



Searle Center
on
Law, Regulation, and Economic Growth

*“Stakeholder Capitalism, Corporate
Governance and Firm Value”*

Robert Marquez

Craig & Rhonda Cerny Professor in Finance, W.P. Carey School of
Business, Arizona State University

LAW & ECONOMICS COLLOQUIUM

Thursday, January 29th, 2009

4 p.m.

Rubloff 175

Stakeholder Capitalism, Corporate Governance and Firm Value*

Franklin Allen

University of Pennsylvania

Elena Carletti

European University Institute

Robert Marquez

Arizona State University

November 30, 2008

Abstract

In countries such as Germany, the legal system is such that firms are necessarily stakeholder oriented. In others like Japan social convention achieves a similar effect. We analyze the advantages and disadvantages of stakeholder-oriented firms that are concerned with employees and suppliers compared to pure shareholder-oriented firms. We show that in a context of imperfect competition stakeholder firms have higher prices and lower output than shareholder-oriented firms. Surprisingly, we also find that firms can be more valuable in a stakeholder society than in a shareholder society. With globalization stakeholder firms and shareholder firms often compete. We identify the circumstances where stakeholder firms are more valuable than shareholder firms, and compare these asymmetric equilibria with symmetric equilibria with stakeholder and shareholder firms. Finally, we show that, in some circumstances, firms may voluntarily choose to be stakeholder-oriented because this increases their value.

*We are grateful to Anat Admati, Mariassunta Giannetti, Peter Gourevitch, Kose John, Eugene Kandel, Giancarlo Spagnolo, Merih Sevilir, Raghu Sundaram, Kenichi Ueda and Michael Weisbach for their very helpful comments and suggestions and to seminar participants at ASU, Berkeley (Haas), Stanford (GSB), HEC, the Universities of Frankfurt, Gothenberg, Mannheim, the Max Planck Institute in Bonn, and to participants at the 2008 FIRS (Alaska) Conference, the UNC-Duke 2006 Corporate Finance Conference, the 2006 Summer Research Conference at the Indian School of Business, and the 2007 NBER/RFS Workshop. Franklin Allen is grateful to the Wharton Financial Institutions Center for financial support. Contact author: Franklin Allen, Wharton, School, University of Pennsylvania, 3620 Locust Walk, Philadelphia, PA 19104-6367, e-mail: allenf@wharton.upenn.edu.

Stakeholder Capitalism, Corporate Governance and Firm Value

Abstract

In countries such as Germany, the legal system is such that firms are necessarily stakeholder oriented. In others like Japan social convention achieves a similar effect. We analyze the advantages and disadvantages of stakeholder-oriented firms that are concerned with employees and suppliers compared to pure shareholder-oriented firms. We show that in a context of imperfect competition stakeholder firms have higher prices and lower output than shareholder-oriented firms. Surprisingly, we also find that firms can be more valuable in a stakeholder society than in a shareholder society. With globalization stakeholder firms and shareholder firms often compete. We identify the circumstances where stakeholder firms are more valuable than shareholder firms, and compare these asymmetric equilibria with symmetric equilibria with stakeholder and shareholder firms. Finally, we show that, in some circumstances, firms may voluntarily choose to be stakeholder-oriented because this increases their value.

1 Introduction

In their classic survey of corporate governance, Shleifer and Vishny (1997; p. 738) outline their focus in the following way: “Our perspective on corporate governance is a straightforward agency perspective, sometimes referred to as separation of ownership and control. We want to know how investors get the managers to give them back their money.” In the US and UK and many other Anglo-Saxon countries there is wide agreement that this is what corporate governance is about. The law is clear that shareholders are the owners of the firm and managers have a fiduciary (i.e., very strong) duty to act in their interests, and most of the academic literature on governance has taken this perspective (see, e.g., Becht, Bolton, and Röell, 2003, for a more recent survey).

However, moving beyond the cases of the US and UK, firms’ objectives vary by country and often deviate significantly from the paradigm of shareholder value maximization. As Denis and McConnell (2003; p. 6) point out in their survey of international corporate governance: “in many European countries shareholder wealth maximization has not been the only – or even necessarily the primary – goal of the board of directors.” To provide one example, in Germany the legal system is quite explicit that firms have a duty to pursue the interests of parties beyond just shareholders. The Germans have the system of *co-determination*, in which employees and shareholders in large corporations have an equal number of seats on the supervisory board of the company, so that the interests of both must be taken into account (see Rieckers and Spindler, 2004, and Schmidt, 2004).

Germany is by no means the only country where the interests of parties other than just shareholders have bearing on companies’ policies, and we document differences across a variety of countries in the next section. The common theme among these regimes, however, can be seen from surveys of managers reported in Yoshimori (1995). Figure 1 shows the choices of senior managers at a sample of major corporations in Japan, Germany, France, the US, and the UK, 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. 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. Figure 2 shows the results of asking managers to choose between the following specific alternatives:

(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).

As for the previous question, there is a sharp difference between Japan, Germany and France and the US and UK, in that in the former countries it is stakeholders' interests more generally - and in particular workers - that must be considered by firms. This suggests also that firm continuity and employment preservation are important concerns in societies that take stakeholders' concerns into account.

The fact that in many countries the legal system or social convention requires firms to take into account stakeholder concerns raises a number of important issues.

- How should the objective function of stakeholder oriented firms be modeled?
- How does this different objective function affect the ways that firms compete with each other? What are the effects on the prices they set and, most important, on the stock market values of the firms? How do these compare with the case where firms are solely oriented toward shareholders? It is often suggested that taking stakeholders' concerns into account necessarily reduces overall firm value. Is this standard view correct?

- With globalization firms from stakeholder oriented societies often compete with firms that are shareholder oriented. How does this competition affect prices and firm values? Which firms do better and how does the outcome compare to that with just stakeholder or just shareholder oriented firms?
- Under what circumstances would firms voluntarily choose to be stakeholder oriented even if it were not mandated by the law?

The purpose of this paper is to address these issues. We develop a simple model of stakeholder governance where firms are concerned with their continuity as well as their value. We start by considering a standard two-period duopoly model with imperfect price competition where firms maximize shareholder value. In the first period firms are subject to a random shock to their costs and if this shock is large enough they may be unable to continue operating. In choosing their first period prices, firms take into account the effects on first period profits as well as on the probability of surviving into the second period.

We introduce stakeholder governance by assuming that firms in stakeholder oriented societies put weight in their objective function on the effects of the firm's failure on stakeholders other than shareholders. The idea is that if firms do not survive, stakeholders face costs of searching for new opportunities. If a firm is stakeholder-oriented, it takes (at least part of) these costs into account in its objective function and thus in its decision making process. We show that when firms put weight on stakeholders other than shareholders, this concern leads to a softening of competition: firms charge higher prices and their probability of surviving increases. This is because increasing its price increases a firm's probability of survival, thus benefitting its stakeholders. Consequently, contrary to the usual view that a stakeholder orientation is bad for shareholders, total firm value (i.e., shareholder value) can actually be increased through a concern for other stakeholders. We identify the set of circumstances where firm value is higher in a stakeholder society than in an otherwise identical shareholder society, which corresponds to when the strategic benefit of softening competition is greater than the direct loss from deviating from the objective of maximizing shareholder value.

We then consider the case of globalization, where it has become commonplace for firms from shareholder societies to compete with firms from stakeholder societies. Again contrary to the standard view, we identify circumstances where stakeholder firms are more valuable than shareholder firms, as well as when all firms stand to benefit from the stakeholder orientation of just one of the firms. We also compare firm value across regimes, contrasting asymmetric equilibria with symmetric equilibria where all firms are either stakeholder or shareholder oriented.

The fact that firm value can be increased by a concern for stakeholders raises the possibility that shareholders may want to put in place governance structures that commit them to adopt a concern for other stakeholders even when not required to do so. We show that, when a firm anticipates a sufficiently large reaction from its rival, it can improve its shareholders' welfare by voluntarily choosing to take into account other stakeholders. We also show that, even in circumstances where firms may not voluntarily adopt a stakeholder orientation, such governance structures may nevertheless arise endogenously if consumers are more willing to buy from firms that care about stakeholders other than shareholders.¹ Interestingly, this leads to a situation of self-enforcing societies where consumers induce firms to adopt stakeholder concerns and consequently increase the value to shareholders.

Our paper is related to a number of strands of literature. The first is concerned with firms' objective functions. Acharya, Myers, and Rajan (2008) study theoretically how critical employees, who represent "stakeholders" in the firm, can play a crucial role in the internal governance of the firm. In particular, they argue that younger managers in line for upper management positions may be more concerned with maintaining continuity of the firm and may influence a firm's investments in a way that increases shareholder value. Acharya, Myers and Rajan's purpose is to understand the internal operations of the firm and how this leads to concerns for continuity. Our paper is complementary in that we are interested in the

¹An alternative could be that firms lobby to put in place government regulations requiring a more stakeholder-friendly approach to governance. Such political economy considerations may help explain the legal requirements of codetermination in Germany, among other countries. See Pagano and Volpin (2005) for a broader discussion of the interaction between employment protection and the electoral system.

effects of concerns for continuity on market equilibrium. Blinder (1993) models the objective function of Japanese firms as the weighted sum of shareholder profits and a function of employee earnings and shows that this leads firms to maximize revenue. In contrast, we put the firm-specific costs and benefits stakeholders receive in the objective function and show that concern for stakeholders leads to a concern for survival which softens competition.

Much of the previous literature in finance and economics on stakeholder governance has been concerned with the normative issue of whether it is socially optimal for firms to pursue anything other than shareholder interests. Tirole (2001, 2006) takes a negative view on the desirability of adopting a stakeholder-oriented objective for the firm. The reason is that if workers and other stakeholders have interests that diverge from those of shareholders, it is extremely difficult to charge managers with anything other than the pure maximization of firm value because there are no reliable measures of stakeholder welfare. Allen and Gale (2000, Chapter 12) and Allen (2005) take a more positive view arguing that changing firms' objective functions from just focusing on shareholder wealth can correct for market failures and thus improve welfare. Bris and Brisley (2005) show that having lower investor protection for minority shareholders changes the way in which firms compete, leading to higher output and lower prices. This makes consumers better off and can improve social welfare. Claessens and Ueda (2008) empirically consider the role of relative changes in legal protection for different classes of stakeholders in the US. They find that improving stakeholder protection can improve efficiency. For example, judicial decisions enhancing employment protection can improve the growth of more skilled-labor, knowledge and intangible-asset intensive industries. Cremers, Nair, and Peyer (2008) find empirically that a firm's stakeholders, such as its customers or its suppliers, can play a "monitoring" role and help improve efficiency. This is particularly the case in more competitive industries where greater amounts of information are available, making such monitoring less costly and more effective, as well as in relationship-intensive industries. In contrast to these papers, our focus is positive in that stakeholder governance is mandated in many countries and we are concerned with its likely effects.

There is a long tradition in finance going back to at least Jensen and Meckling (1976) of viewing corporate governance as being about how to resolve agency issues. In this view, different stakeholders such as employees and bondholders need to be provided with the correct incentives and this is why they may need to be included in the governance process. The foundation of this approach is that while shareholders own the firm and their objective is to maximize its value, they are not necessarily directly involved in running the firm. In contrast, in our analysis there is no agency problem, and our starting point is that many countries have in place legal requirements that stakeholders be included in the governance process.

There is also a related literature in industrial organization. Sklivas (1987) shows that in oligopolistic industries shareholders can choose managerial incentives to alter the way in which firms compete and shows that firm value can be affected in this way. Fershtman and Judd (1987) also consider the interaction between managerial incentives and competition in oligopolistic markets. They show that compensation contracts can optimally depend on things other than profits such as sales. In a similar spirit, Aggarwal and Samwick (1999) use a framework of imperfectly competitive product markets to explain the optimality of compensation contracts for managers based on both own and rival performance. Furthermore, there is a large literature, starting with Brander and Lewis (1986) and more recently Dasgupta and Titman (1998), on how debt affects competition and showing that debt acts as a precommitment device that changes the way in which firms compete (Allen, 2000, contains a discussion of this literature). Our approach is related in that stakeholder governance commits the firms to be less aggressive, but we abstract from any additional strategic considerations introduced by incentive contracts or limited liability.

In contrast to finance and economics, stakeholder governance has received considerable attention in other disciplines. There is a large managerial literature on how stakeholder governance can be implemented. For example, Blair (1995) has suggested that firm-specific investments by employees and other stakeholders are crucial. She argues that these parties

should be given residual claimant status along with shareholders. O'Sullivan (2000) stresses the importance of building organizations that are able to continuously innovate and ensuring all stakeholders are involved in this process. There is also a large legal literature that is surveyed in Licht (2003).

The remainder of the paper proceeds as follows. In the next section we discuss how governance arrangements vary across countries, and provide some institutional details. Section 3 presents a model analyzing the case where firms care about other stakeholders in addition to shareholders. Section 4 looks at globalization where different types of firms compete with each other. Section 5 focuses on the incentives of firms to become stakeholder oriented and the possibility of having self-enforcing stakeholder economies. Section 6 concludes.

2 Governance Arrangements in Different Countries

As discussed above, the system of co-determination in Germany provides a clear example of a country where firms' objectives encompass a broader set of stakeholders in the firm than merely those who own shares. However, Germany is by no means the only country with such a system. For example, China has a two-board system with a supervisory board above the management board. The 2005 reforms in China's Company Law required that employee representatives account for no less than one third of the supervisory board. The reforms also codified corporate social responsibility requiring that firms bear in mind their social responsibilities in conducting their business operations. In line with the findings of our paper, Wang and Huang (2006) argue that the rationale for the imposition of corporate social responsibility is to prevent companies from maximizing their interests at the expense of others in the community.

As documented by Wymeersch (1998), several other countries have some form of co-determination. Austria has a system of co-determination similar to that in Germany. The Netherlands has a system known as the *structuurvennootschap* that is applicable to all larger

companies except for those with an international group structure such as Royal Dutch Shell and Unilever. Here the labor representation is indirect in that directors must have the confidence of employees. Members of the supervisory board must take care of “the interest of the company and its related enterprise” (Wymeersch, 1998, p. 1144).

In Denmark, Sweden, and Luxembourg, there is employee representation on one-tier boards. In Denmark, a third of the board is elected by employees (with a minimum of two) in companies with more than 35 employees. In Sweden, companies with more than 25 employees must have two labor representatives on the board, while companies with more than 1,000 employees must have three. The rights and duties of these board members are the same as all other board members. In Luxembourg, firms with more than 1,000 employees and some firms with a state connection have one third of the board elected by the employees.

The system in France is different in that for firms with more than fifty workers two workers’ representatives act as observers at board meetings, but do not have the right to vote. More conventional co-determination systems exist for privatized public sector firms and can be introduced voluntarily by firms. Similarly, in Finland companies can voluntarily adopt employee representation on the board. More than 300 companies have reportedly done this (Wymeersch, 1998, p. 1141).

Another type of worker participation in decision making is on the “enterprise council.” These are concerned with employment conditions such as layoffs and plant closures. Companies with at least 1,000 employees - of which there are 150 or more in two or more EU countries - must have a “European Works Council.”

In Japan, the situation is yet again different from the US and UK. Managers do not have a fiduciary responsibility to shareholders. The legal obligation of directors is such that they may be liable for gross negligence in the performance of their duties, including the duty to supervise (Scott, 1998). In practice, it is widely accepted that stakeholder interests and in particular employee interests play a predominant role (see Dore, 2000, and Jackson and Miyajima, 2007).

It is readily seen that, while the specifics of the systems of governance in each country vary widely, they have as a common objective the inclusion of parties beyond shareholders into firms' decision-making processes. In particular, in many countries workers play a prominent role, being regarded as important stakeholders in the firm. The analysis that follows focuses on this aspect of what we term "stakeholder governance."

3 Models of Governance

In this section we develop a simple model where different forms of governance are associated with different objective functions for the firms. We start with the standard case where firms maximize shareholder value. We then analyze how a concern for stakeholders affects the way firms compete and set prices. Finally, we compare the overall value of firms in the different governance structures and identify conditions where stakeholder firms are more valuable than shareholder firms.

3.1 Shareholder firms

Consider first a simple one-period model where two firms, $i \in \{1, 2\}$, offer differentiated products and compete in prices. Each firm i faces a demand curve given by

$$D_i = A - bp_i + dp_j$$

for $i \neq j$, where p_i and p_j are the prices charged by firms i and j , respectively, and b and d depend on consumers' preferences over the good sold by firm i relative to that sold by firm j . We assume throughout that $b \geq d$, so that firm i 's demand is at least as sensitive to its own price as it is to the price charged by its competitor. Each firm i chooses its price to maximize profit as given by

$$\max_{p_i} \pi_i = \max_{p_i} (p_i - c) D_i(p_i) = \max_{p_i} (p_i - c) (A - bp_i + dp_j),$$

where c represents the marginal cost of producing one unit of output. We assume that c is the same for both firms. The first order condition for profit maximization gives

$$(A - bp_i + dp_j) - (p_i - c)b = 0, \quad (1)$$

which yields

$$p_i = \frac{A + dp_j + cb}{2b}.$$

Given a similar expression for firm j , we can solve for the symmetric equilibrium prices \hat{p} to obtain:

$$\hat{p} = \frac{A + cb}{2b - d}.$$

In order to ensure that profits are positive, we assume that $\hat{p} > c$. A sufficient condition for this is that $A - c(b - d) > 0$.

We now enrich this basic model in various directions. We first introduce a second period identical to the first. We then assume that each firm i is subject to a shock to its marginal costs in period 1, so that $\tilde{c}_i = c + \tilde{\epsilon}_i$, where $\tilde{\epsilon}_i$ is distributed according to the cumulative distribution function $F(\cdot)$, which we assume is uniform on the interval $[-\epsilon, \epsilon]$. Firm i can operate in period 2 only if its profit in the first period, π_{i1} , is nonnegative or, equivalently, if the shock is not too large: $\pi_{i1} \geq 0 \Leftrightarrow \epsilon_i \leq p_{i1} - c$. Firm i 's problem is to choose the price that maximizes its overall market value, V_i , as given by

$$\begin{aligned} \max_{p_{i1}} V_i &= E[\tilde{\pi}_{i1}] + \Pr(\tilde{\epsilon}_i \leq p_{i1} - c) [(1 - \Pr(\tilde{\epsilon}_j \leq p_{j1} - c)) \pi_2^M + \Pr(\tilde{\epsilon}_j \leq p_{j1} - c) \pi_2^D] \\ &= E[\tilde{\pi}_{i1}] + F(p_{i1} - c) [(1 - F(p_{j1} - c)) \pi_2^M + F(p_{j1} - c) \pi_2^D]. \end{aligned}$$

The first term represents the expected profit in the first period, while the second term is what firm i obtains in expectation in the second period if it survives. This equals π_2^M when it is the only firm surviving and π_2^D when both firms are still active. The firm can also fail, in which case it gets zero profits. Noting that $F(p_{i1} - c) = \frac{p_{i1} - c + \epsilon}{2\epsilon}$, the maximization problem

can be written as

$$\max_{p_{i1}} V_i = (p_{i1} - c)D_i(p_{i1}) + \frac{p_{i1} - c + \epsilon}{2\epsilon} \left[\left(1 - \frac{p_{j1} - c + \epsilon}{2\epsilon} \right) \pi_2^M + \frac{p_{j1} - c + \epsilon}{2\epsilon} \pi_2^D \right]. \quad (2)$$

The first-order condition for this problem is

$$\frac{\partial V_i}{\partial p_{i1}} = (A - bp_{i1} + dp_{j1}) - (p_{i1} - c)b + \frac{1}{2\epsilon} \left(\frac{\epsilon - p_{j1} + c}{2\epsilon} \pi_2^M + \frac{p_{j1} - c + \epsilon}{2\epsilon} \pi_2^D \right) = 0. \quad (3)$$

The first two terms represent the total marginal effect of a change in p_{i1} on the expected first-period profit. The last term captures the effect of a change in p_{i1} on the second-period profit of firm i through the marginal change in its survival probability, $\frac{1}{2\epsilon}$.

We can then solve (3) for p_{i1} to obtain the reaction function

$$p_{i1} = \frac{A + cb}{2b} + \frac{1}{2b} \frac{1}{2\epsilon} \left(\frac{\epsilon + c}{2\epsilon} \pi_2^M + \frac{-c + \epsilon}{2\epsilon} \pi_2^D \right) + \frac{p_{j1}}{2b} \left(d - \frac{1}{4\epsilon^2} (\pi_2^M - \pi_2^D) \right). \quad (4)$$

A similar expression holds for the competitor's price, p_{j1} . Note that, while prices are normally strategic complements in models of imperfect competition, the concern for survival introduces an element of strategic substitutability here. If firm j follows firm i and also increases its own price, both firms have a higher probability of survival and will be more likely to obtain π_2^D instead of π_2^M in the second period. This provides an incentive to firm i to deviate and reduce its own price. In order to prevent this deviation from being profitable, we assume throughout that $\frac{\partial^2 V_i}{\partial p_{i1} \partial p_{j1}} \geq 0$ so that prices are strategic complements. This condition can be expressed as

$$\frac{\partial_i^2 V_i}{\partial p_{i1} \partial p_{j1}} = \frac{\partial^2 E[\pi_{i1}]}{\partial p_{i1} \partial p_{j1}} - f(p_{i1} - c)f(p_{j1} - c) (\pi_2^M - \pi_2^D) \geq 0, \quad (5)$$

where f is the density function of the shock $\tilde{\epsilon}_i$. Since $f(\cdot) = \frac{1}{2\epsilon}$ and $\frac{\partial^2 E[\pi_{i1}]}{\partial p_{i1} \partial p_{j1}} = d$, we can write (5) as

$$\frac{\partial_i^2 V_i}{\partial p_{i1} \partial p_{j1}} = d - \frac{(\pi_2^M - \pi_2^D)}{4\epsilon^2} \equiv G \geq 0. \quad (6)$$

As we shall see, the function G will play a crucial role in the analysis. The first term of the function represents the sensitivity of firm i 's demand to the price charged by its competitor, while the second term captures the foregone payoff, $\pi_2^M - \pi_2^D$, for firm i due to the higher survival probability of firm j . The condition then boils down to a restriction on the difference $\pi_2^M - \pi_2^D$ so that the positive effect of a higher first-period price by firm j on firm i 's first-period profit dominates the negative effect that a higher probability of survival of firm j has on firm i 's second-period profit. Note that this restriction also guarantees that the standard regularity condition (see Dixit, 1986) that $\left| \frac{\frac{\partial^2 V_i}{\partial p_{i1} \partial p_{j1}}}{\frac{\partial^2 V_i}{\partial p_{i1}^2}} \right| < 1$ is always satisfied.

Having this in mind, we can now find the unique symmetric equilibrium price from (4) as

$$\hat{p}_1 = \frac{A + cb + \frac{1}{4\epsilon^2} [(\epsilon + c)\pi_2^M + (\epsilon - c)\pi_2^D]}{2b - G}. \quad (7)$$

If we compare this with the one-period price \hat{p} we obtain that

$$\hat{p}_1 - \hat{p} = \frac{(\epsilon + c - \hat{p})\pi_2^M + (\epsilon - c + \hat{p})\pi_2^D}{4\epsilon^2(2b - d) + (\pi_2^M - \pi_2^D)} > 0,$$

if $c < \hat{p} < c + \epsilon$. This means that firms increase prices when they are concerned about survival relative to what they would charge if they had no such concern. The intuition behind this result is simple. When firms care about surviving until period 2, they maximize their expected profits across both periods. Firms set higher prices than in the one-period model since their probability of survival until period 2, $\Pr(\tilde{\epsilon}_i \leq p_{i1} - c)$, is increasing in their first-period price, p_{i1} . In other words, the concern for survival softens competition and, by raising prices, also reduces output.

3.2 Stakeholder firms

So far we have considered the case where firms maximize their expected profits taking only shareholder value into account. However, as discussed earlier, in many countries the legal system and social environment are such that firms also consider the interests of other stakeholders, such as workers or suppliers, in adopting strategic decisions. In Germany, for example, co-determination requires that in large firms workers have representation on the supervisory board, thus having an influence in the strategic direction of the company. In France, workers' representatives are able to attend board meetings and thus change the way meetings are conducted. By requiring consensus in decision making processes as in Japan (see Aoki, 1990), firms are likely to put a weight on employees' interests directly.

To capture the concern for stakeholders in our model, we modify the firm's objective function from the previous section to capture the notion that the non-survival of a firm affects not only shareholders, but also other parties, like employees and suppliers. Such parties would likely have to bear some (nonpecuniary) costs associated with, for example, having to find new jobs and customers. If the firm is interested in stakeholders other than shareholders, it internalizes (at least partly) the negative externality its failure imposes on other parties who depend on the firm by attaching some weight to these costs in its objective function.² This modifies the objective function for firm i as follows:

$$\begin{aligned} \max_{p_{i1}} \Omega_i &= V_i - (1 - F(p_{i1} - c)) K_i & (8) \\ &= E[\pi_{i1}] + F(p_{i1} - c)[(1 - F(p_{j1} - c)) \pi_2^M + F(p_{j1} - c) \pi_2^D] - (1 - F(p_{i1} - c)) K_i \end{aligned}$$

where K_i is the cost borne by stakeholders that is internalized by firm i . Since this is determined by the legal and social environment it is the same for all firms so that

$$K_i = K_j = K.$$

²See Tirole (2006) for a recent discussion of stakeholder governance along these lines.

This approach is one way to build concern for stakeholders into the objective function of the firm in line with various of the existing institutional arrangements described above. Another approach would be to assume that in addition to the costs stakeholders incur under the firm's failure, they also earn rents when the firm stays solvent. This would imply the firm also puts weight on the benefits to stakeholders in case of survival by an additional positive term k_i in the objective function, received only if the firm survives across periods. Similar results obtain under that alternative specification of a stakeholder objective function.

With (8) as the objective function for firms, it can be shown similarly to (7) that

$$\widehat{p}_{1K} = \widehat{p}_1 + \frac{1}{4b\epsilon} \left(\frac{1}{1-\alpha} \right) K, \quad (9)$$

where

$$\alpha = \frac{G}{2b} < 1, \quad (10)$$

since $b > d$ and $\pi_2^M > \pi_2^D$. It can be seen immediately that $\frac{\partial \widehat{p}_{1K}}{\partial K} > 0$. This establishes that a concern for stakeholders serves to soften competition further by increasing prices and reducing quantity in the first period. The intuition is again simple. As stakeholder firms care even more about surviving than shareholder firms, they charge higher prices to guarantee a higher probability of survival. The reduction in competition induced by firms' concern for survival leads to a greater markup over marginal cost, and thus lower output. An interesting implication of this concern for stakeholders is that firms' production in stakeholder societies is further away from the efficiency benchmark provided by the perfect competition paradigm.

3.3 Firm Value

Now that we have derived the equilibrium prices set by shareholder and stakeholder firms, we can turn to the comparison of the firms' values under the two governance structures. We start with the value of a shareholder firm. Substituting the equilibrium symmetric price \widehat{p}_1 as in (7) for both p_{i1} and p_{j1} into (2) and rearranging the terms, we obtain the following

expression for the equilibrium value of a shareholder firm:

$$\begin{aligned}\widehat{V}_{SHA} = & Ac + \frac{(c - \epsilon)}{4\epsilon^2}[(\epsilon + c)\pi_2^M + (\epsilon - c)\pi_2^D] \\ & + \left[A - c(b - d) + \frac{c(\pi_2^M - \pi_2^D)}{2\epsilon^2} + \frac{\pi_2^D}{2\epsilon} \right] \widehat{p}_1 - (b - G)\widehat{p}_1^2.\end{aligned}\quad (11)$$

We note that \widehat{V}_{SHA} is concave in the equilibrium price \widehat{p}_1 . By substituting in for \widehat{p}_1 it is possible to obtain a (complex) closed form expression in terms of exogenous variables, which we omit here for simplicity.

Similarly, by substituting \widehat{p}_{1K} instead of \widehat{p} for both p_{i1} and p_{j1} into (2), we can find an expression for the equilibrium value of a stakeholder firm as a quadratic function of K :

$$\widehat{V}_{STA}(K) = \widehat{V}_{SHA} + \frac{G_\beta}{2\epsilon(2b - G)^2}K - \frac{(b - G)}{4\epsilon^2(2b - G)^2}K^2, \quad (12)$$

where

$$G_\beta = \beta d - \frac{\pi_2^M - \pi_2^D}{4\epsilon^2}$$

and

$$\beta = \frac{A - c(b - d) + \pi_2^M/2}{A - c(b - d) + \pi_2^M/2 + 2b\epsilon} < 1.$$

It is often argued that stakeholder orientation will result in a fall in the value of the firm compared to shareholder orientation. We next show that this is in fact not the case. Firms in stakeholder-oriented economies can have a higher overall value than those in shareholder-oriented economies. The expression for $\widehat{V}_{STA}(K)$ provides a simple way of showing this. The following proposition summarizes our result.

Proposition 1 *Define $K^* = G_\beta/[2\epsilon(b - G)]$. (a) If $G_\beta > 0$ and $0 < K < K^*$, then firms in a stakeholder society have higher value than firms in a shareholder society.*

(b) If $G_\beta > 0$ and $K > K^$, or if $G_\beta < 0$, then firms in a stakeholder society have a lower value than firms in a shareholder society.*

This result is established directly from inspection of (12) and can be easily understood graphically from Figure 3. Since $b > d$ and $\pi_2^M > \pi_2^D$, $\widehat{V}_{STA}(K)$ is a concave function of K . In Figure 3, the intercept at $K = 0$ represents firm value in a shareholder society. Firms in a stakeholder society will be more valuable provided that $\widehat{V}_{STA}(K)$ has a positive slope at $K = 0$ and that $0 < K < K^*$ as illustrated in the figure by the upper line, where K^* is the value of K such that $\widehat{V}_{STA}(K) = \widehat{V}_{SHA}$. By contrast, shareholder firms are more valuable if $K > K^*$ since the weight on survival is so large that firms charge prices that are so high that they lead to lower value. Similarly, if $\widehat{V}_{STA}(K)$ has a negative slope at $K = 0$ then the value of firms in a stakeholder society is always lower.

The sign of the slope of $\widehat{V}_{STA}(K)$ at $K = 0$ is determined by the sign of G_β . To establish when G_β will be positive or negative, we vary π_2^M in the range $\pi_2^D \leq \pi_2^M \leq \pi_2^D + 4d\epsilon^2$ so that the strategic complementarity condition (6) is satisfied. For $\pi_2^M = \pi_2^D$, G_β equals $\beta d > 0$; while for $\pi_2^M = \pi_2^D + 4d\epsilon^2$, it becomes $(\beta - 1)d < 0$ since $\beta < 1$. Moreover, differentiating G_β twice with respect to π_2^M it can be seen that the expression is concave in π_2^M . Using this with the initial positive sign and subsequent negative sign of G_β , it follows there exists a unique solution $\bar{\pi}_2^M$ such that $G_\beta = 0$ in the relevant range. All this implies that $G_\beta > 0$ for $\pi_2^M < \bar{\pi}_2^M$, and $G_\beta < 0$ for $\pi_2^M > \bar{\pi}_2^M$. For $\pi_2^M = \pi_2^D$, firms in a stakeholder society are more valuable than in a shareholder society for $0 < K < K^*$. As π_2^M increases, the range of K for which stakeholder firms are more valuable decreases. When $\pi_2^M = \bar{\pi}_2^M$, stakeholder firms cease to be more valuable than shareholder firms for any K .

The result illustrates that shareholders' and stakeholders' interests are not necessarily opposed but rather can be aligned. This happens when firms' stakeholder orientation serves to soften competition sufficiently. Then, the higher prices charged by stakeholder-oriented firms benefit the shareholders in terms of higher overall profits and the stakeholders in terms of higher probability of survival. However, when the firms' stakeholder orientation is too large (i.e., when K is too big), being stakeholder oriented actually decreases firm value since it forces firms to focus too much on survival at the cost of losing profitability and market

value. Likewise, when π_2^M is sufficiently large, the strategic benefit of committing to charge a higher price is low since each firm wants to be the only firm in operation in future periods. This can be seen from equation (6), where it is clear that as π_2^M increases the value of committing to charge a high price through a stakeholder orientation decreases. When π_2^M is so large that $G_\beta < 0$, firms are worse off as a result of their stakeholder orientation.

As already noted above, even if having firms caring about stakeholders can be beneficial for both shareholders and other stakeholders, it may not enhance total welfare. The reason is that consumers are worse off due to the higher prices stakeholder firms charge and the consequent reduction in output.

4 Globalization: Competition between Shareholder and Stakeholder Firms

So far we have considered the case where all firms operate in the same legal environment and have contrasted the effects of having stakeholder concerns in place. We now consider a setting where firms of different types compete together. This type of competition may occur as a result of globalization where firms from shareholder societies (such as the US) compete with those in countries where some measure of stakeholder governance is mandated (such as Germany). We first consider the circumstances where a stakeholder firm is more valuable than the shareholder firm with which it competes, and vice-versa. We then perform a cross-regime analysis and compare the situations with mixed competition with the situations where only stakeholder firms or only shareholder firms are active.

We adopt the convention that firm i is the shareholder firm and firm j is the stakeholder firm so that $K_i = 0$ and $K_j > 0$. With this in mind, firm i 's reaction function is given by (4), while firm j 's reaction function is given by

$$p_{j1} = \frac{A + dp_{i1} + cb}{2b} + \frac{1}{2b} \frac{1}{2\epsilon} \left(\frac{\epsilon - p_{i1} + c}{2\epsilon} \pi_2^M + \frac{p_{i1} - c + \epsilon}{2\epsilon} \pi_2^D \right) + \frac{1}{2b} \frac{1}{2\epsilon} K_j, \quad (13)$$

where K_j represents the concern for stakeholder interests embedded in the legal and social environment in firm j 's home country. Solving the two reaction functions, (4) and (13), gives the following closed form solutions for the equilibrium prices of the two firms:

$$\widehat{p}_{i1} = \widehat{p}_1 + \frac{1}{4b\epsilon} \left(\frac{\alpha}{1 - \alpha^2} \right) K_j, \quad (14)$$

$$\widehat{p}_{j1} = \widehat{p}_1 + \frac{1}{4b\epsilon} \left(\frac{1}{1 - \alpha^2} \right) K_j, \quad (15)$$

where from (2) $\alpha = G/2b < 1$. Using this, it can be shown straightforwardly that

$$\widehat{p}_1 < \widehat{p}_{i1} < \widehat{p}_{j1} < \widehat{p}_{1K},$$

where note that we have set $K_j = K$ to be able to compare the asymmetric equilibrium with one stakeholder firm with the equilibrium with two stakeholder firms analyzed above. These inequalities show that both shareholder and stakeholder prices are higher in the asymmetric globalization equilibrium than in the symmetric shareholder equilibrium. Moreover, in the asymmetric equilibrium the price set by the shareholder firm is lower than the price set by the stakeholder firm. Finally, both prices in the asymmetric globalization equilibrium are lower than in the symmetric stakeholder equilibrium.

The intuition behind these last results hinges once again on the effect of the concern for stakeholders on firms' incentives in setting prices. Given that prices are strategic complements, the stakeholder firm "follows" its rival shareholder firm in setting a price lower than when its rival was a stakeholder firm. However, the concern for stakeholders prevents the stakeholder firm from reducing its price to the level charged by the shareholder firm.

Turning next to the comparison of values in the asymmetric equilibria, we substitute (14) and (15) into (2) and the corresponding expression for V_j , and obtain:

$$\widehat{V}_i(0, K_j) = \widehat{V}_{SHA} + \frac{\gamma G_\beta}{2\epsilon(2b - G)^2} K_j + \frac{bG^2}{4\epsilon^2(4b^2 - G^2)^2} K_j^2, \quad (16)$$

$$\widehat{V}_j(0, K_j) = \widehat{V}_{SHA} + \frac{(1 - \gamma)G_\beta}{2\epsilon(2b - G)^2}K_j - \frac{2b(2b^2 - G^2)}{4\epsilon^2(4b^2 - G^2)^2}K_j^2, \quad (17)$$

where

$$\gamma = \frac{2b}{2b + G} < 1, \quad (18)$$

and $\widehat{V}_i(0, K_j)$ refers to the equilibrium value of shareholder firm i competing against stakeholder firm j , while $\widehat{V}_j(0, K_j)$ is the equilibrium value of stakeholder firm j when competing against the shareholder firm i . These expressions allow us to compare the values of the shareholder and stakeholder firms in the asymmetric equilibrium.

Proposition 2 *In an equilibrium with one stakeholder firm and one shareholder firm,*

(a) *if $G_\beta < 0$ and $0 < K_j < K'$, where K' is the value of K that satisfies $\widehat{V}_i(0, K') = \widehat{V}_j(0, K')$, the stakeholder firm is more valuable than the shareholder firm;*

(b) *if $G_\beta < 0$ and $K_j > K'$, or if $G_\beta > 0$, the shareholder firm is more valuable than the stakeholder firm.*

The proposition follows from a simple comparison of (16) and (17). Since $b > d$, we have that $\widehat{V}_i(0, K_j)$ is convex and $\widehat{V}_j(0, K_j)$ is concave in K_j , and their slopes at $K_j = 0$ depend on the sign of G_β . In Figure 4, $G_\beta < 0$ and both $\widehat{V}_i(0, K_j)$ and $\widehat{V}_j(0, K_j)$ are downward sloping at $K_j = 0$, with the slope of the former less than that of the latter since $\gamma > 1 - \gamma$. $\widehat{V}_i(0, K_j)$ and $\widehat{V}_j(0, K_j)$ cross at K' , so that for K_j above this level the shareholder firm is always more valuable. In Figure 5, where $G_\beta > 0$, the slopes of both $\widehat{V}_i(0, K_j)$ and $\widehat{V}_j(0, K_j)$ at $K_j = 0$ are positive, with that of the shareholder firm being greater than that of the stakeholder firm. The shareholder firm is therefore more valuable for any positive K_j when $G_\beta > 0$.

For low values of firm j 's stakeholder orientation (i.e., for $K_j < K'$), it is clear that which firm is better off depends on whether or not having a stakeholder orientation is beneficial. From Proposition 1 we know that when $G_\beta < 0$, being forced to internalize stakeholders' concerns actually leads firms to have a lower value, even if it benefits a firm's stakeholders by increasing the probability of survival for the firm. However, from (16) and (17) we see

that, since $\gamma > 1 - \gamma$, the shareholder firm's value is more sensitive to changes in K_j than the stakeholder firm (for relatively small values of K_j). Therefore, Proposition 2 establishes that in such cases a shareholder firm is worse off than the stakeholder firm against which it competes. Not only does the shareholder firm suffer a loss relative to when it competes against another shareholder firm (i.e., $\widehat{V}_i(0, K_j) < \widehat{V}_{SHA}$), its losses are also greater than the losses for the stakeholder firm. Note as well that, as before, this occurs only when π_2^M , the value of being a monopolist in the second period, is sufficiently high so that $G_\beta < 0$. In this case, strategic complementarities are relatively low, and firms are not able to benefit from the deviation away from value maximization that is embodied in a stakeholder objective function.

Proposition 2 also establishes that when stakeholder concerns are sufficiently large (i.e., for $K_j > K'$), a shareholder-oriented firm always does better when competing against a stakeholder-oriented firm. The intuition for this case is relatively straightforward: when firm j has a strong orientation towards stakeholders, it focuses primarily on survival by charging very high prices at the sacrifice of profitability. The shareholder firm, firm i , benefits from these higher prices, but since it is not as concerned about survival, it gains relative to its stakeholder rival.

The more interesting case arises when $G_\beta > 0$, which occurs when π_2^M is sufficiently small. For this case, Proposition 1 shows having a stakeholder orientation is beneficial to both firms due to the commitment to further soften competition. Here, Proposition 2 suggests that the shareholder firm benefits more than the stakeholder firm: the shareholder gets to free-ride on the increase in price arising out of firm j 's stakeholder orientation, but does not itself have to deviate away from the maximization of shareholder value.

Having analyzed the asymmetric equilibrium, we can compare the payoffs to firms in this equilibrium against the two other alternative regimes: where both firms are stakeholders or where they are both shareholders. We start with a comparison with the symmetric shareholder equilibrium.

Proposition 3 (a) *If $G_\beta < 0$, the value of the symmetric shareholder firm is greater than the asymmetric shareholder firm for $0 < K < K''$, where K'' satisfies $\widehat{V}_i(0, K'') = \widehat{V}_{SHA}$, and is always greater than the value of the asymmetric stakeholder firm.*

(b) *If $G_\beta > 0$, the value of the symmetric shareholder firm is always less than the asymmetric shareholder firm and is less than the asymmetric stakeholder firm for $0 < K < K^\dagger$, where K^\dagger satisfies $\widehat{V}_j(0, K^\dagger) = \widehat{V}_{SHA}$.*

This proposition can be established directly from inspection of (11), (16), and (17), and is also illustrated in Figures 4 and 5. In Figure 4, the first part of the result for $G_\beta < 0$ follows from the negative derivative at $K_j = 0$ and the convexity of $\widehat{V}_i(0, K_j)$. The second part of the result follows from the negative derivative at $K_j = 0$ and the concavity of $\widehat{V}_j(0, K_j)$. Figure 5 shows the case where $G_\beta > 0$. The results similarly follow from the positive derivatives at $K_j = 0$, the convexity of $\widehat{V}_i(0, K_j)$ and the concavity of $\widehat{V}_j(0, K_j)$.

Proposition 3 again points to the importance of the commitment to soften competition that is embodied in firms' stakeholder-oriented governance structures. When such a commitment is valuable (i.e., when π_2^M is relatively small, so that $G_\beta > 0$), a shareholder firm competing against a stakeholder firm can benefit from the stakeholder firm's higher prices. In this instance, a shareholder firm would prefer to compete in a stakeholder-oriented market rather than one where shareholder focus is the norm, if the shareholder firm does not itself change its governance structure.

On the other hand, when internalizing stakeholder concerns is on net bad for firms (i.e., when π_2^M is relatively large, so that $G_\beta < 0$), a shareholder firm prefers to compete with other shareholder firms rather than compete with a stakeholder firm. This occurs because the low level of complementarities implied by $G_\beta < 0$ means that the stakeholder firm's focus on issues other than pure value maximization also drags down the value of the shareholder firm.

Next we consider the comparison with the symmetric stakeholder equilibrium. Note that again we set here $K_j = K$.

Proposition 4 (a) *If $G_\beta < 0$, the value of the symmetric stakeholder firm is always less than the value of the asymmetric shareholder firm and is less than that of the asymmetric stakeholder firm for $0 < K < K'''$ where K''' satisfies $\widehat{V}_j(0, K''') = \widehat{V}_{STA}(K''')$.*

(b) *If $G_\beta > 0$, the value of the symmetric stakeholder firm is greater than the asymmetric shareholder for $0 < K < K^{\dagger\dagger}$ where $K^{\dagger\dagger}$ satisfies $\widehat{V}_i(0, K^{\dagger\dagger}) = \widehat{V}_{STA}(K^{\dagger\dagger})$, and is always greater than that of the asymmetric stakeholder firm.*

This proposition can be established directly from inspection of (12), (16), and (17), and is again illustrated in Figures 4 and 5. The results follow from the sign of the derivative at $K = 0$, the convexity of $\widehat{V}_i(0, K_j)$ and the concavity of $\widehat{V}_j(0, K_j)$ and $\widehat{V}_{STA}(K)$ in the usual way. Note that in Figure 5 where $G_\beta > 0$, $\widehat{V}_j(0, K_j)$ and $\widehat{V}_{STA}(K)$ do not intersect for $K > 0$. This can be shown by first noting that the coefficient of K_j in (17) is smaller than the coefficient of K in (12) since $\gamma < 1$. Moreover, from the comparison of the coefficients of K_j^2 and K^2 , it can be seen that the absolute value of the coefficient in (17) is larger if $2b(2b^2 - G^2) > (b - g)(2b + G)^2$. This condition is equivalent to $G^3 + bG^2 > 0$, which is always satisfied since $G > 0$.

The intuition for Proposition 4 is similar to that presented above for Propositions 2 and 3. When the strategic impact of having a stakeholder orientation is negative, which occurs when $G_\beta < 0$, a stakeholder firm competing in a stakeholder-oriented market is worse off than if it competes with a shareholder firm. The reason is that, since the shareholder firm focuses on pure value maximization, the strategic response of the stakeholder firm is also to not focus excessively on stakeholders, thus choosing a price that is not overly high and losing less money as a result. By contrast, when complementarities are sufficiently strong that firms benefit from being stakeholder-oriented (i.e., when $G_\beta > 0$), the firms that benefit the most are those that are most able to credibly commit to softening competition. Since a stakeholder governance structure does just that, stakeholder firms competing against other stakeholder firms reap the greatest benefit.

One interesting implication of the analysis in this section is that firms with a focus on

the maximization of only shareholder value are likely to encounter greater resistance when entering a market that is stakeholder oriented than would firms that are more stakeholder friendly, since the entry of the former is more detrimental to incumbent firms (as long as a stakeholder orientation creates value, i.e., if $G_\beta > 0$). This can be seen from Proposition 4, which establishes that a stakeholder firm competing with another stakeholder firm will be better off than if it competes with a shareholder firm. This resistance may come either directly from the existing firms, or from government policies geared toward protecting domestic firms from the threat of foreign entry. Moreover, this resistance is likely to be greatest in countries where stakeholder governance is the norm, since the firms in these countries are the ones most likely to be affected by the entry of firms with only a shareholder focus.

Similarly, Proposition 4 also implies that a shareholder firm entering a stakeholder market may in fact prefer to allow its foreign operations to adopt the norm in that market and mimic the behavior of a stakeholder-oriented firm. By doing so, they further soften competition and raise profits, not only for themselves but also for the incumbent stakeholder since, as per the proposition, competition among all stakeholder firms generates the most value for all firms. By contrast, the same proposition also tells us that a stakeholder firm would never choose to change its governance structure even when entering a shareholder-oriented market. This is because, even though the firm's stakeholder orientation puts it at a disadvantage relative to the shareholder firm, its profits are nevertheless higher with a stakeholder governance structure than as a shareholder firm.

5 Self-enforcing Stakeholder Societies

So far we have analyzed the effect of a concern for stakeholders on firms' equilibrium prices, quantities, and profits. In doing this we have exogenously specified firms' objective functions, taking as given that firms care about stakeholders, either from convention or because of legal requirements such as co-determination. We now analyze whether adopting such a

concern for employees and suppliers into the firm’s objective function would indeed arise as an equilibrium result. That is, we endogenize the choice of K_i and consider whether firms find it optimal to adopt organizational structures that put weight on stakeholders and thus precommit to act like a stakeholder firm. This reflects the situation in countries like France or Finland where firms can voluntarily adopt stakeholder concerns. While incorporating K_i into firms’ objective functions clearly softens competition and may increase profits, it may not be an equilibrium for firms to do this. The reason is that, when firm j cares about its stakeholders, it raises its price and lowers its output. Firm i in that case may have an incentive to commit to being aggressive by lowering its own price to capture a greater market share, which it achieves by choosing an appropriate organizational structure that commits it not to care about stakeholders.

We analyze here two cases. First, we study whether, absent any other consideration, a firm would naturally choose to assign some positive weight to its general stakeholders in its objective functions. Second, we consider how consumers’ desires to transact with “socially conscious” firms can alter the incentives for firms to become stakeholder oriented.

5.1 Firms’ Optimal Objective Functions

We extend here the model to introduce a first stage where we allow firms to choose their own K_i . Assume that at time $t = 0$ each firm i chooses the weight K_i that it places on stakeholder concerns as part of its objective function. Then, conditional on each firm’s time 0 choice of K_i , at time $t = 1$ each firm chooses a price to charge in the first period.

In order to precommit to the objective function chosen at the initial stage, firms must implement an appropriate decision-making structure within the firm. As discussed above, putting workers’ representatives on the board is one extreme way of doing this. Requiring consensus or allowing managers more autonomy are other ways to precommit to pursue broader objectives. O’Sullivan (2000) contains a discussion of how the organizational structure can be designed to incorporate stakeholder concerns in the decision making process of

the firm.

Solving the two-stage game by backward induction, for given K_i and K_j , firm i 's optimal price at $t = 1$ is found from the same maximization as in (8). Solving the first order condition gives the following reaction function

$$p_{i1} = \frac{A + dp_{j1} + cb}{2b} + \frac{1}{2b} \frac{1}{2\epsilon} \left(\frac{\epsilon - p_{j1} + c}{2\epsilon} \pi_2^M + \frac{p_{j1} - c + \epsilon}{2\epsilon} \pi_2^D \right) + \frac{1}{2b} \frac{1}{2\epsilon} K_i,$$

and similarly p_{j1} as in (13). Solving these simultaneously gives

$$\begin{aligned} \hat{p}_{i1}(K_i, K_j) &= \frac{A + cb + \frac{1}{2\epsilon} \left(\frac{\epsilon+c}{2\epsilon} \pi_2^M + \frac{\epsilon-c}{2\epsilon} \pi_2^D + K_j \right) + \frac{1}{4b\epsilon} (K_i - K_j)}{(2b - G)} \\ &= \hat{p}_1 + \frac{\frac{1}{2\epsilon} K_j + \frac{1}{4b\epsilon} (K_i - K_j)}{(2b - G)}. \end{aligned}$$

The function $\hat{p}_{j1}(K_i, K_j)$ can be found similarly.

At $t = 0$, firm i then maximizes the objective function reflecting the market value of the firm with respect to K_i , after substituting in the equilibrium prices $\hat{p}_{i1}(K_i, K_j)$ and $\hat{p}_{j1}(K_i, K_j)$. For firm i , the objective is:

$$\max_{K_i} \hat{V}_i(K_i, K_j) = E[\pi_{i1}(\hat{p}_{i1}, \hat{p}_{j1})] + F(\hat{p}_{i1} - c)[(1 - F(\hat{p}_{j1} - c)) \pi_2^M + F(\hat{p}_{j1} - c) \pi_2^D], \quad (19)$$

where $\hat{V}_i(K_i, K_j) = V_i(\hat{p}_{i1}(K_i, K_j), \hat{p}_{j1}(K_i, K_j))$. In defining the maximization problem with respect to K_i we are implicitly assuming that the firm decides to implement a decision-making structure that explicitly incorporates a concern for stakeholders (that is $K_i > 0$) if this maximizes the value of the firm to shareholders.

Solving the first order condition for both firms' choice it can be shown that the unique symmetric equilibrium involves

$$\hat{K}_i = \hat{K}_j = \max \left\{ \frac{G}{4b^2 - 2bG - G^2} 2\epsilon G_\beta, 0 \right\}. \quad (20)$$

We can then state the following proposition which summarizes the discussion above.

Proposition 5 *When firms choose the extent to which they should be stakeholder oriented, then*

(a) *if $G_\beta > 0$ then $\widehat{K}_i = \widehat{K}_j > 0$ as given by (20) and both firms choose to be stakeholder oriented;*

(b) *if $G_\beta < 0$ then $\widehat{K}_i = \widehat{K}_j = 0$ and both firms choose to be shareholder firms.*

As in the previous section the key to whether firms endogenously adopt stakeholder concerns is the sign of G_β . It can easily be checked that since $b > d$ and $G > 0$ then $4b^2 - 2bG - G^2 > 0$ so that it is only the sign of G_β that is important. If this is negative, as shown in Figure 4, then firms will always choose to be shareholder oriented. If this is positive, so that having a stakeholder orientation is valuable to firms (see Proposition 1 above) as shown in Figure 5, then firms will voluntarily choose to be stakeholder oriented, with $\widehat{K}_i = \widehat{K}_j > 0$ given as in (20).

As a final step, we need to check whether deviating to the shareholder objective function, with the competitor remaining as a stakeholder firm, is profitable. To establish this, recall the definition of $K^{\dagger\dagger}$, given by the value of K that satisfies $\widehat{V}_i(0, K^{\dagger\dagger}) = \widehat{V}_{STA}(K^{\dagger\dagger})$. This variable can be calculated explicitly as

$$K^{\dagger\dagger} = \frac{G}{(b-G)(2b+G) + bG^2/(2b+G)} 2\epsilon G_\beta. \quad (21)$$

It can now be shown that $\widehat{K}_i = \widehat{K}_j < K^{\dagger\dagger}$. To see this, note from (20) and (21) that $\widehat{K}_i = \widehat{K}_j < K^{\dagger\dagger}$ is equivalent to $G^2 < 2b^2$, which is necessarily satisfied. Therefore, deviating to the shareholder objective function is never profitable, and no asymmetric equilibrium exists where one firm chooses to be a shareholder firm and the other chooses to be a stakeholder firm. All this implies that the values of \widehat{K}_i and \widehat{K}_j in Proposition 5 are the unique equilibrium in the choice of degree of stakeholder orientation. Therefore, firms will endogenously choose a stakeholder-oriented governance structure precisely when such a governance structure leads

to an increase in firm value.

5.2 Social Norms in Stakeholder Societies

When the conditions of Proposition 5 are not satisfied, it is not worthwhile for firms to choose to adopt a concern for stakeholders because of the direct effects on their strategic interaction. Even in these situations, however, there may be “social norms” or “social concerns” that induce firms to become more stakeholder-oriented. For example, as discussed in Section 2, most Japanese firms appear to believe in a stakeholder orientation. One possible way to reconcile this with our model is that in societies like Japan firms that do not adopt a stakeholder orientation may be “punished” by consumers. To study this issue further and to capture one aspect of what may be meant by a “stakeholder society,” we suppose in this section that customers care directly about firms’ social concerns and have a preference for buying from such firms. Specifically, we assume that customers prefer to purchase from firms that commit to care not only about shareholder value, but also about their other stakeholders. This implies that if firm i cares relatively more about its employees and other stakeholders than firm j , its demand will be less sensitive to changes in its own price.

One simple way of incorporating this kind of preference by customers is to assume that $b = H(K_i, K_j)$, with $\frac{\partial H}{\partial K_i} < 0$ and $\frac{\partial H}{\partial K_j} > 0$. This means that firm i ’s demand becomes less sensitive to p_{i1} as firm i increases its concern for stakeholders, and more sensitive to p_{i1} as firm j increases such concern. Note that we make no assumption on whether overall demand will increase, but rather only that the share of the market that any given firm can obtain by incorporating K_i into its objective function may vary. Indeed, it could well be that if both firms care about stakeholders equally, then there is no effect on the demand they face. Formally, this can be implemented by assuming that $H(K_i, K_j) = \bar{H}$ whenever $K_i = K_j$.

With this in mind, we can now solve the same maximization problem as before with respect to K_i as given by (19). We now obtain the following.

Proposition 6 *When customers' demand is sufficiently responsive to firms' concern for stakeholders, firms always choose to adopt a stakeholder approach to governance, i.e., for $\left|\frac{\partial H}{\partial K_i}\right|$ sufficiently large, $\widehat{K}_i > 0$. Moreover, \widehat{K}_i is increasing in $\left|\frac{\partial H}{\partial K_i}\right|$.*

To see why this result holds we differentiate the firm's overall profit \widehat{V}_i with respect to K_i , to obtain

$$\frac{\partial \widehat{V}_i}{\partial p_{i1}} = \frac{\partial \widehat{V}_i}{\partial p_{i1}} \Big|_{b \text{ constant}} + \frac{\partial E[\pi_{i1}(\cdot)]}{\partial b} \frac{\partial H}{\partial K_i}. \quad (22)$$

The term $\frac{\partial E[\pi_{i1}(\cdot)]}{\partial b} \frac{\partial H}{\partial K_i}$ represents the direct effect of an increase in K_i on first period expected profits. This term is positive, as it represents the fact that, holding price constant, an increase in K_i decreases b , and thus raises the (out of equilibrium) demand for firm i , raising firm i 's expected profit. Moreover, this term is greater in magnitude the larger is $\frac{\partial H}{\partial K_i}$. It is therefore straightforward to see that, much as in Proposition 5, in equilibrium firms will choose $\widehat{K}_i > 0$ if $G_\beta > 0$. However, since $\frac{\partial E[\pi_{i1}(\cdot)]}{\partial b} \frac{\partial H}{\partial K_i} > 0$, they may also choose $\widehat{K}_i > 0$ even if $G_\beta < 0$ as long as $\frac{\partial H}{\partial K_i}$ is sufficiently large.

The proposition establishes that for $\frac{\partial H}{\partial K_i}$ large enough in absolute value, it will always be the case that $\widehat{K}_i > 0$ in equilibrium. In other words, when customers are sufficiently socially conscious, firms adopt a governance policy that focuses more generally on stakeholders rather than just shareholders. Moreover, the comparative statics result suggests that the more sensitive is consumers' demand to increases in firms' commitment to weighting stakeholders, the more will firms commit to providing this.

One conclusion that can be drawn from these cases is that stakeholder societies can be self-reinforcing in a wide range of situations. The fact that social norms exist that lead customers to prefer to do business with socially conscious firms makes firms want to be socially conscious. Since every firm does this, there need be no change in aggregate demand and sales, but there is an increase in prices and possibly in firms' profits as well. Firms thus compete with each other by setting up their organizational structures so as to in essence cooperate more. A result of the social concern by consumers, however, is that there is a

transfer from consumers to the firms and the workers. An interesting side note is that since output is reduced, the stakeholder society is also farther away from the efficiency of perfect competition, and this happens independently of whether firms' profits end up higher or lower.

6 Concluding Remarks

Most of the literature on corporate governance is concerned with ensuring that the firm is operated in the interests of shareholders. However, in many countries such as Germany firms are required by law or social convention to be not only concerned with shareholders but also other stakeholders such as employees and suppliers. In this paper we have developed a model of stakeholder capitalism and have shown that both shareholders and stakeholders can be made better off if firms adopt a concern for stakeholders. We also considered the situation resulting from globalization where stakeholder and shareholders compete and identify the circumstances where each does better. Since stakeholder firms can do better than shareholder firms we also investigate situations where firms would voluntarily choose to become stakeholder oriented and where they would choose to be shareholder oriented. All these results should hold in more general models of the product market.

Even when stakeholder orientation is not mandated by law as in the case of France or Finland, we show that there exist circumstances where firms will voluntarily want to embed concern for stakeholders in their organizational structures since this increases their value compared to just focusing on shareholders. One way of doing this is to give managers some latitude since as employees of the firm their basic incentives are somewhat aligned with the workers and other stakeholders. Even in other circumstances where firm value is not directly increased in this way, firms may voluntarily adopt a concern for stakeholders if consumers prefer to do business with such firms. Consistent with our model, there is recent evidence that employee representation on supervisory boards increases firm efficiency and market value (Fauver and Fuerst, 2006). An open question, however, is whether the pricing policies

of firms differ systematically as a function of their governance structure, as predicted by our framework, or whether the higher value accruing to firms with employee representation stems from other sources.

The model we have used for the product market is clearly very simple. Many other features could be added. Also, we have treated shareholders, stakeholders, and consumers as different groups. In practice, of course, there is a large overlap between them. For example, workers are also consumers. One issue is whether concern for stakeholders can be welfare improving compared to firms focusing on shareholders alone. Given that there are deadweight costs and rents this is a possibility. If so, how broad are these circumstances? We leave these important issues for future research.

References

Acharya, V., S. Myers, and R. Rajan, 2008, “The Internal Governance of Firms,” working paper, University of Chicago.

Allen, F., 2000, “Capital Structure and Imperfect Competition in Product Markets,” in P. Hammond and G. Myles (eds.), *Incentives, Organization, and Public Economics: Papers in Honour of Sir James Mirrlees*, Oxford: Oxford University Press, 281-301.

Allen, F., 2005, “Corporate Governance in Emerging Markets,” *Oxford Review of Economic Policy* 21, 164-177.

Allen, F., and D. Gale, 2000, *Comparing Financial Systems*, Cambridge, MA: MIT Press.

Aoki, M., 1990, “Toward an Economic Model of the Japanese Firm,” *Journal of Economic Literature* 28, 1-27.

Aggarwal, R. and A. Samwick, 1999, “Executive Compensation, Strategic Competition and Relative Performance Evaluation; Theory and Evidence,” *Journal of Finance* 54, 1999-2043.

Becht, M., P. Bolton, and A. Röell, 2003, “Corporate Governance and Control,” Chapter 1 in G. Constantinides, M. Harris, and R. Stulz, (eds.) the *Handbook of the Economics of Finance*, Amsterdam: Elsevier-North-Holland, 1-109.

Blair, M., 1995, *Ownership and Control: Rethinking Corporate Governance for the Twenty-first Century*, Washington, D.C.: Brookings Institution.

Blinder, A., 1993, “A Simple Note on the Japanese Firm,” *Journal of the Japanese and International Economies* 7, 238-255.

Brander, J. and T. Lewis, 1986, “Oligopoly and Financial Structure: The Limited Liability Effect,” *American Economic Review* 76, 956-970.

Bris, A., and N. Brisley, 2005, “A Theory of Optimal Expropriation, Mergers and Industry Competition,” working paper, Yale School of Management.

Claessens, S., and K. Ueda, 2008, “Banks and Labor as Stakeholders: Impact on Economic Performance,” IMF Working Paper 08/229, Washington, D.C.

Cremers, M., V. Nair, and U. Peyer, 2008, "Takeover Defenses and Competition: The Role of Stakeholders," forthcoming, *Journal of Empirical Legal Studies*.

Dasgupta, S. and S. Titman, 1998, "Pricing Strategy and Financial Policy," *Review of Financial Studies* 11, 705-737.

Denis, D., and J. McConnell, 2003, "International Corporate Governance," *Journal of Financial and Quantitative Analysis* 38, 1-36.

Dixit, A., 1986, "Comparative Statics for Oligopoly," *International Economic Review* 27, 107-122.

Dore, R., 2000, *Stock Market Capitalism: Welfare Capitalism: Japan and Germany Versus the Anglo-Saxons*, Oxford: Oxford University Press.

Fauver, L. and M. Fuerst, 2006, "Does Good Corporate Governance Include Employee Representation? Evidence from German Corporate Boards," *Journal of Financial Economics* 82, 673-710.

Fershtman, C. and K. L. Judd, 1987, "Equilibrium Incentives in Oligopoly," *American Economic Review* 77, 927-940.

Jackson, G. and H. Miyajima, 2007, "Introduction: The Diversity and Change of Corporate Governance in Japan," Chapter 1 in M. Aoki, G. Jackson, and H. Miyajima, (eds.), *Corporate Governance in Japan: Institutional Change and Organizational Diversity*, Oxford: Oxford University Press.

Jensen, M. and W. Meckling, 1976, "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure," *Journal of Financial Economics* 3, 305-360.

Licht, A., 2003, "The Maximands of Corporate Governance: A Theory of Values and Cognitive Style," Law Working Paper No. 16/2003, European Corporate Governance Institute, Brussels.

O'Sullivan, M. A., 2000, *Contests for Corporate Control. Corporate Governance and Economic Performance in the United States and Germany*, Oxford: Oxford University Press.

Pagano, M. and P. Volpin, 2005, "The Political Economy of Corporate Governance,"

American Economic Review 95, 1005-1030.

Rieckers, O. and G. Spindler, 2004, "Corporate Governance: Legal Aspects," Chapter 11 in J. Krahnert and R. Schmidt (eds.), *The German Financial System*, Oxford: Oxford University Press, 350-385.

Schmidt, R., 2004, "Corporate Governance in Germany: An Economic Perspective," Chapter 12 in J. Krahnert and R. Schmidt (eds.), *The German Financial System*, Oxford: Oxford University Press, 386-424.

Scott, K., 1998, "The Role of Corporate Governance in South Korean Economic Reform," *Journal of Applied Corporate Finance* 10, 8-15.

Shleifer, A. and R. Vishny, 1997, "A Survey of Corporate Governance," *Journal of Finance* 52, 737-783.

Skliwas, S., 1987, "The Strategic Choice of Managerial Incentives," *RAND Journal of Economics* 18, 452-458.

Tirole, J., 2001, "Corporate Governance," *Econometrica*, 69, 1-35.

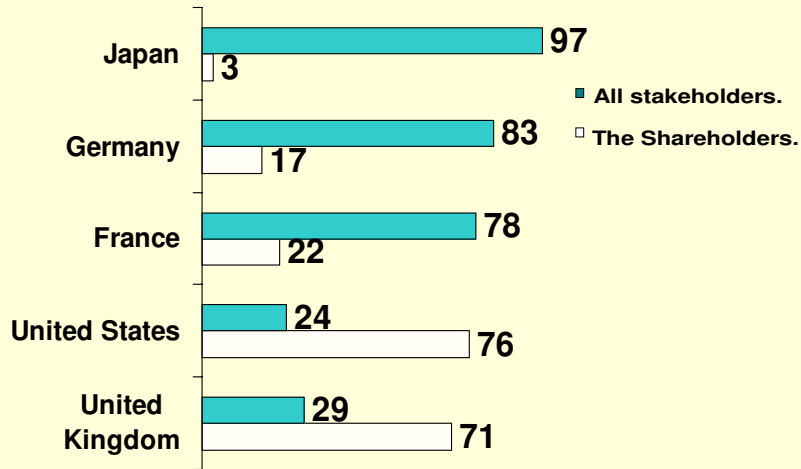
Tirole, J., 2006, *The Theory of Corporate Finance*, Cambridge, MA:MIT Press.

Wang, B. and H. Huang, 2006, "China's New Company Law and Securities Law: An Overview and Assessment," *Australian Journal of Corporate Law* 19, 229-242.

Wymeersch, E., 1998, "A Status Report on Corporate Governance Rules and Practices in Some Continental European States," in K. Hopt, H. Kanda, M. Roe, E. Wymeersch, and S. Prigge (eds.), *Comparative Corporate Governance: The State of the Art and Emerging Research*, Oxford: Clarendon Press.

Yoshimori, M., 1995, "Whose Company Is It? The Concept of the Corporation in Japan and the West," *Long Range Planning* 28, 33-44.

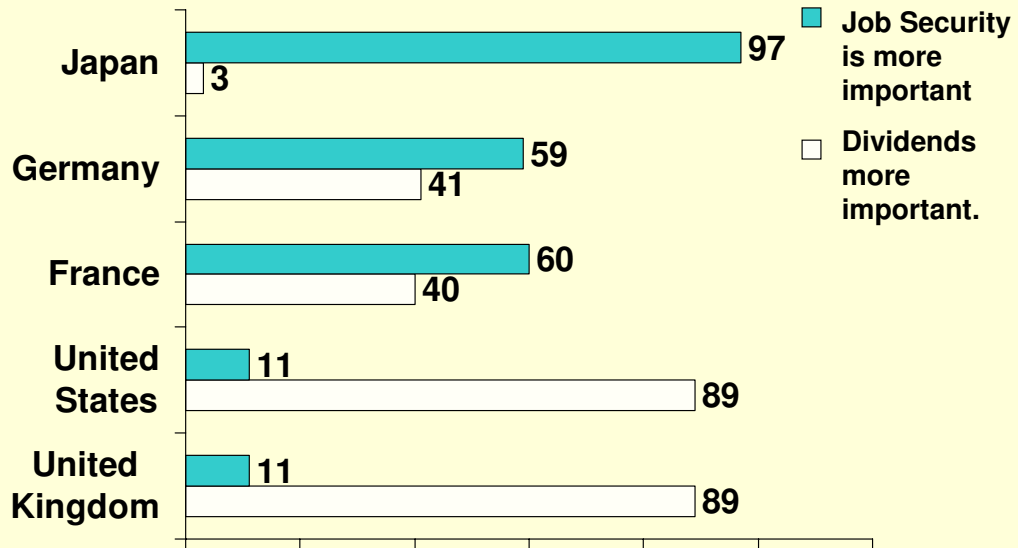
Figure 1: Whose Company Is It?



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

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

Figure 3: Firm value in the symmetric equilibrium. The figure depicts firm value in the case where both firms are shareholder-oriented (\hat{V}_{SHA}) or stakeholder-oriented (\hat{V}_{STA}) as a function of K . The shape of \hat{V}_{STA} varies depending on the sign of the function G_β . The threshold K^* is given by $\frac{1}{2\epsilon}G_\beta/(b-G)$.

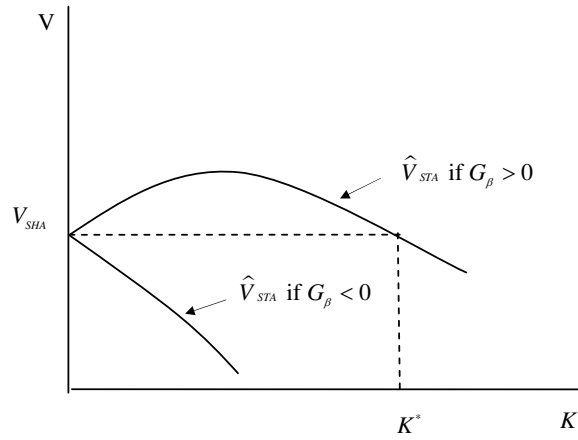


Figure 4: Firm value in the symmetric and asymmetric equilibrium when $G_\beta < 0$. The figure depicts the value of an asymmetric shareholder firm ($\widehat{V}_i(0, K_j)$), an asymmetric stakeholder firm ($\widehat{V}_j(0, K_j)$), a symmetric shareholder firm (\widehat{V}_{SHA}) and a symmetric stakeholder firm (\widehat{V}_{STA}) as a function of K when $G_\beta < 0$. The threshold K' satisfies $\widehat{V}_i(0, K') = \widehat{V}_j(0, K')$, K'' satisfies $\widehat{V}_i(0, K'') = \widehat{V}_{SHA}$, and K''' satisfies $\widehat{V}_j(0, K''') = \widehat{V}_{STA}$.

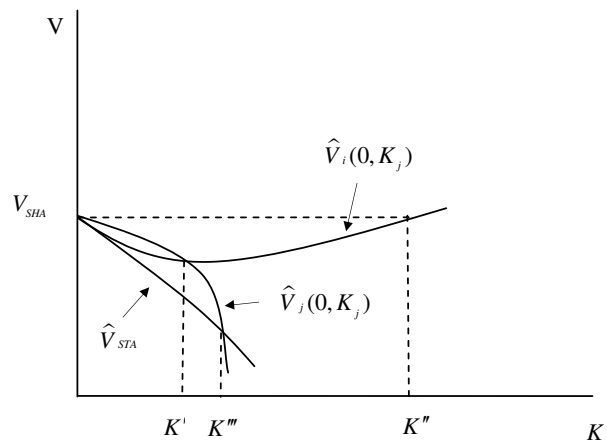


Figure 5: Firm value in the symmetric and asymmetric equilibrium when $G_\beta > 0$. The figure depicts the value of an asymmetric shareholder firm ($\hat{V}_i(0, K_j)$), an asymmetric stakeholder firm ($\hat{V}_j(0, K_j)$), a symmetric shareholder firm (\hat{V}_{SHA}) and a symmetric stakeholder firm (\hat{V}_{STA}) as a function of K when $G_\beta > 0$. The threshold K^+ satisfies $\hat{V}_j(0, K^+) = \hat{V}_{SHA}$, and K^{++} satisfies $\hat{V}_i(0, K^{++}) = \hat{V}_{STA}$.

