, the surplus generated by a good proposal, $2\pi_g$, and the value destroyed by a bad proposal, $2|\pi_b|$, remain unchanged
when there are limits on transfers. Namely, an increase in $q$ favors shared control and changes in the surplus associated with good and bad projects have an ambiguous effect on $\bar{U} - S$. When control is undivided and there are limits on transfers, the effect of an increase the value destroyed by a bad proposal is similar to case with bargaining. In particular, the manager is less likely to implement a bad proposal, although it is more costly when he does so.

5 Control and Proposal Generation

Thus far, we have assumed that both project quality and the level of redistribution is exogenous (conditional on the manager not engaging in pure rent-seeking). In this section, we assume that the likelihood the manager generates a good proposal and amount of redistribution is increasing in his effort. Specifically, at cost $C(q, \bar{r})$, the manager generates a productive proposal with probability $q$ and the mean level of redistribution is $\bar{r}$.\footnote{As before, the manager can engage in extortion instead of generating productive proposals.} We assume that $C(q, \bar{r})$ is increasing in both $q$ and $\bar{r}$ and that $\frac{\partial C(q, \bar{r})}{\partial q \partial \bar{r}} \geq 0$, implying that redistributive effort is a substitute for productive effort. For simplicity, we also assume that the stakeholder can observe the manager’s effort decisions, but that these effort decisions are not contractible.

When control is undivided, the manager’s payoff is given by:

$$U_m = qE[m_g] + (1 - q) \Pr[m_b \geq 0]E[m_b \mid m_b \geq 0] - C(q, \bar{r})$$

When control is shared and the stakeholder is informed, recall that the manager must pay a transfer $y_s = -s_g$ to obtain approval for a good proposal. The manager’s payoff is thus $m_g - y_s = 2\pi_g$ (the manager extracts the full surplus). The manager must pay $t_s$ to obtain approval for a good proposal when the stakeholder is uninformed, where $t_s$ satisfies equation (2). Conditional on obtaining approval, equation (2) implies that the manager again extracts the full surplus. The probability that the manager obtains approval is $\Pr[m_g - t_s \geq 0]$. Let
$t_{s0}$ denote the transfer the manager must pay when $\bar{r} = 0$ and the stakeholder is uninformed. It is easy to verify that $t_s = t_{s0} + \bar{r}$. The manager’s payoff when control is shared is therefore:

$$S_m = S \equiv 2q\pi_g[z + (1 - z) \Pr[\pi_g \geq t_{s0}]] - C(q, \bar{r})$$

(10)

Let $(q_u, \bar{r}_u)$ and $(q_s, \bar{r}_s)$ be the manager’s effort decisions when control is undivided and shared, respectively. Equation (10) implies that the manager obtains no benefit from exerting redistributive effort. In particular, the stakeholder makes the manager pay for the expected level of redistribution to obtain approval for a good proposal. It follows that $\bar{r}_s = 0$, giving us the next result. In addition, the benefit of generating a good project is decreasing in both $z$ and $\sigma^2$, giving us the next proposition:

**Proposition 8** If control is shared, the manager does not exert redistributive effort. In addition, the manager increases his productive effort as the stakeholder becomes better informed or as variability in the level of redistribution decreases.

An implication of Proposition (8) is the following:

**Corollary 3** The manager exerts greater redistributive effort when control is undivided.

These results are in contrast to those Aghion and Tirole (1997), in which delegation of control to an agent leads to greater productive effort or initiative on behalf of the agent. In our analysis, increasing managerial control unambiguously leads to greater unproductive rent-seeking and has an ambiguous effect on productive effort. However, if the stakeholder is sufficiently informed or distributional consequences of decisions are easy to assess in advance ($z$ is large or $\sigma^2$ is small), shared control also leads to greater productive effort.

### 6 Incentives and Control

In this section, we allow the parties to contract on the surplus generated within the firm, $2\pi_i$ (we return to baseline case in which $q$ and $\bar{r}$ are exogenous). Specifically, the parties can allocate a share of $\alpha$ of the surplus to the manager, so that the payoffs of the manager and
stakeholder are \( m_i(\alpha) = \alpha 2\pi_i + r \) and \( s_i(\alpha) = (1 - \alpha)2\pi_i - r \). It is clear from equation (7) that when there are limits on transfers and control is undivided, an increase in \( \alpha \) induces the manager to implement fewer bad proposals. In the absence of any constraints on the choice of \( \alpha \), it is optimal to set \( \alpha = 1 \) and make the manager the full residual claimant; however, externalities remain as a consequence of the non-contractible redistribution \( r \).

In contrast, changes in \( \alpha \) have no impact on the surplus associated with shared control:

**Proposition 9** The expected surplus associated with shared control is independent of the manager’s share of the realized surplus \( \alpha \). On the other hand, if there are limits on transfers, the value of undivided control, \( \tilde{U} \), is increasing in \( \alpha \).

**Proof.** Fix \( \alpha_0 \) and suppose that in equilibrium the manager must pay the stakeholder a transfer \( t_0 \) to obtain approval for a good proposal, i.e., \( t_0 \) solves equation (2). The probability that a good proposal is blocked is \( \Pr[m_g(\alpha_0) < t_0] \). Consider an ownership share \( \alpha_1 \neq \alpha_0 \), and let \( t_1 = t_0 + (\alpha_1 - \alpha_0)\pi_g \). \( t_1 \) solves equation (2) and

\[
\Pr[m_g(\alpha_1) < t_1] = \Pr[m_g(\alpha_0) < t_0],
\]

completing the proof.

As is intuitive, incentives are complementary with control: if the manager has unfettered control, it is optimal to couple that control with strong incentives. However, this result is a consequence of the limits on transfers. If there are no such limits, changes in \( \alpha \) have no impact both when control is undivided and shared.

### 7 Conclusion

In this paper, we show that bargaining frictions alone have extremely few implications for how a firm’s decisions are governed. This result is a consequence of the fact that the allocation of control affects only the direction of transfers and does not reduce the importance bargaining. However, if there are limits on the types of negotiations that can take place, then bargaining frictions play an important role in the allocation of control.

Certain negotiations are extortionary in nature as when one party demands a payment in exchange for not taking a value-destroying action. Allowing managers to make such
demands rewards rent-seeking activity. For this reason, it is often optimal to either explicitly or implicitly restrict the demands a manager can make. An example of a “contract” that effectively limits the ability of executives to engage in these types of negotiations and extract rents is an executive’s fiduciary responsibility to shareholders. More generally, any contract between parties imposes a duty of fair dealing, which rules out demands that are obviously extortionate.

In our model, these limits are only necessary when control is undivided. When control is shared, the parties have mutual veto power, eliminating the need for additional protections. The following equilibrium emerges: when control is undivided, there is no bargaining and the controlling party unilaterally makes decisions; when control is shared, the parties bargain over the appropriate course of action.

In choosing between these governance structures, bargaining frictions play a major role. The cost of undivided control is that the controlling group—management in our model—pursues the agenda that favors their interests, which may lead to value-destroying projects. Giving other parties veto rights imposes discipline on the controlling group, but may also lead to deadlock and the blocking of good proposals as a consequence of bargaining problems. We show that the potential for bargaining breakdowns is most severe when the distributional consequences of decisions are difficult to foresee in advance (i.e., highly variable) and there is a large disparity in the information of parties. Shared control among parties is therefore superior to undivided control when the decisions have predictable consequences or both parties are equally informed and sophisticated.

In our theory, there are essentially two types of protections for stakeholders: veto rights and a fiduciary-like duty of management not to engage in certain forms of rent-extraction. However, stakeholders have other instruments at their disposal, including the threat of exit and the right to select management’s compensation. The threat of exit may give a stakeholder effective veto rights, and control over management’s compensation obviously enables a group to influence decision-making. A challenge for future research is incorporate these instruments in order to obtain a more accurate representation of how relationships are governed within firms.
References


