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A Comparative Theory of Corporate Governance

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A Comparative Theory of Corporate Governance

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Abstract

The term corporate governance is used in two distinct ways. In Anglo-Saxon countries like the US and UK good corporate governance involves firms pursuing the interests of shareholders. In other countries like Japan, Germany and France it involves pursuing the interests of all stakeholders including employees and customers as well as shareholders. Anglo-Saxon capitalism has been widely analyzed but stakeholder capitalism has not. This paper argues that stakeholder capitalism can often be superior when markets are not perfect and complete.

1 Introduction

Corporate governance has been a topic whose importance has been growing, particularly recently. But what exactly is corporate governance? The term is used in a variety of ways. In different countries, in particular, the term has different meanings.

- In Anglo-Saxon countries such as the US and UK the term refers to whether firms pursue the interests of shareholders.
- In other countries such as Japan, Germany and France, the term often refers to whether firms are operated in the interests of a wider set of stakeholders, including employees and customers as well as shareholders.

Underlying these different views of corporate governance are two distinct notions of how market economies operate. In Anglo-Saxon countries Adam Smith's notion of the invisible hand is the key idea underlying the organization of the economy. The modern version of this idea is the Arrow-Debreu model and the fundamental theorems of economics. The first of these states that if firms' objective is to maximize the wealth of their shareholders and individuals pursue their own interests then the allocation is Pareto efficient. The second theorem states that any Pareto efficient allocation can be implemented as a competitive equilibrium given appropriate lump sum taxes. In this view of the world the role of the firm in society is precisely to create wealth for shareholders and this is embodied in the legal framework. In the US and UK managers have a fiduciary (i.e. very strong) duty to act in the interests of shareholders. This is why corporate governance is used in the first sense above. Pursuing shareholders interests is what is required for the efficient use of resources. Issues concerning the equitable distribution of income are avoided by appeal to the second theorem of welfare economics. Desirable distributions can be ensured by appropriate redistribution through lump sum taxes.

The Arrow-Debreu model is based on many strong assumptions. These include perfect and complete markets, symmetric information, perfect competition and so forth. It ignores many realities of actual economies. If such realities are taken into account then it is not so clear that the firm's objective should be solely to pursue the interests of shareholders. In fact in Germany

the legal system is quite explicit that firms do not have a sole duty to pursue the interests of shareholders. This is the system of codetermination. In large corporations employees have an equal number of seats on the supervisory board of the company which is ultimately responsible for the strategic decisions of the company. In Japan, managers have a fiduciary duty to shareholders as in the US and UK but in practice it is widely accepted that they pursue the interests of a wide variety of stakeholders (see, e.g., Allen and Gale (2000a)). Table 1 contains a typical statement of corporate philosophy for a Japanese firm. It is this view of the role of the corporation in society that underlies the second way in which the term corporate governance is used.

The view that Japanese corporations have relatively little responsibility towards their shareholders is confirmed in surveys of managers. Figure 1 shows the choices of senior managers at a sample of major corporations in the five countries between the following two alternatives:

(a) A company exists for the interest of all stakeholders (dark bar).

(b) Shareholder interest should be given the first priority (light bar).

In Japan the overwhelming response by 97% of those asked was that all stakeholders were important. Only 3% thought shareholders' interests should be put first. Germany and France are more like Japan in that 83% and 78%, respectively, viewed the firm as being for all stakeholders. At the other end of the spectrum managers in the US and UK by majorities of 76% and 71% respectively stated that shareholders' interests should be given priority.

The same survey also asked the managers what their priorities were with regard to dividends and employee layoffs. The specific alternatives they were asked to choose between were:

(a) Executives should maintain dividend payments, even if they must lay off a number of employees (dark bar).

(b) Executives should maintain stable employment, even if they must reduce dividends (light bar).

Figure 2 shows the results. As before there is a sharp difference between Japan, Germany and France and the US and UK.

The evidence on managers' views of the role of the firm is upheld by the way that wages are structured in the different countries. In the US and UK wages are based on the nature of the job done. Employees' personal circumstances generally have no effect on their compensation. In Japan and Germany it is common for people to be granted family allowances and special allowances for small children. In France vacation allowances based on family

are common. These differences underline the fact that in the US and UK the firm is designed to create wealth for shareholders whereas in Japan, Germany and France the firm is a group of people working together for their common benefit.

Although there has been an enormous amount of effort devoted to understanding the operation of Anglo-Saxon capitalism where firms pursue shareholders' interests, there has been relatively little devoted to stakeholder capitalism where firms pursue the interests of a variety of stakeholders. There has been some literature on the way that firms operate in different countries but this is small relative to the vast amount of the literature devoted to understanding the operation of Anglo-Saxon capitalism. The seminal work of Aoki and his co-authors is an example of this literature. In a sequence of contributions (see, e.g., Aoki (1984a; 1984b; 1988; 1992)) and edited volumes (Aoki (1984c), Aoki, Gustaffson and Williamson (1990), Aoki and Dore (1994) and Aoki and Patrick (1994)) great progress has been made in understanding the differences between Japanese and US firms. Aoki (1990) contains an excellent survey of this literature and exposition of some of the main ideas it contains. He contrasts the traditional US hierarchical firm, the "H-mode", with the Japanese firm structure, the "J-mode". The H-mode is characterized by (i) hierarchical separation between planning and implemental operation and (ii) an emphasis on economies of specialization. The J-mode stresses (i) horizontal coordination among operating units based on (ii) the sharing of ex post on-site information. Aoki also develops the relationship in Japan between internal organization aspects of the firm and bank-oriented financial control, i.e. the main bank system. When a firm is in financial distress its main bank plays an important role in rescue operations. However, when a firm is financially sound its main bank does not become involved. In addition the existence of crossholdings of shares among Japanese companies means there is no threat of hostile takeover. In the absence of outside control mechanisms internal incentives are crucial. It is suggested that among other things "lifetime employment", "seniority advancement" and management discipline through competition over ranking by corporate profits are important. Also the fact that management decisions of Japanese corporations are subject to the influence of employees as well as owners is stressed.

In this paper we develop a series of models of the firm with overlapping generations (OLG) of employees based on the approach in Allen and Gale (2000a; Chapter 12). In these models, which are outlined in Section 2, we consider what happens when all the employees and managers of the firm

must reach consensus and cooperate. We show that this provides long run incentives for the provision of effort. The necessity of this consensus and cooperation can lead to an efficient allocation of resources. By choosing strategies that attract young employees, the senior managers ensure that the long run viability of the firms is maintained and all employees and the shareholders do well. The structure of these firms where consensus is important and the interests of all stakeholders are pursued is a simplified version of Aoki's J-mode firm. This stakeholder capitalism is contrasted with corresponding with Anglo-Saxon capitalism where firms are run by a single representative manager. This structure is a simplified version of Aoki's H-mode firm. In these firms a single representative manager makes all the decisions and it is not necessary to reach consensus. It is shown that this structure can be inferior to the J-mode both for employees and for shareholders.

One of the important features of stakeholder capitalism is that employees cannot simply be fired at will. Lifetime employment and an inflexible labor market seem to be an important component of stakeholder capitalism. It is shown in Section 3 that these components of the economic system can improve the allocation of resources when firms have a J-mode structure. In order to be effective and induce the requisite effort from all employees there must be a sufficiently high probability of young workers remaining with the firm. An inflexible labor market helps provide incentives for cooperation. Section 3 also considers the issue of corporations decisions when there is a downturn. It is shown that cutting dividends and maintaining wages and employment can be an optimal response of J-mode firms.

Section 4 contains concluding remarks.

2 A Cooperative Theory of the Firm

In many countries the characterization of the firm as an institution exclusively concerned with maximizing some scalar measure of shareholder welfare would seem very strange. For example, the decision-making structure of the Japanese firm is different from that of the Anglo-Saxon corporation. In the US and the UK, managers are given a large amount of freedom and are then monitored and disciplined by the market or by the corporate hierarchy if their performance is poor. Decision making in Japan relies much more on consensus and the use of committees than on the entrepreneurial model favored by the Anglo-Saxon corporation. The Japanese also make use of the

seniority system: all managers have to pass through the ranks before they can achieve the top positions in the firm and CEOs spend relatively little time at the top compared to their American and British counterparts. There is also a much lower degree of inequality in compensation in the Japanese corporation. This is indicative of the importance of team work and the use of group performance to determine rewards in the Japanese firm.

Here we explore the way in which different types of organization may lead to different behavior, emphasizing in particular the role of consensus, teams, and hierarchy as they appear in the Japanese firm, among others. We begin by considering the time preferences that characterize different kinds of firms. As the debate on "short-termism" in the US has suggested, this may be a major and important difference between American and Japanese firms and one that may be traced to differences in organizational structure and culture. In the next two subsections, we present a simple model of the firm's time preference and then subsequently apply these ideas to other aspects of the firm's behavior.

2.1 The firm's time horizon

To see the kind of issues that are involved, we can focus on one particular aspect of this problem, the time horizon implicit in the firm's decisions. Consider a firm where the single manager has all the power of decision-making. The idea that the manager is a rent seeker, who dilutes the shareholders' property rights, is not necessarily antagonistic to the view that the firm is operated in the long-run interests of the shareholders. For example, the manager's rents may happen to give him an income stream similar to that of a shareholder, in which case his incentive is to maximize the value of the firm (present value of net earnings). Of course, the incentives might be even better if he owned all of the shares, but having a part share may be much better than standard agency models such as those investigated in Hart (1995) suggest.

There is, however, a problem with this view of the firm. The manager has only a temporary interest in the firm. More precisely, his interest in the firm is limited to his tenure in the job. Once he ceases to run the firm, the rents will flow to his successor. Even if he owns part of the firm, he can liquidate this holding on the day he leaves. As a result, a firm dominated by a single powerful manager may have a horizon which is no longer than the tenure of the manager.

An alternative type of organization is where a large corporation is run by a group of managers who, like the firm, may perpetuate itself more or less indefinitely. The interests of this group of managers, which is constantly renewing itself, will be quite different from that of any individual manager. The behavior of an individual manager, depending as it does on expectations about how other members of the group will behave, will be quite different from the behavior of a manager who controls all aspects of the firm's activities.

The difference between these two points of view, one of which identifies the behavior of the firm with the decisions of a single manager and the other of which regards the firm as being controlled by a sequence of overlapping generations of managers, can be illustrated by a simple example. Suppose that at any time two managers, one young and one old, are needed to run the firm. Each manager works for two periods and each period a new (young) manager is hired. The managers have two options. They can put effort into running the firm on behalf of the shareholders or they can engage in rent-seeking activities. Whatever they choose to do requires coordination. Unless they both cooperate in running the firm on behalf of the shareholders or, alternatively, both engage in rent seeking, the result will be worse for them than either of the alternatives just mentioned. The managers' rents depend on their allocation of effort to the shareholders' interests or to rent seeking. Let r be the aggregate flow of rents when both of the managers are making an effort on behalf of shareholders and R the rents when both are engaged in rent seeking. Naturally, we assume that $R > r > 0$, where 0 is the managers' outside option. Suppose for simplicity that the rents are divided evenly between the two managers, and that managers are risk neutral and do not discount the future. Then they will seek to maximize the sum of lifetime rents.

We assume that the only action the shareholders can take is to replace the managers if they observe rent seeking behavior. In practice it will be difficult to replace managers and this will only be done with some delay, if at all. However, to make the point more strongly, let us assume that the shareholders are unusually powerful and can replace managers "immediately" if they observe rent seeking. This means that the managers can achieve at most one period of high rents before they will be replaced. The question then is, under what conditions will the managers choose to engage in rent-seeking behavior?

Recall that coordination between the managers is required if they are to

achieve any rents at all. One interpretation of this requirement is that if anyone deviates from an agreed plan the result is so disastrous that they all are worse off. Another interpretation is that the structure of decision-making in the firm requires consensus. Another interpretation is that managers are able to monitor each other and enforce an agreed upon course of action. Whatever the interpretation, we will impose the requirement that the managers' actions will be changed only if everyone is willing to change. Thus, a given action is an equilibrium unless everyone can be made better off by a deviation.

Suppose that the managers are pursuing the shareholders' interests. The payoff to the young manager is $r/2+r/2 = r$. The payoff to the old manager is $r/2$. If they were both to switch to rent seeking, the payoff to the young manager would be $R/2 + 0 = R/2$, since he would be replaced next period. The payoff to the old manager would be $R/2$. Clearly, the old manager is better off, since $R > r$, but the young manager would be no better off if

$$r \geq R/2,$$

which becomes the condition for viability of the policy of pursuing the shareholders' interests. The key point here is that the structure of the J-mode firm is such that the interests of all stakeholders are aligned.

As a benchmark, suppose that instead of imposing this structure which requires consensus and the cooperation of all generations of management, we had assumed that there existed a single, representative manager so that the firm has an H-mode structure. To maintain comparability across the two models, we should assume that the choices available to the representative manager are the same and that the aggregate rents are the same. This means that the manager can either exert effort on behalf of the shareholders or engage in rent seeking, that his per period rents in either case are r and R respectively, and that he is replaced after two periods on average. Suppose that he exerts effort on behalf of shareholders. When he is young, his payoff from the given policy is $r + r = 2r$ and his payoff from rent seeking is $R + 0 = R$, so the condition for him to continue pursuing the shareholders' interests is

$$2r \geq R,$$

which is equivalent to the viability condition given above. In the second period, however, his payoff from pursuing the shareholders' interests is only

r, whereas the payoff from rent seeking is R. Since $R > r$, the policy of pursuing shareholders interest is no longer viable. The H-mode can lead to a conflict between the interests of the managers and the shareholders in situations where with the J-mode firm all interests are aligned.

The same argument extends immediately to a management structure involving N managers, each of whom lives for N periods. The lifetime rents to a manager who pursues the interests of shareholders is r, whereas the rents from deviating will only be R/N. The condition for viability in the J-mode firm becomes

$$r \geq R/N,$$

which becomes easier to satisfy as N becomes large.

With a representative manager in the H-mode firm who runs the firm for N periods, the payoff in the last period from rent seeking is R and the payoff from pursuing the shareholders' interests is r, so rent seeking will occur since

$$R > r.$$

Similarly, distinguishing the rents of managers of different ages makes no real difference to the argument. Suppose that under rent seeking a manager of age n receives R_n and under a policy of pursuing the shareholders' interests he receives r_n, where $\sum r_n = r$ and $\sum R_n = R$. Then the viability condition for the policy of pursuing the shareholders' interests becomes

$$\sum_{n=k}^{N} r_n \geq R_k$$

for at least one manager $k = 1, ..., N$. If this condition is violated for all $k = 1, ..., N$, then summing the inequality over k implies $\sum r_n n < R$, so a sufficient condition for viability is

$$\sum r_n n \geq R.$$

To illustrate when this condition can be satisfied suppose that $r_n = r/N$ for each n. In this case the condition for cooperation in the J-mode firm is

$$r > \frac{N}{\sum n} R.$$

Similarly to before as N becomes large this condition will eventually be satisfied.

As before, in the H-mode firm the representative manager will want to engage in rent seeking in the last period of his tenure since $R > r$.

The analysis above focused on different groups of managers. However, it can straightforwardly be seen that the analysis can be extended to include other stakeholders as well. For example employees could also be included in the consultative process. If their cooperation is required their interests will also be taken into account by the firm.

The simple representations of the J-mode and H-mode above illustrate that the J-mode can be superior for all stakeholders. By requiring consensus and cooperation the J-mode ensures that the firm will take a long-run perspective. This allows efficient decisions which are in the interest of all stakeholders to be made. In contrast with the H-mode, managers nearing the end of their tenure can have an incentive to pursue their own interests rather than those of the firm as a whole.

2.2 No management dismissal

It may be argued that the result concerning the superiority of the J-mode depends crucially on the shareholders being able to get rid of a lazy or self-serving management *immediately* and that in reality managements are rather hard to replace. But a variant of the preceding story works even if it is impossible to replace the management. We simply have to argue that rent seeking by management will ultimately have bad effects on the firm and that if the management structure is sufficiently far-sighted, the managers themselves will choose not to go down this road. The reason is that ultimately it will become impossible to motivate enough effort to keep the firm going, even in rent-seeking mode, and the anticipation of this event will cause the management coalition to unravel. An interesting interpretation of this model is the Japanese corporation. Managers pursue the longevity of the firm. As a by-product shareholders do all right.

To make these ideas clear, we need a more formal model. The firm is assumed to have a finite number of *states*, indexed by $s = 0, 1, ..., S$. These states could represent market share or capital stock or successfully completed R&D or any other measure of the firm's well being. The firm's management have a finite number of strategies available, which we assume they choose jointly through consensus. Again, this behavior could be represented as an

equilibrium of a coordination game. The strategies or actions are indexed by $a = 0, 1, ..., A$. For simplicity, but also because it captures something important about the internal structure of the firm, we assume that all the managers are in effect playing the same strategy. This is partly because there is a complementarity, which requires every manager to be "doing the right thing" in order for the firm to succeed, and partly because managers can monitor one another and enforce performance of the required actions.

The self-perpetuating management is represented by the usual overlapping generations (OLG) structure. Each manager works for N periods and the firm requires exactly N managers, whose ages are $1, ..., N$ as before. Each period one of the managers retires and is replaced by a new manager. All the other managers shift up one place, like the guests at the Mad Hatter's tea party. Each period, a manager of age n receives a rent $r_n(a, s)$, if the action a is chosen by all and the state of the firm is s. A special case of this structure would be the one in which each manager receives the same rent, regardless of his rank in the firm.

The evolution of the state of the firm depends on the actions chosen by the managers and is described by the transition function $f(a, s)$. That is, $f(a, s)$ is the state of the firm next period if s is the state this period and a is the joint action chosen by the management this period. We do not allow for random transitions, though the model could clearly be extended to allow for this.

A policy function α associates an action $\alpha(s, t)$ with each possible state of the firm s and each date t. Let $V_{nt}(\alpha, s)$ be the equilibrium payoff in the continuation game of a manager of age n at date t if the firm's state is s and the policy is α. Since managers can always exercise an outside option, which we normalize to 0, a policy α is *individually rational* if and only if

$$V_{nt}(\alpha, s) \geq 0$$

for all n, t and s. In addition, the managers are collectively rational and will not choose a dominated policy. A policy α is *viable* if it is individually rational and there does not exist another individually rational policy α' such that, for some date t and state s,

$$V_{nt}(\alpha', s) \geq V_{nt}(\alpha, s),$$

for all n, with strict inequality for some n. Thus, any manager has a veto on a change in policy.

2.3 Motivating effort in the long run

Now let us see how rent-seeking behavior may be restricted by the infinite horizon OLG structure. Suppose that managers have three options. They can take effort on behalf of the firm (i.e., on behalf of the shareholders), they can take effort on their own behalf (i.e., rent seeking), or they can do nothing (i.e., shirking). Denote these strategies by a_E , a_R and 0, respectively.

The transition function is defined by

$$f(a,s) = \begin{cases} s & \text{if } a = a_E \\ \max\{s-1, 0\} & \text{otherwise.} \end{cases}$$

In other words, the state of the firm remains constant if and only if the managers all make effort on behalf of the shareholders. Otherwise, the state of the firm deteriorates. Of course, we should realistically allow for strategies that could improve the state of the firm, but for the purposes of illustrating the mechanics of the model this cruder version will suffice.

Now we need to make some assumptions about the payoffs to managers from following different policies. First, we set the payoff from shirking to 0, which is also the managers' outside option:

$(A.1)$ $r(0,s) = 0$ for all n and s.

This assumption ensures that it is always possible to meet the individual rationality constraint.

Next recall that $r(a,s)$ measures the net rents received by a manager of age n when the action is a and the firm's state is s. This number may well be negative if the cost of acquiring firm-specific human capital and making effort is not fully compensated by the rents received in that state (compared to the outside option). Suppose that the state of the firm is constant over time and that a manager makes an effort on behalf of the firm for the whole of his life. We assume that the lifetime net rents are greater than the outside option if and only if the state of the firm is sufficiently high. More precisely, there exists a state $0 < k < S$ such that

$(A.2a)$ $\sum_n r_n(a_E, s) < 0$ for $s = 0, ..., k-1$

and

$(A.2b)$ $\sum_n r_n(a_E, s) > 0$ for $s = k, ..., S$.

We want to assume that even under rent seeking behavior, new managers have to incur some setup costs. This can be justified in a number of ways. It may be necessary for incentive purposes or it may be the result of some

limitation on the managers' ability to redistribute rents. Formally, we assume that

(*A*.3) $r_1(a,s) < 0$ for $s = 0, ..., k-1$.

Finally, we assume that in the worst state, even rent seeking behavior is not as good as the outside option:

(*A*.4) $\sum_n r_n(a,0) < 0$.

Clearly, any state $0 < s < k$ is not sustainable. In order to attract young managers, the firm has to offer them non-negative lifetime net rents. But this means that they cannot choose $a = a_E$ all of the time, so the state of the firm is bound to deteriorate. The question then is what states are sustainable.

To answer this question we begin by showing that once the state of the firm drops below the critical level $s = k$, it is impossible to motivate any effort, even for rent seeking.

Lemma 1 *For any viable policy* α, $V_{1t}(\alpha, s) = 0$ *and* $\alpha(s,t) = 0$, *for any date* t *and for states* $s = 1, ..., k-1$.

Starting at any date t and any given state $s = 1, ..., k-1$, let a^τ be the action chosen at date τ and s^τ the state at date τ, for any $\tau \geq t$. The sequence is defined recursively by putting

$$(a^t, s^t) = (\alpha(s,t), s)$$

$$s^\tau = f(a^{\tau-1}, s^{\tau-1}) \text{ for } \tau > t$$

and

$$a^\tau = \alpha(s^\tau, \tau) \text{ for } \tau > t.$$

In this notation, for any date $T > t$,

$$\sum_{\tau=t}^{T} V_{1\tau}(\alpha, s^\tau) = \sum_{\tau=t}^{T} \sum_{n=1}^{N} r_n(a^{\tau+n-1}, s^{\tau+n-1})$$

$$= \sum_{\tau=t+N-1}^{T-N+1} \sum_{n=1}^{N} r_n(a^\tau, s^\tau) + \sum_{\tau=t}^{t+N-2} \sum_{n=1}^{\tau-t+1} r_n(a^\tau, s^\tau) + \sum_{\tau=t-N+\tau}^{T} \sum_{n=N-T+\tau}^{N} r_n(a^\tau, s^\tau).$$

Since there is a finite number of actions, some pattern of N actions, $\{a^i\}_{i=1}^N$ must repeat itself infinitely often over the infinite horizon of the model. Suppose that this pattern is observed between dates t and $t+N-1$. Then for

some $T > t$, the same pattern must be observed between $T - N + 1$ and T. That is, $a^{t+N-1} = a^{T-N+n}$ for $n = 1, ..., N$. In this case, the expression above reduces to

$$\sum_{\tau=t}^{T} V_{1\tau}(\alpha, s^\tau) = \sum_{\tau=t}^{T-N} \sum_{n=1}^{N} r_n(a^{\tau+n-1}, s^{\tau+n-1}).$$

Suppose that $s^t = 0$. Then $s^\tau = 0$ for all $\tau \geq t$, and by assumption

$$\sum_{n=1}^{N} r_n(a^{\tau+n-1}, s^{\tau+n-1}) \leq 0, \text{ for all } t.$$

Since $V_{1\tau}(\alpha, 0) \geq 0$ for all τ, we must have $V_{1\tau}(\alpha, 0) = 0$ for $\tau = t, ..., T$. Now suppose that at some date, the state of the firm becomes $s = 0$. Then we know that there is a later date at which $V_{1t} = 0$ and $a = 0$ at all subsequent dates. Suppose that $a^\tau \neq 0$ at some date preceding t, say date $t - 1$. Then $V_{1,t-1}(0) = r_1(a^{t-1}, 0) < 0$, a contradiction. So $a^{t-1} = 0$ and by induction we can show that $a^\tau = 0$ whenever $s = 0$. In other words, $V_{1t}(0) = 0$ for all t.

Now suppose that this is true for states $s = 0, ..., h$ and suppose that the state of the firm is $s = h + 1$ at some date. We know that $a = a_E$ is not sustainable, so there must be some later date t, say, at which $a^t \neq a_E$. Consider the first such date t. Then we know that $a^t \neq a_E, s^t = h + 1$ and $s^{t+1} = h$. Then

$$V_{1t}(\alpha, h + 1) = r_1(a^t, h + 1) < 0,$$

a contradiction, since $a^\tau = 0$ for all $\tau > t$. Thus, we must have $a = 0$ whenever $s = h+1$. By induction, this shows that $V_{1t}(\alpha, s) = 0$ and $\alpha(s, t) = 0$ for any t and any $s = 0, ..., k - 1$.

It now follows easily that $a = a_E$ is viable if the state is $s = k$. The reason is that this policy produces positive lifetime rents and that any deviation, even for one period, pushes the firm into the state $k - 1$, after which rents are 0. The first period in which this happens, the newest manager $n = 1$ will receive a negative rent, which makes him unwilling to join the firm.

Theorem 2 *There exists a viable policy α such that $\alpha(s, t) = a_E$ for all t if $s = k$.*

Whether higher states are sustainable depends on the exact comparison of rents under a_E and a_R.

Compare this result with what we should expect from the representative manager in the H-mode firm. Let $r(a,s) \equiv \sum_n r_n(a,s)$ denote the total rents when the action is a and the state is s. A representative manager who retires at date T will look at the rents from engaging in rent seeking behavior and compare

$$\sum_{\tau=t}^{T} r(a_R, k-\tau+t)$$

with the payoff from exerting effort on behalf of shareholders

$$\sum_{\tau=t}^{T} r(a_E, k).$$

The gains from rent seeking behavior will typically be much larger in this case and so there is no reason to think that a state like $s = k$ is sustainable.

We have argued that the J-mode structure greatly increased the incentives for the management to take effort on behalf of shareholders, when compared with the incentives of a representative manager with a fixed horizon in the H-mode firm. However, the assumptions of the model were quite restrictive, even within the context of the management game.

One extension that is clearly needed is to expand the action set to allow for the possibility of increasing as well as decreasing the state of the firm. It may be possible to obtain the same result by showing that within the set $s = 0, ..., k-1$, managers will never have an incentive to use these actions. The argument will be made more complicated, because the prospect of a higher future state may compensate young managers for the negative current rents, so the older managers will have to block these deviations.

An essential element of the argument is the existence of an absorbing state. There must exist some state or set of states which, once entered, will never be left because the incentives for effort are too low. The possibility of entering these states is then bootstrapped to undermine the incentive for effort in a larger set of states, which also makes it unattractive to enter the larger set of states. By making a large set of states "out of bounds", we restrict the scope for rent-seeking activities.

The basic idea in this model without dismissal is that firms must keep attracting young workers to remain viable. They can only do this if they avoid rent seeking and pursue strategies that ensure the long run viability of the firm. In the long run this is again in the interest of all stakeholders. Short term opportunism is avoided in the J-mode. In the H-mode the structure is

such that managers take a short view and this means they pursue their own interests which is inefficient.

3 Employment and income distribution

One of the most important differences between the US and Japan is the operation of the labor market. Firms in the US hire and fire employees at will. The only consideration is whether or not value is created for shareholders. In Japan there is a very different tradition with regard to employment, in which the firm is expected to act in the public interest rather than in the interest of shareholders. It can be argued that the Japanese conception of the objectives of the firm has been shaped by Japan's postwar experience. In the aftermath of the war, with the Japanese economy in ruins and the repatriation of many people from countries formerly under Japanese control, creating employment was one of the highest goals of national policy and one that appears to have been embraced by Japanese corporations. The desire to create employment, which was a national imperative at one time, appears to have become internalized in the behavior of the firms over the succeeding decades. It may be weaker now than it was then, but several aspects of the behavior of Japanese corporations suggest that it has not been supplanted by value-maximization. One example is the low rate of return on investment and the long repayment periods accepted by Japanese managers. Although this *could* be explained by long-term value maximization, it is also consistent with objectives other than value-maximization. Similarly, their willingness to sacrifice short-term returns for market share is consistent with other objectives.

In the previous section the focus was on when cooperative strategies were worthwhile. In this section we extend the model by considering the employment policy and how that affects incentives to cooperate. The issue of income distribution between shareholders and employees is also considered.

3.1 Employment

Consider the initial model from above with two generations and immediate dismissal if caught shirking. The implicit assumption above was that the probability of continuation with the firm if there is no shirking is 100 percent. Suppose now that the probability of employment in the next period is π. If

the employee is fired then it is assumed that the utility is the same as if he is fired for shirking, i.e. 0. Then the constraint which ensures the participation of the young is

$$\frac{r}{2} + \pi\frac{r}{2} + (1-\pi)0 \geq \frac{R}{2} + 0$$

or rearranging

$$r \geq \frac{R}{1+\pi}.$$

It can be seen that the lower the probability of continuation or equivalently the higher the rate of unemployment the less likely the constraint is to be satisfied.

Similarly for the case where there are N cohorts of employees and each cohort has a probability π each period of remaining employed the condition becomes

$$r \geq \frac{R}{1+\pi+\pi^2+...+\pi^N}.$$

As before the lower the probability of employment and the shorter the length of employment the less likely the constraint is to be satisfied.

The other models can be similarly extended to show that maintaining employment is desirable in terms of ensuring that cooperation is worthwhile.

These results illustrate that lifetime employment is desirable in J-mode firms. They help ensure that cooperation is more likely. Firms are particularly reluctant to lay off people in Japan. The same is true but perhaps to a lesser extent in other countries with stakeholder capitalism such as Germany and France.

Another important aspect of Japan and other stakeholder capitalism countries is that they have inflexible labor markets. In other words, if employees are laid off it is difficult to obtain a job. In the analysis above it was assumed the disutility from labor was 0. If this was higher then the viability constraint for the J-mode firm would be less likely to be satisfied. This suggests that an inflexible labor market can have advantages in the long run. Note that the rationale for an inflexible labor market is somewhat different to that in Shapiro and Stiglitz (1984). In their paper making unemployment less desirable increases the incentive for an individual to provide effort. Here it helps ensure consensus and cooperation and this in turn makes effort worthwhile.

3.2 Income distribution

The modelling of income distribution within the firm has so far been very stark. The allocation between the shareholders and the employees has been taken as exogenous. Consider the issue of the allocation between shareholders and employees in the simple two cohort model with dismissal considered initially.

Suppose that the workers are paid a gross wage of R. If they exert effort the disutility of this is equivalent to η so their net utility is

$$r = R - \eta.$$

The viability condition for the J-mode firm now simplifies to

$$\frac{R}{2} \geq \eta.$$

Cutting gross wages R means the viability constraint is less likely to be satisfied. When times are hard this suggests it may be in the interest of both shareholders and workers to cut dividends and maintain wages and employment. If wages and/or employment are cut the viability constraint in the J-mode firm may be violated. In this case cooperation will end and the value of the firm will collapse. It will be necessary to cut dividends rather than cut wages to avoid this outcome. This result is consistent with the evidence in the surveys from the stakeholder capitalism countries of Japan, Germany and France shown in Figure 2.

The discussion in this section has been based on the simplest model. However, similar results hold for the other versions of the model.

4 Concluding remarks

In Anglo-Saxon countries such as the US and UK good corporate governance is based on the idea that firms should pursue the interests of the shareholders. Traditionally this means firing workers at will and ignoring the needs of other stakeholders in the firm. The intellectual justification for this way of organizing firms is Adam Smith's notion of the invisible hand. If all agents pursue their own interest the resulting outcome will be socially efficient. For firms this means they should pursue the goal of creating value for shareholders. The validity of this argument depends on there being perfect and complete markets.

In practice it is not clear that markets are sufficiently perfect and complete for Anglo-Saxon capitalism to be the best way of organizing an economy. Countries such as Japan, Germany and France have traditionally adopted stakeholder capitalism where a much broader set of interests is pursued by firms. The simple models developed in this paper have been designed to illustrate that in some circumstances having a J-mode firm that takes into account a wider variety of interests than just shareholders can do better than an H-mode firm where managers have considerably more autonomy. In the J-mode cooperation helps align everybody's interest. In contrast in the H-mode firm the managers interests' are not aligned with those of shareholders or other stakeholders. In many cases the J-mode can do significantly better than the H-mode.

This paper has focused on simple partial equilibrium models of the firm. It would interesting to extend it in various directions. One is to explicitly model the setting of compensation of both employees and shareholders. A second is to analyze the operation of J-mode firms in general equilibrium settings. The role of competition in this case may be particularly important (see, e.g., Allen and Gale (2000b)). Allowing for unemployment in the models may also permit some interesting results regarding the desirability of labor market reform in stakeholder capitalism economies.

Anglo-Saxon capitalism has been extensively studied. Stakeholder capitalism has not. It is important that stakeholder capitalism be fully analyzed and understood before decisions to move towards Anglo-Saxon capitalism are considered or implemented. Much research remains to be done in this area.

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Table 1

ASAHI BREWERIES, LTD.

Corporate Philosophy of Asahi Breweries, Ltd.

We at Asahi Breweries, Ltd., through our business activities including alcoholic and nonalcoholic beverages, food and pharmaceuticals, wish to contribute to the health and well-being of people the world over. By thus contributing to society as a whole, the company seeks to attain the trust and confidence of the consumer and develop still further.

1. Consumer Orientation

Identifying the best interests of consumers, we endeavor to meet their demands by creating products suited for contemporary tastes and lifestyles.

2. Quality First

Open to consumer opinion of our products, we consistently enhance quality level and extend technological capabilities in order to market the finest products in the industry.

3. Respect for Human Values

Our Company firmly believes that human beings are the core of the business, and follows the principle of human values through developing human resources and implementing fair personnel management. Each employee is encouraged to fully utilize his or her own potential, and work to realize an open, positive thinking corporate culture.

4. True Partnership Between Labor and Management

Our Company aims to strengthen harmonious relations between labor and management based on mutual understanding and trust. Both parties work hand in hand for corporate development as well as the welfare of all employees.

5. Cooperation with Business Associates

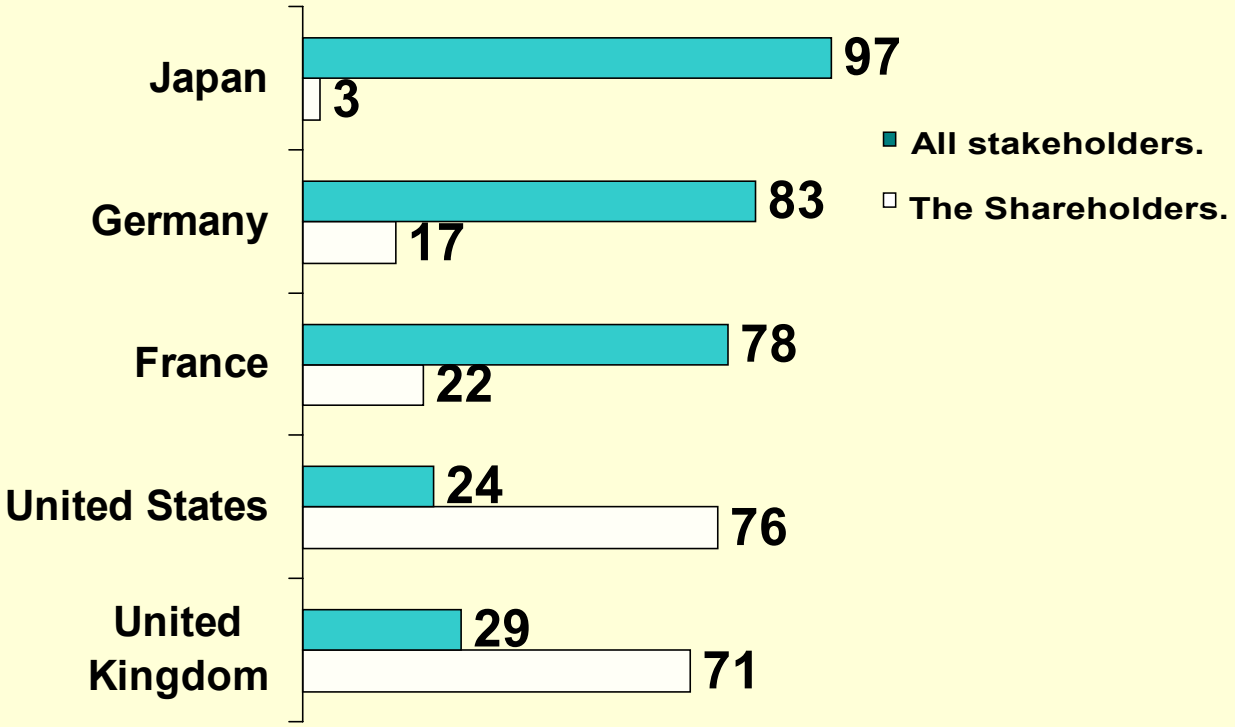
We seek to build strong relations with all our business associates and affiliates in a spirit of co-existence and co-prosperity based in mutual trust. At the same time, we are determined to accept and fulfil our responsibilities as the core of the Asahi group of companies.

6. Social Responsibilities

We at Asahi, through securing and expanding the base of our operations, desire to fulfill our responsibilities to stockholders and the local communities in which we operate. Also in carrying out business activities, we sincerely observe the moral principles of management based on social standards.

Source: Asahi Breweries, Ltd. Case, 1989, Harvard Business School, 9-389-114.

Figure 1: Whose Company Is It?

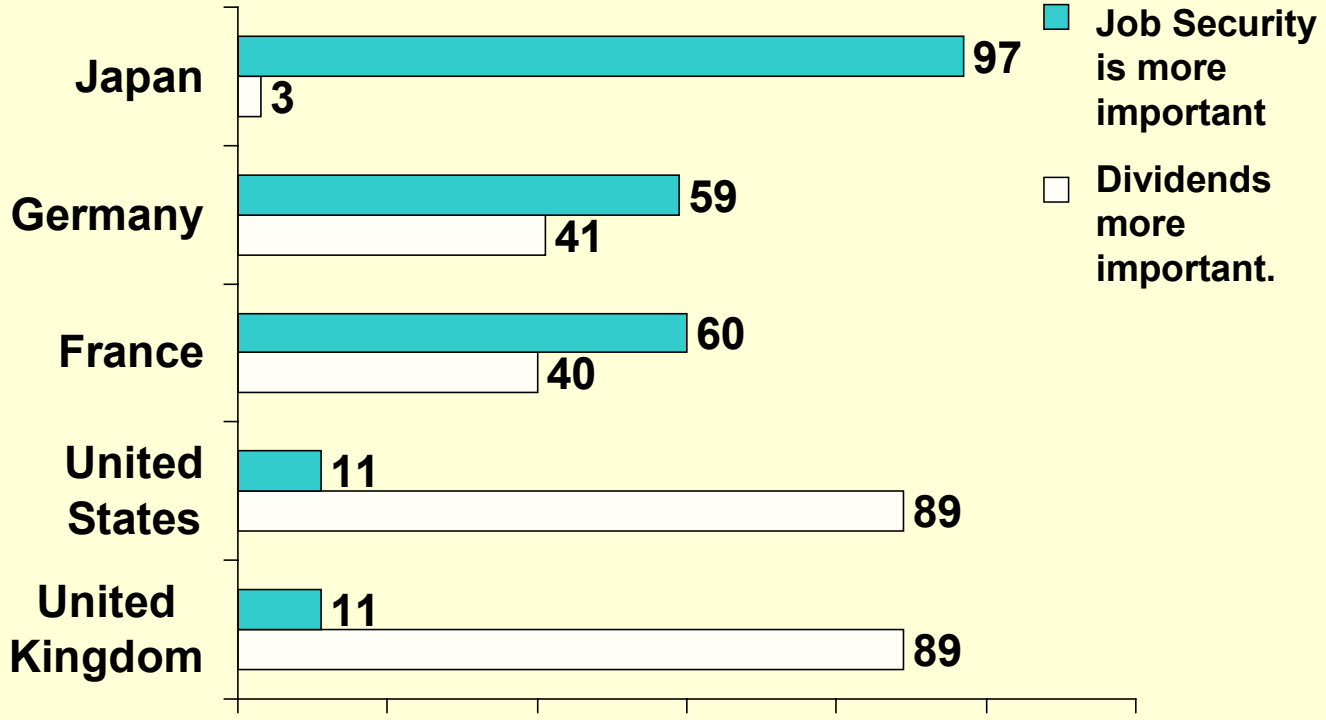


Number of firms surveyed: Japan, 68; United States, 82; United Kingdom, 78; Germany, 100; France, 50.

Source: Masaru Yoshimori, "Whose Company Is It? The Concept of the Corporation in Japan and the West." *Long Range Planning*, Vol. 28, No. 4, pp. 33-44, 1995

From: Institute of Fiscal and Monetary Policy (1996), Chart III-1-2, p. 57.

Figure 2: Job Security or Dividends?



Number of firms surveyed: Japan, 68; United States, 83; United Kingdom, 75; Germany, 105; France 68

Source: Masaru Yoshimori, "Whose Company Is It? The Concept of the Corporation in Japan and the West." *Long Range Planning*, Vol. 28, No. 4, pp. 33-44, 1995

From: Institute of Fiscal and Monetary Policy (1996), Chart III-4-6, p. 84.