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**APPROACHES TO PARTNERSHIPS
CAUSING ASYMMETRIES BETWEEN
JAPAN AND THE WEST**

by

Thomas Andersson

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Postadress
Box 5501
114 85 Stockholm

Gatuadress
Industrihuset
Storgatan 19

Telefon
08-783 80 00
Telefax
08-661 79 69

Bankgiro
446-9995

Postgiro
19 15 92-5

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WEST

Thomas Andersson

The Industrial Institute
for Economic and Social Research (IUI)
Box 5501, 114 85, Stockholm, Sweden

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Abstract:

This paper argues that Japanese and western firms have established different equilibria at home in how to form relations. It is shown that this may explain the current asymmetries in trade and investment. Given that commitments are not credible, there are impediments to mutually acceptable partnerships for a westerner in Japan, limiting western exports. Japanese firms in the West, on the other hand, have an incentive to organize themselves in the western way, accounting for unimpeded exports of Japanese goods. Protectionism in the West does not improve the situation. Undoing the barrier requires that western firms commit themselves to the Japanese market.

APPROACHES TO PARTNERSHIPS CAUSING ASYMMETRIES BETWEEN JAPAN AND THE WEST*

I Introduction

The spurt in Japanese exports has been explained on the basis of, e.g., factor endowments, savings behaviour and terms of trade (Saxonhouse, 1983; Saxonhouse and Stern, 1989; Krugman 1987). However, there are no satisfactory explanations for the small size of imports and inward investments in Japan. The country liberalized most of its imports and capital markets in the 1980s, and the yen has strengthened. Still, Japan's trade and investment imbalances continue to grow. There are now accusations not of formal, but of informal barriers to trade. Some westerners suggest that Japanese consumers prefer home goods because they are "racist" (Dornbusch, 1989). This seems inconsistent with the high price that Japanese consumers are willing to pay for western goods.

The most common allegation today rather concerns *Keiretsu*. Rigid, long-term relationships, cross stock holdings and customized markets, are said to close foreigners out. In short, foreign firms argue that they have difficulties to be accepted as business partners in Japan. At the same time, the adaptability of Japanese firms abroad surprises many observers. Lay-offs of workers, hostile takeovers and other kinds of behaviour which are unacceptable in Japan, are now commonly practiced by Japanese firms abroad. Thus, foreigners seem to have difficulties in adapting to Japanese business practices, while the Japanese adapt to western ones relatively easily.

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These circumstances bring attention to the functioning of intermediate goods markets, and how relations are formed between economic counterparts. According to Kanemoto and MacLeod (1991), firms in Japan and in "western" countries belong in separate equilibria. However, there has not yet been any attempt to analyse the consequences of multiple equilibria in the approach to partnerships for international interactions.

This issue is addressed in the present paper, which presents an explanation for imbalances in trade and investment between Japan and the West, i.e. the industrialized countries in North America and western Europe. Undertaking business in a foreign country, in the form of trade, licensing or direct investment, is assumed to require some form of relation, or partnership, with a foreign firm. Meanwhile, the different partnerships organized by a firm are viewed as interrelated with each other, since they have implications for the inner restrictions and opportunities that confront the organization as a whole.

It is further argued that Japanese and western firms have different objectives when approaching individual partnerships, which essentially depends on the varying organization of their *other* partnerships. The construction of contracts is not studied in detail, however, and difficulties to achieve credible commitments are merely commented on.¹ Adding contractual considerations may present interesting extensions, and could help endogenizing why Japan and the West form different equilibria.

The paper is organized as follows. Section II discusses organizational features of Japanese firms compared to western ones. Section III sets up the model, formalizing alternative approaches to partnerships. Multiple equilibria within a single economy are demonstrated in Section IV. Section V analyses international interactions. Section VI concludes.

1 The principal-agent literature is almost entirely bilateral in nature. Multiple principals and agents have been considered in the literature on vertical restraints, but this is not immediately relevant for the present study. Here, I focus on the incentives which confront actors rather than the construction of specific contracts.

II Organizational differences

So far, most studies of the Japanese economy have focused on specific aspects, such as labour relations, financial markets, supplier relations, coordination, innovative capacity, etc. In several respects, there are considerable differences between the organization of Japanese and western firms. As discussed by Aoki (1991) and Okuno-Fujiwara (1992), it is crucial to consider special features of the Japanese system as a whole.

It is a stylized fact that the Japanese view business relationships "differently" than westerners. In their eyes, westerners are "dry", implying impersonal and short-sighted attitudes which value only short-term profits. The Japanese view themselves as "wet", suggesting that deals rely on personal relationships and mutual interests. Westerners, on the other hand, experience that negotiations with the Japanese are time-consuming and costly, and that promised deals do not materialize. Emmot (1989), for example, characterizes the Japanese as "unreliable". Are such perceptions the mere outcome of prejudice in contact with the unknown, or is there an underlying economic rationale, reflecting an inherent barrier to establishing effectively functioning relationships across the border?

Various empirical studies have found support for systematically "closer" business interactions between separate Japanese firms than between corresponding western ones (Clark et al., 1987; Asanuma, 1988). Although formal contracts are generally short-term in Japan, human relations appear to account for stable, continuous relationships. Firms keep alternative suppliers which are played against each other, and seldom are cut off. Activities which are not immediately relevant for the core of a firm's organization is generally removed to form its own corporate unit, and there is a heavy reliance on subcontractors, distributors, banks and other external bodies. Western firms, by contrast, rather tend to unify interests through internalization, or vertical integration, which is normally viewed as a means to handle risk-sharing, moral hazard and adverse selection.

The conditions under which vertical integration effectively does away with such problems are far from clear, however. While most of the literature assumes that it always works, Grossman and Hart (1986) takes the position that those problems remain untouched. It appears that the outcome may differ considerably between different settings, as independent economic counterparts, or partners, tend to form relatively more interconnected and exclusive relationships in Japan than in western societies. With actors committed to their particular partnerships, they also invest within them. Asanuma (1989), Hoshi et al. (1990) and others have demonstrated benefits in terms of risk-diversification, complementarity of assets and the enhancement of human skills.

Seeking explanations why such close relations have emerged in Japan, Itoh (1989) points out both social and economic factors. There are relatively strong reputation effects in Japan, with more severe punishments for broken promises than in the West. This is observable e.g. in the modest role played by the legal system, as conflicts can typically be resolved by the contenders themselves. Itoh also argues that high growth favours continuous contracts between economic actors in general. Partly due to late industrialization, Japan is believed to have undeveloped external markets relative to the "markets" within organizations. This shows up in, e.g., the remuneration of workers. While "wages" - work priced in the market as a whole - dominate in the West (particularly in Europe, which industrialized first), Japan uses "salaries" - work priced within companies.

The nature of inter-firm relationships partly reflects differences in the internal organization of firms. In this respect, the mechanisms governing processing, dissemination, and utilization of information represent a focal aspect.² In Japanese firms, information processing and operational activities are closely connected. There is a great deal of horizontal coordination, and strategic corporate

2 Shimada (1983) found that the exchange of information between the government, capital owners and workers has made the wage increases in Japan more compatible with the macro economy than in other countries. Some refer to Japan as a "no exit" society, meaning that there is no way out of personal relationships.

decisions are less often imposed by the top management on the basis of centralized information. Decisions require the consensus of those who are involved in practical work, and the responsibility for designing and coordinating activities is to a great extent delegated to the operational level. Broadly speaking, western companies rather rely on centralized information. Decisions are made and orders distributed in a hierarchical "top-down" fashion, accounting for more layers in the organizational structure and more supervision at the core of the firm.

The centralized information structure allows for greater responsiveness to major shocks. The horizontally oriented structure, on the other hand, accounts for adaptability on the operational level in response to, e.g., changes in consumer preferences or the strategies of other firms. Itoh (1990) argues that the delegation of coordination is more favourable the weaker the systematic risk in work processes, and the more homogeneous the labour force is in terms of risk-attitudes and work-ethics. Various studies of employment, promotion and rank practices within Japanese firms have analyzed how these are adapted to enhance the effectiveness of the horizontally organized Japanese company (Okuno-Fujiwara, 1989; Kanemoto and Macleod, 1991).

Given tangible differences in the organization of Japanese firms compared to western ones, and how they team up with each other, what are the implications for interactions between them?

III The model

Before turning to the interaction between Japanese and western firms, we here formalize some fundamental aspects of the differences in organization discussed above. It is hard to generalize organizational structures, as they vary with production functions and the external framework which is relevant for the specific firm. At the same time, western firms are more or less universally underrepresented in Japan, while Japanese organizations throughout appear to adapt more successfully abroad. For this reason, there is a need for a model which captures

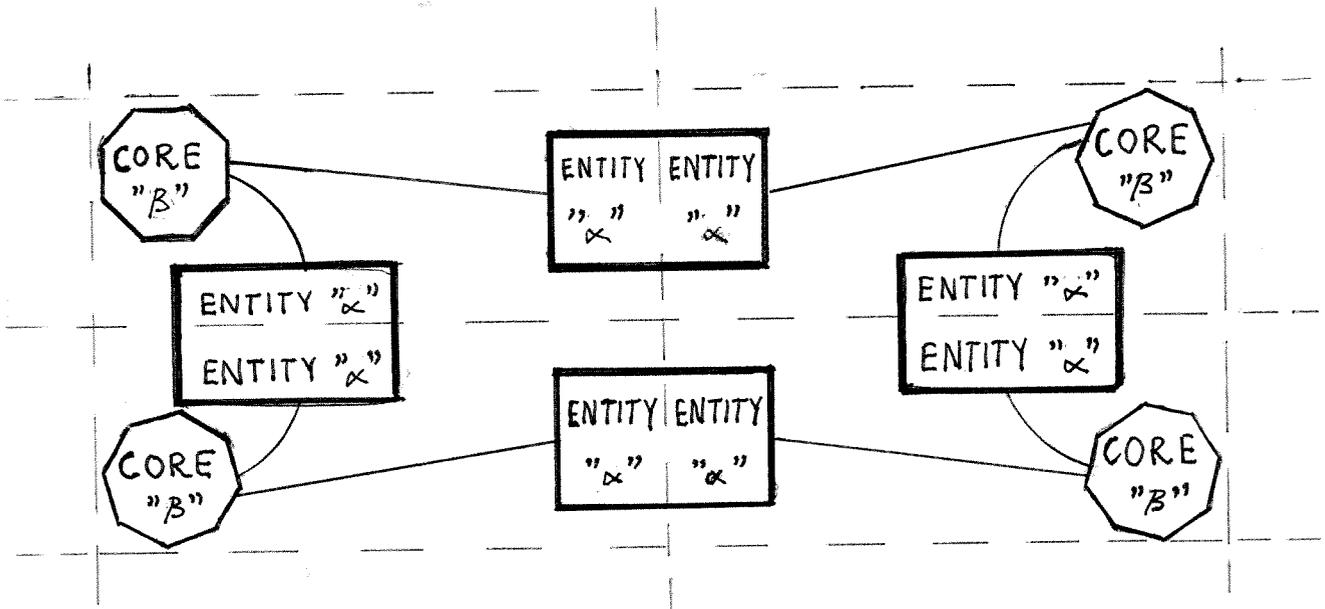
broad differences between Japan and the West.

An economic transaction is commonly viewed as a punctual and isolated act of exchange between a buyer and a seller who try to extract as much surplus as possible from each other. In the intermediate goods markets, this is the exception rather than the rule. Transactions are generally not of a one-shot nature, but take the form of bundles of actions that may be repeated many times. As brought up by Commons (1934), trading involves the harmonization of relations between parties which may otherwise be in conflict. Many relations must be upheld simultaneously, with collaborators, suppliers, distributors, etc. The interaction between two firms is here referred to as a partnership, which represents the entire exchange between them. Our unit of study is an 'entity', meaning the division or section of a firm which collaborates with a single partner entity belonging to another firm, named the "particular" partner. A certain partnership is not independent of the other ones pursued by a firm, which means that firms are thought of as always made up of several entities. Firms maximize profit in their organization as a whole, i.e. across their range of entities, taking two basic sources of profit into account. One is the enhancement of the specific activity in which an entity is involved. The other is related to the company as a whole. The former kind emanates from complementarity with the particular partner, so-called relation-specific skills. The latter draws on economies of scale or scope in administration, finance, marketing, R&D, etc., in the "core" of a firm.

The two kinds of gains are partly conflicting. Adaptation to particular partners implies high efficiency in specific activities but little flexibility overall. This applies both to physical processes, e.g. in their use of materials and machinery, and to human skills (cf. Williamson, 1989). To simplify, assume a direct trade-off in the sense that an effort or investment within an entity benefits either the specific partnership, or enhances a firm's own organization in general. The former is named *relation-specific* investment, the latter *generally-enhancing* investment. A firm may lean more or less towards one or the other, and combinations should be feasible.

Starting up a joint activity requires that either side spends one unit of investment. The fraction which is relation-specific is written λ , which takes a value $\lambda \in [0, 1]$. The rest, $(1-\lambda)$, is generally-enhancing. The pay-off from either kind of investment is dependent of the behaviour of the particular partner, as well as the other entities within a firm. The connections are illustrated in Figure 1. A network of boxes within an area bounded by dotted lines represents an individual firm. Each entity is organized in interaction with another firm.

FIGURE 1: Connections between firms



Relation-specific investment gives rise to a premium of complementarity α within an entity, where $\alpha > 0$. Upgrading a company's own assets, generally-enhancing investment gives rise to the premium β in the core of the firm, where $\beta > 0$. Thus, the former benefits only the individual entity, while the latter has a public good's nature within the organization of a firm. One consequence of this difference is that relation-specific investment benefits both firms in a particular partnership, while generally-enhancing benefits just the firm that undertakes it. Furthermore, general capabilities are less useful the more "other" activities hinge on adaptation to particular partners. The greater the extent to which other entities within a firm invest relation-specific, the smaller the gain β .⁴

Distinguish between the investment undertaken by a firm within an entity itself (λ), the investment carried out by the particular partner firm in the corresponding entity (λ^*), and the investment undertaken in the firm's other entities (λ^{**}). For each entity, a firm maximizes its contribution to overall profits, Π . As laid out above, rents may arise within the entity itself, or in the core of the firm. Before considering the maximization problem of the firm as a whole, that of the specific entity can be written as

$$(1) \quad \max_{\lambda} \Pi = -1 + p[A(\lambda, \lambda^*) + B(\lambda, \lambda^{**})]$$

where 1 represents the unit of investment, and the second term the output of the entity. The price of output is denoted p . A is the pay-off accruing to the entity itself, which is a function of the relation-specific investment undertaken by both firms in the particular partnership. Given mutually beneficial investments, we have $\delta A / \delta \lambda > 0$ and $\delta A / \delta \lambda^* > 0$. B , on the other hand, represents the gain which accrues to the core of the firm. This is reversely related to the amount of

4 The interdependency between entities can be compared to the notion of strategic complementarities, laid out by Cooper and John (1988).

relation-specific investment undertaken by a firm both within the particular partnership and in other partnerships, but it is unaffected by the actions of partner firms. Thus, we have $\delta B / \delta \lambda < 0$ and $\delta B / \delta \lambda^{**} < 0$. A and B form additive components in the pay-off function of the firm, as they represent rents that accrue to different parts of its organization.

Depending on the functional properties of A and B , (1) may raise more or less complex issues. For simplicity, assume that the premium to relation-specific investment is divided equally between two partner firms. In addition, there are economies of scope in the sense that relation-specific investment is more effective when both firms in a partnership apply it. Thus, A takes the form of a matrix

$$(2) \quad \begin{matrix} \lambda & \lambda^* & 1 & 0 \\ 1 & & \left(\begin{matrix} \kappa \alpha & \alpha/2 \end{matrix} \right) \\ 0 & & \left(\begin{matrix} \alpha/2 & 0 \end{matrix} \right) \end{matrix}.$$

The synergy effect of both firms investing relation-specific is written κ , which is $\kappa \geq 1$. Note that the off-diagonal elements are positive, since relation-specific investment benefits the particular partner even if that firm invests generally-enhancing. While this is a crucial feature of our model, it is straightforward to add asymmetries in the way the revenue obtained from a partnership is divided. With the present construction the division of gains is fixed and independent of price, however. This simplification lacks importance as long as perfect competition reduces profits to zero.

The premium β is directly proportional to the emphasis on generally-enhancing investment in other entities. Thus, we write B as a matrix

$$(3) \quad \begin{matrix} \lambda & \lambda^{**} & 1 & 0 \\ 1 & & \left(\begin{matrix} 0 & 0 \\ 0 & \beta \end{matrix} \right) \\ 0 & & & \end{matrix} .$$

It should be noted that the off-diagonal elements are zero in this case, which may seem counter-intuitive given the public-goods nature of generally-enhancing investment. The interpretation is, however, that the *other* entities of a firm are unable to benefit from generally-enhancing investment to the extent that they themselves are oriented towards relation-specific investment, i.e. complementarity with specific partners. The next section determines equilibria within this kind of framework. We thereafter consider the relevance of the model for understanding interactions between Japanese and western firms.

IV Equilibria in a closed economy

Consider an economy with free entry of representative firms. Each firm can organize any finite number of entities, and maximizes overall profits. Project-size is taken as given and the potential costs and benefits are identical for all firms. The maximization problem of an individual entity is now written

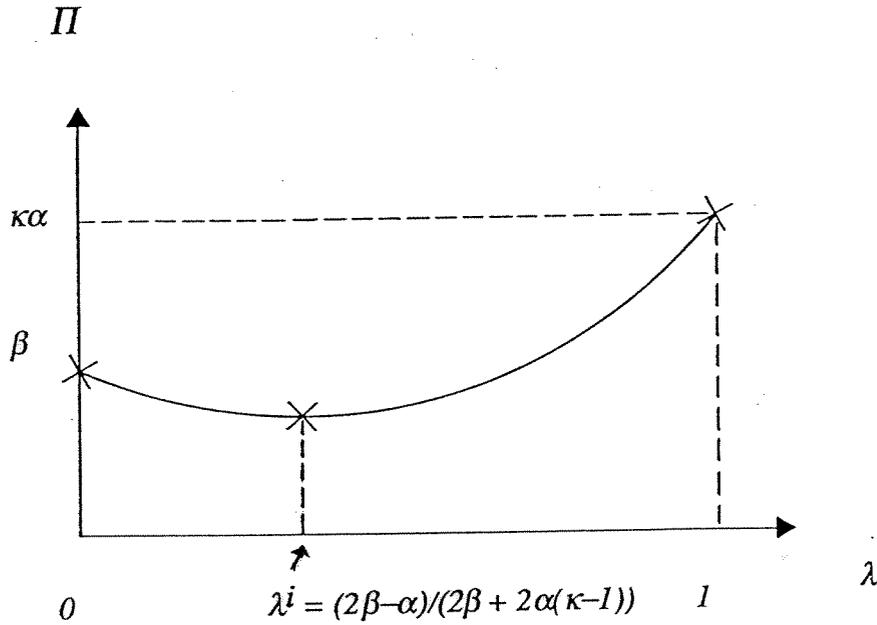
$$(4) \quad \max_{\lambda} \Pi = -1 + p[\kappa\alpha\lambda\lambda^* + \lambda(1-\lambda^*)\alpha/2 + (1-\lambda)\lambda^*\alpha/2 + \beta - (\lambda+\lambda^{**})\beta - \lambda + \lambda\lambda^{**}\beta]$$

where the expression in parenthesis is the pay-off given by (2) and (3). The derivative of (4) with respect to λ is non-negative if $\lambda^*\alpha(\kappa-1)+\alpha/2 \geq \beta(1-\lambda^{**})$. The profitability of λ increases in λ^* and λ^{**} , as we have a complementarity between entities. Because all firms and entities are identical, the first order condition

renders a minimum in λ . As derived in Appendix 1, this is $\lambda_i = (2\beta - \alpha)/(2\beta + 2\alpha(\kappa - 1))$. At λ_i , a firm is indifferent between the two kinds of investment in the last entity. Relation-specific and generally-enhancing investment generate exactly the same return. The kind of investment which is more profitable used on its own, is the least prevalent at this point. In the special case when $\kappa = 1$, meaning that there are no economies of scope in partnerships from investing relation-specific, we have $\lambda_i = 1 - \alpha/2\beta$.

Even though λ_i represents a Nash equilibrium, since λ_i is the best possible reply for all entities given that all others are organized this way, it is a very unlikely one. Any deviation from λ_i in λ^* or λ^{**} makes it optimal to adjust λ in the same direction, towards either of the endpoints. In fact, only the extreme endpoints, in which all investment is either relation-specific or generally-enhancing, are candidates for stable Nash equilibria. Given $\lambda^* = \lambda^{**} = 0$, $\lambda = 0$ is the optimal reply, provided that $\beta \geq \alpha/2$. If this is not fulfilled, it is always better to set $\lambda = 1$, irrespective of the behaviour of the partner firm. If $\lambda^* = \lambda^{**} = 1$, the optimal strategy for the last entity is $\lambda = 1$ under all circumstances. Since a firm should be able to coordinate activities in different entities to a certain extent, we can safely conclude that multiple equilibria prevail in the present framework, provided that $\beta \geq \alpha/2$. This can be seen from Figure 2, which illustrates the relationship between Π and λ .

In the equilibrium based on relation-specific investment, each entity earns $\kappa\alpha$, while the payoff is β with generally-enhancing investment. Irrespective of which equilibrium renders the highest payoffs, it is rational for firms to retain their entities in either equilibrium, once it has been established. Which equilibrium is achieved depends on the interaction between the firms in the economy. Regardless of the equilibrium, profits are reduced to zero by free entry. This gives $p = 1/\beta$ and $p = 1/\kappa\alpha$ in the two equilibria respectively.

FIGURE 2: Relation between Π and λ .

It should be noted that the case when only $\lambda^* = 1$, which suggests that a firm is free to adjust all its entities simultaneously, is more problematic. A firm may then use generally-enhancing investment in all its entities although all partners invest relation-specific. To rule this out requires unrealistically strong synergetic effects from partner firms investing relation-specific, i.e. it is necessary that $\beta \leq \alpha(\kappa - 1/2)$. For at least two reasons, we neglect this possibility for the time being. Firstly, it is unlikely that a firm can costlessly reorganize all its activities from an emphasis on relation-specific to generally-enhancing investment. Secondly, even if it could do so it would have great problems to be accepted as partner by the firms around it. We return to this below.

In practice, there will be more complex functional forms than assumed in (2) and (3), and all firms or entities will not be identical. That "all" firms in an economy are unlikely to invest one way or the other is not crucial for the following analysis. Instead, one may think of different probability distributions in different economies. The important point is that multiple equilibria are plausible, with a different mixture of investment in different equilibria.

As the premium to λ emerges on the "operational" level, such investment should be more effective the greater the adaptability and responsiveness of activities on that level. The possibility to create rents at the core of a firm, on the other hand, should be greater with hierarchically channeled information flows and central coordination. The loss of overall flexibility which goes along with adaptation to a particular partner is likely to be smaller the stronger the prevalence of reputation effects, which make it costly to break promises. Moreover, the usefulness of general learning should be smaller the less developed the external markets of an economy. Thus, the observed characteristics of Japanese firms speak for an orientation towards premiums of the α kind, while those of western firms lean towards the β kind. This could help to explain why western firms use hostile takeovers, so as to streamline the priorities of partners with their own objectives. In Japan, by contrast, hostile takeovers are extremely unusual. The present framework suggests that separate firms may cooperate more effectively in Japan.

It may be argued that Japan industrialized as a fairly closed system, while the West industrialized at a time when Japan had not yet emerged as an industrial nation. Thus, it is possible that different equilibria were established at the outset. The question then arises how the two equilibria are affected when confronted with each other. Multiple equilibria may not seem probable in a world with multinational companies that diversify their operation networks across countries. The great bulk of world production and trade is nowadays undertaken by such large firms. Japan remains an extremely closed economy as far as industry is concerned, however. Inward investments remain insignificant in relation to the size of the economy, which also applies to the volume of industrial imports. Are these observations consistent with the model framework?

V International interactions

Japan and the West developed in isolation from each other, and formed two "pools" of firms in which the approach to partnerships may have gone different ways.

Using the model presented above, we now explore the consequences of an orientation towards relation-specific investment in Japan and generally-enhancing investment in the West. All firms on each side are "domestic", the others "foreign". Since Japan and the West have modest interactions, we assume to begin with that firms may team up only a single entity with a foreign partner. A firm which goes abroad can be thought of as a supplier of home goods, and one receiving a foreigner as a distributor of foreign goods.

As we have seen, the outcome of a partnership is influenced by the investment of the particular partner as well as the organization of a firm's other entities. Because a firm has an existing network of its "home" kind when it considers collaboration with a foreign firm, the partnership with the latter is assumed to exert only a marginal impact on its total operations. This means that the optimal design of a firm's home relations is unaffected by the foreign-related entity. For Japanese firms, $\lambda^{**}=1$, so that the first column in (3) is applicable. Inserting this in (4) and taking the derivative, relation-specific investment is seen to be profitable if

$$(5) \quad \lambda^* \alpha (\kappa - 1) \geq -\alpha/2 .$$

Since κ is known not to be smaller than one, (5) is always fulfilled, irrespective of the behaviour of the partner firm. The obvious reason is that the Japanese firm does not gain anything from investing generally-enhancing, since it does not have other entities which are organized this way. Thus, the Japanese firm sticks to its home way, and relies entirely on relation-specific investment. For a western firm, on the other hand, the second column in the second matrix in (3) is relevant. Inserting this in (4) and, again, taking the derivative, relation-specific investment is profitable if

$$(6) \quad \lambda^* \alpha (\kappa - 1) \geq \beta - \alpha/2 .$$

As the Japanese partner firm invests $\lambda^* = 1$, the western firm invests relation-specific with a Japanese partner if

$$(7) \kappa \geq \beta/\alpha + 1/2 .$$

This is equivalent to the condition $\beta \leq \alpha(\kappa - 1/2)$, already mentioned as unrealistic. If (7) holds, the spill-over effect κ is strong enough to outweigh the return to generally-enhancing skills although the whole organization of the western firm is oriented in that direction. The total gain generated by an entity is then at least $\alpha/2$ greater in the Japanese equilibrium than in the western one. This seems unlikely, given that the western equilibrium has managed to get established in the first place.

Thus, unless the synergy effect κ is strong enough to fulfill (7), both a Japanese and a western firm which otherwise are related to domestic partners, behave the same way when involved with a foreign partner as with a domestic one. The Japanese firm goes for relation-specific investment, the westerner for generally-enhancing. As the former kind benefits both firms while the latter kind does not, the Japanese firm loses and the western firm gains. Under these conditions, Japanese firms are unwilling to make business with western ones. If goods are the same, firms stick to partners in their own pools and no trade takes place between Japan and the West. With differences in, e.g., factor endowments, technology or consumer preferences, on the other hand, there is a demand for foreign goods.

Assume that a western exporter must team up with a Japanese distributor to enter the Japanese market. Insert the relevant values of λ , λ^* and λ^{**} in (4). To break even the Japanese firm sets the price $2/\alpha$, which corresponds to a mark-up of 2κ compared to the price of Japanese goods. The higher price benefits the western firm as well, which gains $2\beta/\alpha$. The negative side is that the Japanese partner is unwilling to expand output, as that would reduce price. In this situation, western firms have an incentive to compete among each other by offering side-payments to

Japanese firms in exchange for partnerships. Such payments are not without problems. The firms providing them must know that their partners do not break up relations thereafter, and why would the latter not do so in case operations are undesirable from their perspective? For such reasons, transfer payments may be associated with excessive costs, the specific nature of which depend on the institutional setting and ability of firms to sign detailed and trustworthy contracts. Neglecting such costs, the price of western goods in Japan, $\rho\omega$, is determined by

$$-1 + \rho\omega (\alpha/2 + \sigma) = 0$$

(8)

$$-1 + \rho\omega (\alpha/2 + \beta - \sigma) = 0$$

where σ is a transfer payment. The upper row represents the gain of the Japanese firm which receives the transfer, and the lower row the gain of the western firm which provides it. Zero profits follow from perfect competition among both kinds of firms. Solving (8), we obtain $\sigma = \beta/2$ and $\rho\omega = 2/(\alpha + \beta)$. The price is reduced by the use of transfer payments, meaning that the exports of western goods are increased. Still, an inefficiency remains since the partnership foregoes the synergy effect which normally prevails in Japan without any full compensation from generally-enhancing investment. Only when $\kappa = 1$, i.e. when there is no synergy effect, is the barrier to entry off-set by costless provision of transfer payments from western to Japanese firms. The numerical values would be altered if the higher price on western goods benefitted only the Japanese distributor, but the barrier for western goods would be unaffected.

Thus, firms have an incentive to find a way around the asymmetry in the approach to partnerships. The assumption introduced above, that only one entity may be organized with a foreign counterpart abroad, is of limited applicability and can be dropped. This suggests that a firm can establish a new network of entities, which can be disconnected from the domestic entities. We do not consider this for a

firm which receives a foreign firm in its home market, since it seems unnatural that a domestically located activity could interact only with foreign firms. We also retain the assumption that the total activity exposed to foreign partnerships is small compared to that with domestic ones, meaning that the latter remains unaffected under all circumstances.

If a western firm cuts off its entities in Japan from home, neutralizing the premium β , it gains from investing relation-specific. Before a firm has been well connected to Japanese counterparts, it may be difficult to credibly commit itself to relation-specific investment, however. It may also take time to observe whether a firm invests relation-specific or not. Consider the sequential nature of a partnership. Ex ante the establishment of a partnership it pays for a western firm in Japan to break loose from its home organization and invest relation-specific. As long as such investment has not become sunk it pays to undo such promises, however, re-establish integration with the home company and slip back into generally-enhancing investment. In case a credible commitment can not be made, prospective Japanese partners will foresee this ex ante. In this sense, western firms in Japan may be subject to dynamic inconsistency in their optimal plans (Kydland and Prescott, 1977). It may then take time before they are trusted by their Japanese partners, which is in line with the stylized facts. Of course, the Japanese themselves are subject to the same need of credibility among each other. The difference is that their existing operations are based on relation-specific investment, and that it should then be more difficult to switch to generally-enhancing investment. Still, the Japanese are known to scrutinize prospective partners very carefully among each other as well, not only among westerners.

The above discussion suggests that credible commitments are crucial in Japan. When credible commitments are possible on behalf of the Japanese partner, a transfer payment from the westerner reduces the barrier to entry. A certain impediment to trade still remains, however. For unimpeded exports western firms must credibly commit to breaking loose from home operations and invest

relation-specific. Otherwise, western exports and investments are restricted in volume, and prices are excessively high. This is in line with Lawrence (1986), who depicted the "invisible" barrier to imports in Japan as equivalent to a mark-up on price, rather than a quota which would give rise to abnormal price responses. Furthermore, it should be relatively straightforward to make commitments in production that hinges on physical processes, such as manufacturing. The opposite is probable in activities which are based on human efforts and skills, such as services. In fact, the direct investment in Japan is overrepresented in manufacturing and underrepresented in services.

Turning to Japanese firms in the West, these find it unequivocally desirable to establish "western" enterprises which cut off their bonds with home organizations, and invest the western way. A western firm would, of course, prefer that a Japanese partner invested relation-specific, given that it could avoid to provide compensation. Still, it accepts a partnership with a Japanese firm the western way, just as it accepts business with westerners. This is in line with the adaptability observed by many Japanese firms in the West.

The conclusion is that western firms in Japan have difficulties to be accepted as partners, unless credible commitments can be made. The result is high prices on western goods in Japan, and limited western exports and investments. Mark-ups on the price of western goods in Japan, and the underrepresentation of foreign-owned firms in sectors where credible commitments are particularly difficult to make, are consistent with these findings. Japanese firms in the West, on the other hand, encounter no dynamic inconsistency, but have an incentive to stick to generally-enhancing investment. Thus, the provision of Japanese goods is unrestricted in western markets. Finally, it should be noted that the two equilibria may remain stable in spite of the interaction between them. Japanese firms in the West convert to the western approach, and western firms which retain their western approach in Japan enjoy limited success.

VI Concluding remarks

This article has suggested that organizational differences between Japanese and western firms at home can be interpreted as the emphasis on relation-specific investment among the former, and on generally-enhancing investment among the latter. Firms from both sides prefer to invest with a foreign partner the same way as with a domestic one. The Japanese firm would then lose and the western firm gain, since relation-specific investment benefits both firms in a partnership while generally-enhancing benefits only the firm that undertakes it. To actually enter a partnership with a westerner, a Japanese firm then requires a mark-up on price.

In this situation, there is an incentive to cut off an activity abroad from home, and invest the host country way. However, there is a dynamic inconsistency in the optimal plan of a western firm in Japan. Ex post the establishment of a partnership with a Japanese firm, it is optimal to invest generally-enhancing. Given difficulties to make credible commitments, the prices of western goods will be excessive in Japan and supply be limited. Japanese firms in the West, on the other hand, encounter no credibility problems, meaning that Japanese exports and investments overseas should be unrestricted.

The model presented is, of course, simplified. In its present form it does not explore production functions, or allow for differences between firms. It is not considered, for example, that Japanese firms often retain close relationships between each other when going abroad, which can be seen from distributors following their core firms to new markets. In very broad terms, however, the findings provide a new perspective on the behaviour of western firms in Japan, and of Japanese firms in the West.

While the conclusions are in line with the prevailing imbalances in trade and investment, it must be asked how the barrier to entry in Japan can be reduced? At present, invisible barriers are used an excuse on the part of the West to implement its own barriers through, e.g. voluntary export restraints and antidumping proceedings. Such measures will not improve the asymmetry

presented in this paper. On the contrary, the situation is likely to worsen, because there is a reduced pressure on western firms to go abroad. To undo a barrier which emanates from asymmetric approaches to partnerships, western firms must make credible commitments so as to approach the Japanese market in the Japanese way. This may be achieved through careful tailoring of western goods to Japanese customers, establishment of local R&D, and cultivation of local structures and relations in various ways.

In addition to the aspects discussed here, it is possible that, in practice, cultural and linguistic barriers prevent representatives from the two sides from understanding each other, contributing to overly complicated negotiations. For example, westerners may not understand why Japanese firms seek compensation for entering partnerships with them, and the Japanese may not understand why westerners do not seem willing to emphasize specific partnerships as they do themselves.

References

- Aoki, M., 1988, *Information, Incentives and Bargaining in the Japanese Economy*, Cambridge University Press, Cambridge.
- Aoki, M., 1991, The Japanese Firm as a System: Survey and Research Agenda, paper presented at Japan in a Global Economy, 5-6 September, Stockholm School of Economics, Stockholm.
- Asanuma, B., 1988, Japanese-Supplier Relationships in International Perspective: The Automobile Case, working paper no. 8, Kyoto University, Kyoto.
- Asanuma, B., 1989, Manufacturing-Supplier Relationships in Japan and the Concept of Relation-specific Skill, *Journal of Japanese and International Economies*, 3, 1-30.
- Clark, K.B., Chew, W.B. and Fujimoto, T., 1987, Product Development in the World Auto Industry, *Brookings Papers on Economic Activity*, 729-771.
- Commons, J.R., 1934, *Institutional Economics*, University of Wisconsin Press, Madison.
- Cooper, R. and John, A., 1988, Coordinating Coordination Failures in Keynesian Models, *Quarterly Journal of Economics*, CIII, 441-463.
- Dornbusch, R., 1989, Give Japan a Target and say Import, *The New York Times*, Sept. 24.
- Emmot, B., 1989, *The Sun Also Sets*, Simon & Schuster Ltd, New York.
- Grossman, S. and Hart, O.D., 1986, The Costs and Benefits of ownership: A Theory of Vertical and Lateral Integration, *Journal of Political Economy*, 94, 691-719.
- Hoshi, T., Kashyap, A. and Scharfstein, D., 1991, Corporate Structure, Liquidity and Investment: Evidence from Japanese Industrial Groups, *Quarterly Journal of Economics*, CVI, February.
- Itoh, M., 1989, Kigyokankankei to Keizokutekitorihiki, in Imai, K., and Komiya, R., *Nippon no Kigyo*, University of Tokyo press, Tokyo.
- Itoh, H., 1990, Coalitions, Incentives and Risk Sharing, mimeo, Kyoto University, Kyoto.
- Kanemoto, Y. and MacLeod, W.B., 1991, The Theory of Contracts and Labour Practices in Japan and the United States, *Managerial and Decision Economics*, 12, 159-70.
- Krugman, P., 1987, Is the Japan Problem over? in Sato, R. and Wachtel, P., eds., *Trade Frictions and Economic Policy, Problems and Prospects for Japan and the United States*, Cambridge University Press, Cambridge.
- Kydland, F.E. and Prescott, E.C., 1977, Dynamic Inconsistency: Rules Rather than Discretion: The Inconsistency of Optimal Plans, *Journal of Political Economy*, 85, 513-48.
- Lawrence, R.Z., 1987, Imports in Japan: Closed Markets or Minds?, *Brookings Papers in Economic Activity*, 2.

- MITI (Ministry of International Trade and Industry), 1991, *Successful Foreign-Affiliated Enterprises in Japan (Vol. 2)*, International Affairs Division, Tokyo.
- Okuno-Fujiwara, M., 1989, On Labour Incentives and Work Norm in Japanese Firms, *Journal of the Japanese and International Economies*, 4, 367-84.
- Okuno-Fujiwara, M., 1992, Comments on the Japanese Economic System, presented at Japan in a Global Economy, 5-6 September, Stockholm School of Economics, Stockholm.
- Saxonhouse, G., 1983, The Micro- and Macro-economies of Foreign Sales to Japan, in Cline, W.R., ed., *Trade Policies in the 1980s*, Institute for International Economics, Washington D.C., 259-304.
- Saxonhouse, G. and Stern, R.M., 1989, An Analytical Survey of Formal and Informal Barriers to International Trade and Investment in the United States, Canada and Japan, in Stern, R., M., ed., *Trade and Investment Relations among the U.S., Canada and Japan*, University of Chicago Press, Chicago.
- Shimada, A., 1983, Wage Determination and Information Sharing: An Alternative Approach to Incomes Policy, *Journal of Industrial Relations*, 25, 177-200.
- Williamson, O.E., 1989, Transaction Cost Economics, in Schmalensee, R. and Willig, R.D., eds., *Handbook of Industrial Organization*, 1, Elsevier Sciences Publishers B.V., 134-182.

Appendix 1

As firms are identical, λ^* (the investment chosen by a partner firm) must be the same for all entities. Assume that a firm organizes two entities. Note that λ and λ^{**} are replaced from the perspective of the other entity. Applying the first order condition to (4) gives

$$\delta\Pi/\delta\lambda = \lambda^*\alpha(\kappa-1) + \alpha/2 - \beta(1-\lambda^{**}) = 0$$

(A1)

$$\delta\Pi/\delta\lambda^{**} = \lambda^*\alpha(\kappa-1) + \alpha/2 - \beta(1-\lambda) = 0$$

Solving for λ in (A1), we get

$$(A2) \quad \lambda = 1 - \alpha/2\beta - \lambda^*\alpha(\kappa-1)/\beta$$

The size of λ depends on the value of λ^* . The equation is unaffected by the number of entities organized by a firm. As firms are identical, (A2) holds for both firms which organize a partnership. λ and λ^* are replaced from their respective perspectives. Rewriting (A2),

$$\lambda = (2\beta - \alpha - 2\lambda^*\alpha(\kappa-1))/2\beta$$

(A3)

$$\lambda^* = (2\beta - \alpha - 2\lambda\alpha(\kappa-1))/2\beta$$

is obtained for the two partner firms. Solving for λ gives

$$(A4) \quad \lambda_i = (2\beta - \alpha)/(2\beta + 2\alpha(\kappa-1))$$

which is a minimum.