

Does Trust Improve Business Performance?

MARI SAKO
Industrial Relations Department
London School of Economics and Political Science,
Houghton Street, London WC2A 2AE, UK.
Tel. +44 171 955 7424; Fax. +44 171 955 7424. E-mail m.sako@lse.ac.uk

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Chapter 4

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Mari Sako

Does trust improve business performance? And if so, how can trust be created in business where there is none? These are the two questions which this chapter addresses. The main aim of the chapter is to evaluate various theories which touch on the causes and outcomes of trust, and to provide empirical tests of those theories using a large scale survey of automotive parts suppliers in the United States, Europe and Japan.

A growing interest in building trust between organisations stems from the belief that trust enhances business performance. For instance, trust has been identified as an important component which makes partnerships, strategic alliances, and networks of small firms successful (Brusco 1985, Powell 1996, Smitka 1991). Trust is also of great relevance today because the maintenance of consistently high quality, which is an important source of competitiveness, is easier in a high-trust production system than in a low-trust one (Sako 1992). In a similar vein, Fukuyama (1995) attributes national industrial competitiveness to trust as a societal-level cultural norm and a social capital. According to him, people's capacity to institutionalize trust in the realm of work and business accounts for the industrial success in Japan and Germany. By contrast, the 'missing middle', namely the absence of intermediate social groups in the area between the family and large, centralised organisations like the church or the state, accounts for the relative economic backwardness of Latin Catholic countries (like Italy, France and Spain) and Chinese societies (Fukuyama 1995, p. 55-56).

In Fukuyama's (1995) study, as in others, the link between trust and business performance is plausible but not proven. Nevertheless, the idea is so appealing that at the practitioner level, an increasing number of studies exhort business to create trust as an essential component in making partnerships between firms successful (SMMT & DTI 1994, Ingersoll Engineers 1995). In business strategy, recent work on trust between organizations focuses on the possibility of using it to create and maintain competitive advantage (Barney and Hansen 1994, Jarillo 1988). While theoretical explorations on the link between trust and performance abound, empirical studies in this area are rare (exceptions include Mohr and Spekman 1994). This chapter presents evidence which fills this lacuna.

The second, related, question which this paper addresses -- how can trust be created when there is none? -- has been the subject of much debate. The extreme positions in this debate are held by those who argue that trust can be cultivated intentionally by farsighted parties who recognize the benefits of long-term cooperation (Axelrod 1984), and those who argue that it is a by-product of the embeddedness of parties who share a common cultural or social norm (Granovetter 1985). Both approaches are not very helpful for thinking about how to create trust when there is none. In the former, if the parties are not farsighted enough, or if they are antagonistic from the start, a process of cooperation may never get started. In the latter, those living in communities which are already endowed with high trust can benefit from it, but those without it are doomed to suffer from the adverse consequences of low trust. This chapter examines whether the two extreme views can be reconciled.

The central concept explored in this chapter is mutual trust between a customer and a supplier organisation. Trust is an expectation held by an agent that its trading partner will behave in a mutually acceptable manner (including an expectation that neither party will exploit the other's vulnerabilities). This expectation narrows the set of possible actions, thus reducing the uncertainty surrounding the partner's actions. The notion of trust implies that the partner has freedom of choice to take alternative courses of action. Thus, predictability in behaviour arises not because of constraints which force the other side to stick to a single possible course of action. Sako (1991, 1992) categorised other reasons for predictability in behaviour to distinguish between three types of trust: 'contractual trust' (will the other party carry out its contractual agreements?), 'competence trust' (is the other party capable of doing what it says it will do?), and 'goodwill trust' (will the other party make an open-ended commitment to take initiatives for mutual benefit while refraining from unfair advantage taking?). This three-way distinction will be employed throughout this chapter.

Contractual trust rests on a shared moral norm of honesty and promise keeping. Competence trust requires a shared understanding of professional conduct and technical and managerial standards. Goodwill trust can exist only when there is consensus on the principle of fairness. Viewed in this way, there seems to be a hierarchy of trust, with fulfilling a minimum set of obligations constituting 'contractual trust', and honouring a broader set constituting 'goodwill trust'. A move from contractual trust to goodwill trust involves a gradual expansion in the congruence in beliefs about what is acceptable behaviour. Because of the three-way distinction made in the concept of trust, opportunism, defined as self-interest seeking with guile by Williamson (1985), is not a mere opposite of trust. A precondition for trust of the contractual and goodwill types is the absence of opportunistic behaviour. However, lack of opportunism is not a sufficient condition for goodwill trust. For example, a

supplier that withholds a vital piece of technical information may not be acting opportunistically according to the strict contractual sense. This amounts to fulfilling the letter, but not the spirit, of the contract. Fulfilling the spirit of the contract, by demonstrating commitment and fair behaviour, is close to the notion of goodwill trust.

The chapter is structured as follows. Section 1 reviews various theories which address the issue of whether trust enhances business performance or not. The evidence from a large-scale survey on the impact of trust on supplier performance is reported. Section 2 discusses how trust can be created between organisations particularly when they are in low trust relationships. This section also reports the results of the survey concerning the determinants of trust and opportunism. Section 3 concludes by drawing theoretical and empirical implications of this study.

1. Does Inter-Organisational Trust Enhance Business Performance?

Inter-organisational trust may enhance business performance in a number of ways. This section reviews some of the major works by categorising them broadly into those which focus on (a) reducing transaction costs, (b) investment with future returns, and (c) continuous improvement and learning. The last sub-section presents empirical evidence.

Before doing so, however, a brief word on the link between the notion of inter-organisational trust and governance. In organizational studies, it has been common to treat trust either as a determinant of 'governance structure' or as a governance structure in itself. 'Governance mechanisms' include such formal arrangements as markets, hierarchies, and intermediate modes including long-term contracts, joint ventures and other forms of alliances (Heide and John 1990, Joskow 1988, Walker and Weber 1984, Williamson 1985). Trust or opportunism enter into some of these analyses as one of the determinants of governance structures. For example, trust is a social norm which lessens the need to use hierarchy to attenuate opportunism. Thus, the higher the general level of trust, the less need there is for vertical integration (Williamson 1985). Similarly, the higher the dyadic trust which develops over time, the less need there is to rely on equity-holding (Gulati 1995). Here, trust tends to be conceptualised as a substitute for various governance mechanisms. The notion of governance structure is closely linked to the idea of 'safeguards' against opportunistic behaviour. Such safeguards, i.e. externally imposed constraints, become unnecessary if actors have an internalised moral norm of behaving in a trustworthy manner. This view of trust as a

determinant of governance structures is dominant in the functionalist perspective represented by transaction cost economics, which argues for an effective alignment of governance structures with transactional characteristics (see below).

An alternative conception is to regard trust as a governance structure, albeit an informal one. 'Governance by trust' is an informal control mechanism which enhances the effectiveness of transactions whether they take place in markets or within a hierarchy (Smitka 1991). This conceptualization introduces the possibility that trust may complement, rather than substitute for, hierarchy or market (Bradach and Eccles 1989, Smitka 1992). This paper adopts this 'governance by trust' perspective. It posits that trust exists to a varying degree in different types of formal governance structures, be they markets, long-term contracts, or hierarchies. Whatever the formal governance structures, the higher the level of mutual trust, the better the performance is likely to be. While formal governance structures may act as 'safeguards' against opportunistic behaviour, they are, in themselves, not sufficient to ensure the sort of performance -- innovation and learning -- which trust induces.

1.1 Reducing transaction costs

The performance criterion used by transaction cost economics (TCE) is the minimisation of transaction costs. This is achieved by aligning governance structures to the characteristics of the transaction. In particular, whenever the environment is uncertain and specific assets are required in a transaction, both parties have an incentive to behave opportunistically. Depending on the frequency of trading which determines the costs of recontracting, Williamson (1979) prescribes either vertical integration or relational contracting. In this framework, as long as optimal decisions are made, every governance structure is just as efficient as another at the margin.

The TCE paradigm has been so influential that the minimisation of transaction costs is taken as a performance objective even in other areas, such as strategic management. Strategic management is about how firms can create and sustain competitive advantage. For instance, it is said that trust enables a network of firms to adapt to unforeseen circumstances, thus reducing transaction costs; in this sense firms can make use of the network strategically (Jarillo 1988). More recently, Barney and Hansen (1994) examine trustworthiness as a source of competitive advantage. They make a distinction among three types of trust: weak form, semi-strong form, and strong form trust. Weak form trust emerges because there are limited opportunities for opportunism. Semi-strong form trust depends on governance devices such as a market for

reputation and contracts to safeguard against the threat of opportunism. Strong form trust emerges in response to a set of internalised norms and principles that guide the behaviour of exchange partners, and is independent of whether or not specific governance mechanisms exist. (In the three-way categorisation of trust employed in this chapter, goodwill trust corresponds roughly to strong form trust, and contractual trust to semi-strong trust.) They argue that only strong form trust leads to competitive advantage. The basis for arguing so is that first, strong form trust is more difficult to imitate than weak form or semi-strong form trust. Second, with strong form trust, less safeguards are needed in the form of governance structures, and therefore it is less costly for the firm.

1.2 Investment to increase future returns

This last assertion depends on the time period which is taken into account. Once strong form trust is built and established, firms may enjoy lower costs than those without. But it is quite possible that the process of building trust might have involved a very high initial set-up cost with uncertain or risky returns. A British purchasing manager in a recent interview said that trusting a new supplier requires a leap of faith, even if there are some objective quality standards such as ISO 9000. This is because the formal documentation sought in an initial supplier audit is not revealing about how the quality standard is actually implemented, but the latter is difficult to capture fully in a short visit. Building trust in itself is an investment, and trust between a buyer and a supplier is a 'relation-specific skill' (Asanuma 1989). The returns to investment may be in terms of low monitoring and coordination costs -- the agency costs in principal-agent theory -- and it is this aspect which enables such practices as just-in-time delivery and no quality inspection on delivery. However, at any time, a buyer and a supplier which have just begun trading and are in the process of building a high-trust relationship may be incurring a greater set up cost than other companies in low-trust relationships. This in turn leads to a hypothesis that the older the trading relationship, the greater the gap in performance between high-trust and low-trust supplier relations, assuming that the parties have been following a strategy of developing mutual trust during the whole period of the trading relationship.

Suppliers in a high-trust trading relationship are also willing to invest in customer-specific and general assets because of the assumed long-term commitment in such a relationship. Greater investment in itself may be considered a performance measure. At the same time, asset specialisation is likely to increase productivity (Dyer forthcoming). Following

Williamson (1985), specific assets consist not only of physical capital, but also of human capital and location.

1.3 Continuous improvement and learning

The third and the last perspective argues that trust, especially of the goodwill sort, gives rise not only to lower transaction costs or to higher net benefits from investment, but also to more rapid innovation and learning (Sabel 1994). In other words, suppliers in high-trust relations are likely to exploit opportunities to the mutual benefit of both the customer and the supplier, which would otherwise not have been exploited had transactions depended solely on contracts or 'incentives'. As trust is linked to the notion of 'freewill' choice and is seen to obviate the use of 'safeguards' or constraints, trust gives that something extra, a positive motivational force which enhances X-efficiency and dynamic efficiency. These outcomes are achieved through an orientation towards joint problem solving to improve quality, to reduce costs, and to innovate production and management methods. Such collaboration between a customer and a supplier leads to learning-by-transacting. This implies that even after trust is built and established, trading partners which are performing well are likely to interact intensively. Thus, unlike in the previous investment perspective, the cost of interaction, if imputed by time spent by all the multi-functional personnel involved in interfacing between suppliers and customers, may be quite high. Trust is therefore like a renewable resource which atrophies with disuse and multiplies with use.

1.4 Survey evidence

The main reason for the relative absence of empirical work to date lies in the characteristics of the relevant theories. In particular, the functionalist approach of TCE asserts that whatever governance structure exists is best for the organisation given its environment and circumstances. This has led many researchers to test the determinants of governance structures but not the performance outcomes of these structures. Moreover, all the aforementioned three approaches to linking trust to performance put forward measures which are difficult to quantify, such as transaction costs, net benefit of investment in trust, learning and innovation. Ideally, also, longitudinal, rather than cross-sectional, studies are necessary in order to unravel the direction of causation between trust building and performance. The survey evidence presented in this chapter does not fully overcome the measurement nor the causation problems, but constitutes an attempt at addressing the question of whether trust enhances performance.

The data used to explore the links between trust and performance were collected by the author and Susan Helper during 1993 and 1994. For details on questionnaire design, the sampling framework and response rates, see Appendix A. The data consist of 1415 valid responses from first-tier component suppliers in the automotive industry in Japan, the US and Europe.

The survey asked respondents to evaluate how much trust they could place on their customer. The items used to measure trust and opportunism in the questionnaire are shown in Table 1. Specifically, the concept of 'contractual trust' is operationalised by the reversed statement 'We prefer to have everything spelt out in detail in our contract'; this preference for detailed formal contracts is presumed to arise from the supplier's distrust that the customer would not stick to promises unless formally spelt out in a contract. The concept of 'competence trust' is captured by a reversed statement 'The advice our customer gives us is not always helpful.' 'Goodwill trust' is operationalised by the statement 'We can rely on our customer to help us in ways not required by our agreement with them'. The survey also asked about suppliers' perception of fairness which is a basis for the sustenance of goodwill trust. Lastly, customer opportunism was captured by the statement 'Given the chance, our customer might try to take unfair advantage of our business unit'.

Insert Table 1 about here

In order to examine inter-country differences in trust, the data were divided into the following locations of the responding supplier companies: Japan, the US, Britain, Germany and the Latin Catholic countries in Europe (namely Italy, France and Spain). The sample size for the European countries is quite small and the results must be interpreted with caution. But Britain was separated out to examine the supposed similarities with the US. Germany and the Latin Catholic countries were distinguished in order to examine whether there is any evidence of a contrast between the 'spontaneously sociable' and the 'missing middle' countries identified by Fukuyama (1995). The survey asked about inter-organisational trust (suppliers' trust of customers). Therefore, we would expect organisational trust in Germany to be higher than in Latin Catholic countries where high inter-personal trust does not extend to trust between organisations.

As shown in Table 1, 'contractual trust' is the highest in Germany and Japan, while the suppliers in the Anglo-American and Latin Catholic countries prefer less contractual flexibility. Japanese suppliers exhibit the highest level of 'competence trust' towards their customer companies, while results for the other countries are mixed, with Latin Catholic suppliers exhibiting a rather high level of 'competence trust' in contrast to German suppliers. 'Goodwill trust' as measured in the survey is the highest among the Latin Catholic and German suppliers. The expectations about fair customer behaviour are most evident among the Japanese suppliers, followed by the German and Latin Catholic suppliers, while the majority of Anglo-American suppliers do not expect fair treatment from their customers. Lastly, customer opportunism is more prevalent in the US and Britain than in Japan, Germany or the Latin European countries. Although the results are broadly as expected, the anticipated distinction between Germany and the Latin Catholic countries is not evident in the survey.

Next, the impact of suppliers' trust of customers on supplier performance can be examined by looking at the following measures of performance used in the survey: suppliers' costs, profit margins, just-in-time (JIT) delivery, and joint problem solving. The cost measure is in terms of the average annual percent change in the supplier's total costs for the product it supplied to the customer during the year preceding the survey. The profit measure was in terms of the average annual percentage point change in the supplier's gross margins for the product in the year preceding the survey. The degree of success in implementing JIT was measured by agreement to the statement 'Use of JIT has allowed our business unit to increase delivery frequency without increasing costs.' Joint problem solving, as an indicator of learning and innovation, was measured by the percentage of contact hours the supplier had with the customer which was for the purpose of 'joint efforts to improve the product or process' (other options included 'assigning blame rather than solving problems').

Different types of trust may be presumed to have different impacts on supplier performance. Therefore each type of trust listed in Table 1 was correlated with each of the performance measures. The suppliers were divided into high trust and low trust groups, with the former consisting of those who agreed or strongly agreed with each of the statements. The t-test and Kruskal-Wallis test were applied to examine whether suppliers' performance was significantly different between the high trust and low trust groups. The five way locational classification (into Japan, USA, Britain, Germany and Latin Catholic countries) is applied in this analysis also.

The only type of trust with which the first measure of supplier performance, cost reduction, is associated significantly is goodwill trust. Moreover, when each region is

examined separately, it is only in Japan that the high trust group of suppliers performs significantly better in this respect than the low trust group (see Figure 1). Although not statistically significant, high goodwill trust is associated with less cost reduction in Germany and the Latin Catholic countries. The scope for reducing costs may be considered to depend in part on the starting cost level; that is, the higher the initial cost, the greater the scope for cost reduction, and the lower the initial cost, the more difficult it is to effect further cost reduction at the margin. This argument makes it doubly surprising that Japanese suppliers in the high trust group, which have been engaging in cost reduction activities for much longer than their counterparts in the US or Europe, are the ones which have distinguished themselves in reducing costs further.

With respect to changes in suppliers' profit margins, interestingly it is only in the US that all the five measures of trust (including the reverse of opportunism) listed in Table 1 are significantly associated with better profit margins (in the form of less profit squeeze). In none of the other countries is the profit performance between high trust and low trust groups significantly different (see Figure 2 which shows the result for goodwill trust only).

Insert Figures 1-4 about here

Next, high trust of all types was associated with suppliers being able to increase the frequency of delivery without increasing costs in the US and Japan. However, in Europe only high goodwill trust significantly enhance JIT delivery in Britain and the Latin European countries (see Figure 3 for results on goodwill trust).

Lastly, high trust suppliers were significantly more likely to spend a greater proportion of their contact time with customers in 'joint efforts to improve the product or process' in the US and Japan, according to the measures of competence trust and goodwill trust. On average, suppliers with high goodwill trust in Japan spent 43% of the total contact time in joint problem solving, as compared to 35% for low trust suppliers; the corresponding figures were 38% and 30% for high and low trust suppliers in the US (see Figure 4). Although some differences exist between high and low trust groups in European countries, they were not statistically significant.

Since this is a cross-sectional data, it could be that the causation runs the other way, from good performance (in the form of profit margin increase) to trust. However, it seems

unlikely that cost reduction by the supplier causes it to increase its trust of customers, nor does it seem likely that better just-in-time delivery in itself increases suppliers' trust of customers.

To summarize the survey results concerning the trust-performance links, there is some support for the hypothesis that trust is conducive to good supplier performance and that this positive link is stronger for goodwill than for other types of trust. As predicted, suppliers spend more of their time in joint problem solving with their customers, the higher the level of goodwill and competence trust placed upon them. However, differences in the nature of the links between specific types of trust and specific performance measures are not fully explainable. In particular, the impact on goodwill trust on cost reduction is seen only among Japanese suppliers, while profit conditions are better for the high trust group than for low trust group in the US only.

2. How Can Trust Be Created?

Having obtained some evidence that trust in supplier relations is associated with good supplier performance, we will now turn to the question of how trust may be created. More often than not, this question in practice is asked by managers who face low-trust adversarial customer-supplier relationships. They are in a vicious circle of 'low trust dynamics' (Fox 1973), in which low trust generates less open communication (leading to misunderstandings) and tighter control to eliminate any scope for discretion, which in turn reinforces the low trust attitude. The mutually reinforcing nature of low trust between a customer and a supplier makes both parties reluctant to take the first courageous step to break the vicious circle. Breaking the vicious circle is all the more difficult because a trusting first step -- e.g. in the form of disclosing confidential information -- increases one's vulnerability to the other's opportunistic behaviour.

A number of prescriptions have been offered to break out of the low trust dynamics in bilateral relationships. The following three sets of approaches are suggested in the existing literature: legalistic remedies including the use of formal contracts, a rational calculative approach, and gift exchange. This section discusses the three approaches, then review the relevant institutional environment of bilateral business relationships which is considered to affect the creation and maintenance of trust. The validity of these factors is tested using the survey data.

2.1 Favourable and adversarial effects of legalistic remedies

Some organisations use legalistic measures to attempt to restore trust. But it has been suggested that such legalistic 'remedies', including formalising contracts and rules, work for a certain dimension of trust only, namely task reliability (Sitkin and Roth 1993) or competence trust. According to Sitkin and Roth (1993), legal procedures may be used to substitute for interpersonal trust which may not be available in organisations due to the absence of a history of face-to-face contact. Then, legal remedies can be used to guard against bad contingencies which would undermine trust relationships. A greater formalisation of rules and procedures can restore competence trust effectively by fostering coordination when past violations, in the form of under-performance, are specific to a particular context or task.

At the same time, Sitkin and Roth (1993) argue that legalistic remedies cannot cure another category of distrust which stems from the absence of a shared set of values between the parties, due for instance to a violation of goodwill trust. In their view, legalistic remedies cannot promote value congruence because the formulation of rules and regulations would only exacerbate the problem of distrust, by maintaining the distance between the parties involved, and by increasing the suspicion that rules are imposed in order to reduce the degree of discretion available to each party. So we may hypothesize that:

H1: Written contracts attenuate customer opportunism and enhance competence trust, but undermines the ceration of goodwill trust.

2.2 History of long-term trading and rational calculation

To the extent that trust is built by demonstrating trustworthiness over time, the historical duration and experience of a relationship is said to matter greatly (Sabel 1992). For instance, Zucker (1986) argues that 'process-based trust' arises from long-term relationships which have proven to be stable over time. On this basis, some studies (e.g. Gulati 1995) use the duration of trading as a proxy for the level of trust in business relationships. Thus:-

H2A: The longer the duration of past trading, the higher is the supplier's trust of its customer.

Expectations of continued trading into the future may be induced by past association. But past association is one of the several ways in which long-term commitment may be made credible (see the next subsection). For those who place importance on the rational calculative basis for creating cooperation, what matters more than the record of long-term trading is the expectation of long-term commitment into the future, what Axelrod calls 'enlarging the shadow of the future' (Axelrod 1984; Heide and John 1990).

H2B: The longer the informal commitment made by the customer to continue trading with the supplier, the higher is the supplier's trust for its customer.

2.3 Gift exchange and credible commitments

But how can the customer firm create an expectation of informal long-term commitment among its suppliers? One mechanism for creating informal commitment is for the customer to provide technical assistance to a supplier. The customer would receive no return on its investment in training if it fires the supplier. To the extent that the customer demonstrates knowledge and skills by providing technical assistance, it enhances suppliers' 'competence trust' of the customer. Over time, particularly if technical assistance is not fully paid for, suppliers would interpret it as an initiation of 'gift exchange' (Akerlof 1982, Mauss 1966), and it may become a basis for 'goodwill trust' (Sako 1992). In a gift exchange, a long-drawn out imbalance of 'favours' done and returned sustains the relationship of interdependence. Thus, we may hypothesized that:-

H3A: Technical assistance by customers enhances suppliers' goodwill and competence trust in customers.

Can technical assistance be also a form of credible commitment which attenuates opportunism (Williamson 1985)? In order to test for the difference between credible commitment and gift exchange, the following procedure is adopted in this paper. 'Gift exchange' is based on loose reciprocity over time. The purpose of this loose reciprocity is to indebted the other party into doing favours in the future. By contrast, in making credible commitments, both parties give out hostages simultaneously so as to signal to the other party that they are committed because defection is too costly. We interpret the simultaneous provision of suppliers' technical assistance to customers and customers' technical assistance to suppliers as more akin to credible commitment than unilateral assistance. Therefore,

H3B: Bilateral technical assistance between customers and suppliers reduce customer opportunism.

Another area in which reciprocity may matter is information exchange. Sharing of information facilitates coordination between organizations. But disclosing proprietary or confidential information to the other party exposes one's vulnerability. In this situation, a two-way flow of information reduces information asymmetry, and thus reduces any scope for opportunistic behaviour (Williamson 1975). However, in order for a customer to develop suppliers' trust in the customer, it must engage in gift exchange, namely the disclosure of its information regardless of whether suppliers also disclose their information at the same time. This mechanism is essential to creating and sustaining trust, which feeds on a loose form of reciprocity over time.

H4A: The more suppliers' disclosure of information to their customer is matched by the customer's provision of information to suppliers, the lower the supplier's perception of customer opportunism.

H4B: The more customers provide information to their suppliers, the higher the level of suppliers' trust in customers.

2.4 Embeddedness

Trust between trading partners may vary not only with the attributes of bilateral transactions but also with the trading environment in which they are a part. Here, societal culture, politics, regulation, professionalisation, and national institutions are said to be a relevant set of attributes in which a bilateral relationship may be embedded (Granovetter, 1985). This embeddedness approach has led some authors to examine a very broadly defined institutional environment of business relationships, including the industrial environment, the financial system, the national legal tradition and system, and the systems of industrial relations and skill formation (e.g. Lane and Backmann 1996). It is beyond the scope of this chapter to review all these factors for all the countries which are covered in the surveys. This subsection focuses, instead, on two aspects of what is meant by embeddedness, namely the importance of path-dependent evolution of societal norms, and the role of intermediate associational networks in moderating competition with cooperation.

In the first sense of embeddedness, Dore (1983) and Sako (1992) provide evidence that Japanese companies are more predisposed to trusting their trading partners than British companies. This is interpreted to be in part due to prevailing business norms, which are determined by societal-level cultural values. Societal norms may be self-reinforcing. Over time, a history of good experience with trusting behavior in Japan may have promoted the diffusion of trust. In fact, cultural norms such as trust can be 'the precipitate of history' (Dore 1987, p.91). For instance, Japanese suppliers in the automotive industry may trust their customers more today because they have had more customer commitment, more technical assistance, etc. over a much longer period of time than most US suppliers, and their trusting behaviour has been honoured by being given growing orders. In contrast, a typical (though more eloquent) US supplier executive asserted that their customer 'would steal a dime from a starving grandmother' (Helper 1991). Attempts by US or European companies to imitate the Japanese business norm are costly and difficult because the way in which a network of customer-supplier relations developed in Japan is path dependent.

In the second sense of embeddedness, Fukuyama (1996) argues convincingly that the density of associational networks at intermediate levels between the state and individual firms accounts for the prevalence of institutionalised trust in certain societies such as Japan and Germany. For example, Smitka (1991) argues that 'governance by trust' is more prevalent in the Japanese than in the US automobile industry due to, among other things, the existence of suppliers' associations (*kyoryokukai*) in Japan and their absence in the USA. These are voluntary associations which enhance lateral communication among suppliers, and therefore act as an extra bulwark against customer opportunism (Sako 1996). In Germany, national and regionally based industry associations offer a forum for the exchange of information and the development of common norms and standards, thus creating a favourable environment for the creation and maintenance of trust between firms (Lane and Backmann 1996). In contrast, trade associations in the US and Britain are relatively weak in their associability and governability (Traxler 1995). While networks of small firms exist in certain parts of the Latin Catholic countries in Europe, they must rely on trust based on common family background, religion or ethnicity, rather than on institutionally based trust. This, it is argued by Fukuyama (1996), is due to the relative absence of intermediate associations at the level between the family and the state.

Because of the above reasons, it is expected that while there are factors common to all countries which contribute towards creating and maintaining trust between firms, a combination of some parts of the country-specific institutional environment and national history which gives rise to a unique level of trust in each country.

2.5 Survey evidence and discussion

Using the aforementioned datasets, the four sets of hypotheses elaborated above were tested using the ordered probit regression technique. Four measures were chosen as the dependent variables. Customer Opportunism is measured by the statement 'Given the chance, our customer might try to take unfair advantage of our business unit.' Competence Distrust is measured by 'The advice our customer gives us is not always helpful.' Goodwill Trust is measured by 'We can rely on our customer to help us in ways not required by our agreement with them.' Lastly, Fairness, reflecting a shared principle of fairness between the customer and the supplier which is a basis for goodwill trust, is measured by 'We can depend on our customer always to treat us fairly'. Since all the four scales are ordinal, a response of 4 implies greater agreement than a response of 2, but does not imply twice as much agreement. Thus, the ordered probit regression technique is used. The independent variables are explained in detail in Appendix B. As the correlation matrices in the appendix show, there is no problem with multicollinearity.

First, the datasets are combined to test the hypotheses, while controlling for country differences by dummy variables. In doing so, we focus our analysis on the question of whether determinants are different for different types of trust and opportunism. Next, each regional dummies for Japan, the US, Britain, Germany, and the Latin Catholic countries in Europe is analysed separately to test the embeddedness hypothesis. Lastly, as is evident in the term 'low trust dynamics' or 'high trust dynamics', the analysis will focus on the possibility of mutual and reverse causation between trust and the main independent variables.

Insert Table 2 about here

Determinants of trust and opportunism

As shown in Table 2, each set of hypotheses is supported to a varying degree.

The first hypothesis, H1, that written contracts (CONTRACT) attenuate customer opportunism and enhance competence trust but reduce goodwill trust, is not supported. It appears that when other mechanisms are present, contract duration in itself fails to be a sufficient enhancer of competence trust or a safeguard to attenuate opportunism.

As hypothesized in H2B, informal commitment (COMMIT) made by the customer enhances all types of trust and reduces customer opportunism. However, contrary to H2A, the length of trading does not have a significant impact on trust. Thus, long-term trading in itself is not sufficient to bring about trust in relationships.

As expected, in accordance with H3A, technical assistance by customers (TECHG) enhances goodwill trust and competence trust but does not have a significant impact on opportunism. H3B is also supported. It was hypothesized that due to credible commitments, a smaller gap between suppliers' technical assistance and customers' technical assistance (TECHDIF) would attenuate customer opportunism, and this is the case. At the same time, a greater gap in bilateral technical assistance reduces goodwill trust significantly and also undermines the notion of fair treatment which is a pre-requisite for goodwill trust.

The hypotheses H4A and H4B on information sharing are both supported. In particular, the gap between suppliers' provision of information to customers and customers' disclosure of information to suppliers (INFODIF) increases customer opportunism. Moreover, the customer's provision of information (CUSTINFO) in itself has an independent significant effect of enhancing trust and reducing opportunism.

To summarize, the main determinants of goodwill trust are informal customer commitment, customers' technical assistance and customers' provision of information. The same three factors are significant determinants of competence trust. By contrast, the main determinants of customer opportunism include the information asymmetry between the customer and the supplier, and informal customer commitment. Earlier, it was hypothesized that 'gift exchange' enhances trust but does not attenuate opportunism, while 'credible commitments' attenuate opportunism but do not enhance trust. The survey data provide some support for this. In particular, customers' technical assistance enhances trust but does not attenuate opportunism. It is the customers' provision of information, regardless of whether suppliers provide information to customers or not, which matters for enhancing trust, while two-way information sharing (which can be interpreted to be credible commitment) is what matters for attenuating opportunism.

Country differences: a test of embeddedness

In order to examine differences in the levels of trust and opportunism among countries, dummy variables were created for suppliers located in the US, Britain, Germany and the Latin

Catholic countries respectively, using those in Japan as the baseline reference group. These dummies capture the embedded national-specific cultural norms and institutions, after taking account of the factors affecting trust and opportunism, which are common to all suppliers regardless of their country location.

As one might expect, the level of customer opportunism anticipated by suppliers was higher in the US, the UK and the continental European countries than in Japan (see Table 2). The level of competence trust was also lower in these three regions than in Japan. For goodwill trust, the level was significantly lower in the US than in Japan as expected, but surprisingly, significantly higher in the Latin Catholic countries than in Japan. The German suppliers' goodwill trust was not significantly different from that of Japanese suppliers. Lastly, suppliers' perception of fair treatment by customers was lower in the US, Britain and Germany as compared to in Japan, but not significantly different between the Latin countries and Japan. These results largely confirm the impressionistic picture given in Table 1, but give a much better indication of the country-specific contribution to raising or undermining different types of trust after controlling for universal factors.

Trust dynamics and written contracts

In order to test for causality, one would ideally require a longitudinal study. As a second best, the survey asked suppliers about the situation now and four years ago in some of the questions, which enables us to conduct cross-lagged tests. The rest of this paper examines the causation between trust and contract duration. The only measure of trust for 'now' and '4 years ago' was the one concerning fair treatment ('we can depend on our customer to treat us fairly.'). Therefore, this subsection uses this measure of trust only.

In the analysis above, written contracts were found not to have any significant impact on opportunism nor trust. One of the reasons for this may be that when other mechanisms are present, contracts in themselves fail to be a sufficient enhancer of trust or a safeguard to attenuate opportunism. Another possibility is that besides the formal contract duration, other dimensions (such as the actual content of the contract) may matter in affecting opportunism and trust.

Another added complication is that the implicit contract duration may be different from the explicitly agreed contract duration. For example, according to the survey, in Europe, contracts have lengthened from a median of 1 year in 1990 to 3 years in 1994. In the US also, the median contract duration has increased, though less dramatically, from 1 year in 1989 to

1.5 years in 1993. However, these figures conceal a sharp decrease in contract duration reported by suppliers to one vehicle manufacturer in the US. In Japan, contracts between companies typically do not contain specific information about the type of products to be supplied. The practice of general framework contracts (without product-specific contracts) prevailed for two-thirds of the respondents in both 1989 and 1993. Where there were contracts, the implicit contract in Japan tended to be longer than the basic contract which was renewed annually. Therefore, contract duration alone does not truly reflect differences in customer commitment particularly in Japan.

In spite of the above caveat, the survey data make it possible to examine what were the causes and effects of longer-duration contracts at least in the US and Europe. In order to test whether changes in the level of trust is causing changes in contract duration or vice versa, cross-lagged tests were applied to each regional dataset. As can be seen in Table 3, the coefficients in both regressions are negative and significant in the US, implying that a low level of trust has led customers to offer longer-term contracts, which in turn have led to lower levels of trust. In general, lengthening the duration of the contract has not had the intended effect of restoring trust in the US. Thus, some US automotive supplier relations appear to be suffering from a low trust dynamics, and the reason may be the inability of legal 'remedies' to bring about goal congruence when the existing relationships are adversarial (Sitkin and Roth 1993).

Insert Table 3 about here

In Europe overall, the impact of contract duration on trust is positive and significant in countries other than the UK. Thus in the main countries of Germany, France, Italy and Spain, it appears that automotive customers have been able to enhance suppliers' trust by offering longer-term contracts. When the Latin Catholic countries are separated out from Germany, the positive impact of contract duration on trust is found to be significant among suppliers in the former only. The German result is not what we expected, but the Latin Catholic countries are seen to share the same civil law tradition with Germany (Arrighetti et al 1996). In the UK, as in Japan, there has been little changes in contract duration, and what little changes there were have had no significant impact on the level of trust among suppliers. This finding, if we contrast the UK with continental Europe, is not inconsistent with Lane and Backmann's conclusion that (a) adhering to contractual conditions was invariably rated more highly as a trust-creating behaviour in Germany than in Britain, and (b) contracts were used in a more varied and adversarial manner in Britain than in Germany (Lane and Backmann 1996, p.385).

To summarize, the empirical evidence presented in this section shows that the determinants of trust are different from the opposite of the determinants of opportunism. The former are such things as technical assistance and customer provision of information to suppliers regardless of whether the suppliers reciprocate or not; these mechanisms were called 'gift exchange'. The latter include 'safeguards' in terms of credible commitments. After taking account of these universal factors, the levels of suppliers' trust and expectations of customer opportunism were found to be significantly different according to their country location. These differences were interpreted to be due to the embeddedness of business relationships in country-specific institutions and history. The impact of one specific institution, the legal framework, was also examined. There is some evidence that the vicious circle of low trust dynamics (with longer contracts leading to higher distrust which in turn has led to even longer contract) developed in the US auto industry in the recent past. But for the Latin Catholic countries, the lengthening of the formal contract appears to have contributed towards enhancing trust. Thus, contract lengths have had different effects on trust creation in different countries.

3. Conclusions

This chapter conceptualised inter-organisational trust into 'contractual trust', 'competence trust' or 'goodwill trust', according to the sources of predictability in mutually acceptable behaviour. The distinction among the three types of trust has proven to be useful in particularly in thinking about the outcomes of trust.

In linking trust to business performance, it was argued that there should be a move away from the framework of minimising transaction costs towards one with a focus on learning and innovation (see also Goshal and Moran 1996). The main hypothesis was that among the three types of trust, 'goodwill trust' would have the strongest impact on performance. This is because the extra edge which 'goodwill trust' offers over and above the formal governance structures of contracts or hierarchies is learning and continuous improvement, not merely in making savings in transaction costs. The survey of first-tier automotive suppliers provides evidence that trust is associated with supplier performance particularly in just-in-time delivery and continuous improvement.

In relation to the creation of trust, this paper recommends a move away from a framework which focuses on safeguards against the abuse of trust towards thinking about

enhancers of trust. The latter are like 'gift exchange' based on loose reciprocity over time. According to the survey evidence, the trust enhancers may take the form of customers' technical assistance to suppliers, which does not function as a safeguard against opportunism. One effective safeguard is information sharing (i.e. two-way flow of information), while the unilateral provision of information by customers, regardless of whether suppliers reciprocated simultaneously or not, was found to enhance trust. Other safeguards, such as legal contracts, were found to have differential effects in different countries, with the US experiencing a low trust dynamics and the Latin European countries experiencing a positive impact of longer contracts on enhancing trust

The distinction between 'safeguards' and 'enhancers' of trust roughly corresponds to the difficulty in reconciling the two views on trust alluded to at the beginning of this chapter, namely one regarding trust as an outcome derived from rational calculation and the other equating it to a value traced to culture or social norms. However, 'safeguards' are rarely fool-proof in business, precisely because trust is more than promise keeping, and contracts are always necessarily open-ended. Thus, while law in certain countries may help jump-start trust relations in business, in the end 'goodwill trust' has to be found not by resort to law but through learning-by-interacting to fill in the gap left by incomplete contracts. At the same time, gift exchange as an enhancer of trust, in the form of technical assistance for example, may depend on a social norm of loose reciprocity, but in business, there is no such thing as blind faith. The process of gift exchange may be started, and can only be sustained, by intense communication and monitoring of each other's behaviour to find opportunities for continuous improvement, but these are quite different from 'safeguards'.

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Appendix A Questionnaire Development and Data Collection

Data were collected by the author and Professor Susan Helper during 1993 and 1994 from 675 first-tier automotive component suppliers in the US, 472 first-tier suppliers in Japan and 268 suppliers in Europe, according to the following procedure.

Questionnaire Design

A questionnaire was developed in English and Japanese, in order to enquire into a broad range of questions concerning the nature of suppliers' relationship with their customers, the vehicle manufacturers. Because many companies supply their customers with several different types of products, and their relationships with their customers differ by product, we made a decision to ask respondents to answer the questionnaire for their most important customer regarding one product which was typical of their company's output and with which they were familiar.

Many of the questions were taken from an earlier survey undertaken by Helper in North America in 1989 (Helper 1991) and a short questionnaire on trust and opportunism administered by Sako in the electronics industry in Japan and Britain in 1988-9 (Sako 1992). In particular, the measures of trust and opportunism were developed by surveying the academic literature in economics and psychology (e.g. Anderson 1988, Cook et al 1981). We took the view more common in psychology than in economics that creating composite measures of trust and opportunism would reduce measurement error, as compared to using a single measure. Thus, the questionnaire adopted a number of scales, each reflecting different types of trust and opportunism.

Piloting the Questionnaire

Next, the draft questionnaire was sequentially piloted at a handful of supplier companies in both the USA and Japan during 1992. As a result, improvements were made to the clarity of questions and the ease of answering them. Much attention was paid to the phrasing of questions in a vocabulary familiar to managers, and to the consistency of meaning in the English and Japanese languages. For instance we asked several people to translate some questions from English to Japanese and others to translate them back from Japanese into

English. The process of piloting and revision took around nine months. In 1993, the English language survey was used as a basis for piloting the survey in Europe. As a result, modifications were made to adapt some industry terminology to the European convention. A decision was made to administer the European survey in English.

Sampling Framework

The sample chosen for the North American questionnaire was every automotive supplier and automaker component division named in the *Elm Guide to Automotive Sourcing* (available from Elm, Inc. in East Lansing, Michigan). This guide lists the major first-tier suppliers (both domestic and foreign-owned) to manufacturers of cars and light trucks in the United States and Canada.

In Japan, the sample consisted of all members of the Japan Auto Parts Industries Association (JAPIA), all automotive suppliers named in *Nihon no Jidosha Buhin Kogyo 1992/1993* (Japanese Automotive Parts Industry) (published by Auto Trade Journal Co. Inc. and JAPIA, Tokyo, 1992), and the component divisions of vehicle manufacturers. This publication lists all the first-tier suppliers (both domestic and foreign-owned) to the eleven manufacturers of cars and trucks in Japan.

The target respondent in the US was the divisional director of sales and marketing, and the divisional business manager or director of strategic planning in the case of components divisions of vehicle manufacturers. Since they commonly take a lead in interfacing with customers, they were deemed the most knowledgeable informants about customers' procurement practices. Similarly in Japan, the questionnaire was sent to the Director of Sales and Marketing at independent firms. For member companies of JAPIA, the survey was sent to the main contacts named by JAPIA, many of whom were either chief executives or marketing directors. JAMA (Japan Auto Manufacturers Association) took responsibility to identify the respondents for automaker components divisions.

In spring 1994, the European survey was sent out to around 1600 major automotive suppliers located in Western Europe. This sample was compiled from several sources including trade associations and the major vehicle manufacturers in Europe. The target respondent was the director of sale and marketing at each firm. These individuals were selected on the grounds that they would have the broadest knowledge about both customer relationships and about their firms' products and processes.

Response Rates

The questionnaires were sent out in spring 1993 in the US summer 1993 in Japan, and spring 1994 in Europe. The responses were far above the norm for business surveys. It was 55% in North America, 30% in Japan (45% among JAPIA members), and 17% in Europe (26% among UK-based suppliers) after taking into account those firms which were unreachable (mail sent to them was returned undelivered), and those which were not eligible to answer the survey (they were not first-tier automotive suppliers, or they specialised in supplying for heavy truck and buses). In Europe, 45% of responses were from UK-based suppliers, thus making the sample biased towards UK-based suppliers than the population of European suppliers.

The respondents had a wealth of experience, and were thus the single individual able to answer all of our questions for the customer/product pair they chose. US respondents averaged more than 18 years in the automobile industry and more than 11 years with their company. Japanese respondents had worked for 22 years on average at their company. The European respondents averaged 16 years in the automotive industry, and 8 years with their company.

Appendix B Explanations of Independent Variables

This appendix provides the survey question and explains any manipulation made subsequently to create each independent variable.

VARIABLE NAMES

CONTRACT 'What is the length of your written contract or purchase order with this customer for this product?' (in years)

TRADING 'Approximately how long has your firm sold products in this product line to this customer?
1 year 2 years 3 years 4 years 5-10 years 11-19 years 20-40 years 41-60 years over 60 years'
The mid-point of each interval was used; thus the variable takes the values of 1, 2, 3, 4, 7.5, 15, 30, 50.5, and 75.

COMMIT 'For how long do you think there is a high probability that your business unit will be supplying this or similar item to your customer?' (in years)

SUPINFO 'What types of information does your business unit provide to your customer about the process you use to make the product you listed above? (Please check all that apply.)
- Detailed breakdown of process steps
- Cost of each process steps
- Financial information not publicly available
- Production scheduling information
- Type of equipment used
- Your sources of supply
- Detailed information regarding materials you use'
The seven information items were given one point each if checked, and were added.

CUSTINFO	<p>'Does your customer provide you with any of the following types of information? (Please check all that apply.)</p> <ul style="list-style-type: none"> - Warranty or other data from final consumers - Financial information not publicly available - Information on how your product is used in their process' <p>The information items were given one point each if checked, and added.</p>
INFODIF	SUFINFO - CUSTINFO
TECHG	<p>'Over the last four years, what sorts of technical assistance have you received from your customer? (Please check all that apply, and indicate whether 'provided for zero or nominal charge' or 'provided for a fee')</p> <ul style="list-style-type: none"> - Provided personnel who visited supplier site to aid in implementing improved procedures - Arranged for training of your personnel at their site - Provided personnel who worked two weeks or more on your shopfloor to improve your process' <p>Given a weight of 2 if 'provided for zero or nominal charge' and a weight of 1 if 'provided for a fee', and summed over the three items.</p>
TECHDIF	<p>'Approximately what percent of the contacts with your customer regarding this product were for the following purposes?'</p> <p>Percent for 'your business unit providing technical assistance to customer' minus percent for 'customer providing technical assistance to your business unit.'</p>
USA	A dummy with 1 for US responses, 0 otherwise.
UK	A dummy with 1 for UK responses, 0 otherwise.
GERMANY	A dummy with 1 for German responses, 0 otherwise.
LATIN	A dummy with 1 for responses from France, Italy or Spain, 0 otherwise.

REFERENCES

- Akerlof, G.A. 1982 Labour contracts as partial gift exchange, *Quarterly Journal of Economics* 97, 542-6.
- Anderson, E. 1988, Transaction costs as determinants of opportunism in integrated and independent sales force, *Journal of Economic Behavior and Organization* 9, 247-264.
- Anderson, E. and B. Weitz. 1989, Determinants of continuity in conventional industrial channel dyads, *Marketing Science*, 8, 310-323.
- Amighetti, A., R. Bachmann and S. Deakin (1996) Contact law, social norms and inter-firm cooperation, ESRC Centre for Business Research Working Paper No.36, University of Cambridge.
- Arrow, K.J. 1975, Gifts and exchanges, in E.S. Phelps ed., *Altruism, morality and economic theory* (Russell Sage Foundation, New York).
- Asanuma, Banri 1989, Manufacturer-supplier relationships in Japan and the concept of relation-specific skills, *Journal of the Japanese and International Economies* 3, 1-30.
- Axelrod, R. 1984. *Evolution of cooperation* (Basic Books, New York).
- Barney, Jay B. and Mark H. Hansen 1994, Trustworthiness as a source of competitive advantage, *Strategic Management Journal* 7, 175-190.
- Bradach, J. L. and R.G. Eccles 1989, Price, authority and trust: From ideal types to plural forms, *Annual Review of Sociology* 15, 96-118.
- Brusco, S. 1986. Small firms and industrial districts: the experience of Italy, in D. Keeble and F. Weever, eds., *New Firms and Regional Development*. (Croom Helm, London).
- Cook, J. and T. Wall 1980, New work attitude measures of trust, organizational commitment and personal need non-fulfilment, *Journal of Occupational Psychology* 53, 39-52.
- Cook, J. D. et al. 1981. *The Experience of work: A compendium and review of 249 measures and their use*. (Academic Press, Orlando).

- Cummings, L.L. and Bromiley, P. 1996, The organizational trust inventory (OTI): development and validation, in Kramer, R.M. and Tyler, T.R. (eds.) *Trust in organizations: frontiers of theory and research*. (Sage, London).
- Deutsch, M. 1958, Trust and suspicion, *Journal of Conflict Resolution* 2(4), 265-279.
- Dore, R. 1983. Goodwill and the spirit of market capitalism, *British Journal of Sociology* 34, 459-482.
- Dore, R. 1987. *Taking Japan seriously* (Stanford University Press, Stanford).
- Dyer, J. Forthcoming. Does governance matter? Keiretsu alliances and asset specificity as source of Japanese competitive advantage, *Organization Science*.
- Fox, A. 1973. *Beyond contract : Work, power and trust relations*. (Faber and Faber, London).
- Fukuyama, Francis, 1995, *Trust: the social virtues and the creation of prosperity*. (Hamish Hamilton, London).
- Gambetta, D. ed., 1988, *Trust: making and breaking cooperative relations*. (Basil Blackwell, Oxford).
- Goshal, Sumantra and Moran, Peter 1995, Bad for practice: a critique of the transaction cost theory, *Academy of Management Review* 21(1), 13-47.
- Granovetter, M. 1985, Economic action and social structure: The problem of embeddedness *American Journal of Sociology* 91, 481-510.
- Gulati, R. 1995, Does familiarity breed trust? The implications of repeated ties for contractual choice in alliances, *Academy of Management Journal* 38, 85-112.
- Heide, J. B. and G. John 1990, Alliances in industrial purchasing: The determinants of joint action in buyer-supplier relationship, *Journal of Marketing Research* 27, 24-36.
- Helper, S. 1991, Strategy and irreversibility in supplier relations: The case of the US automobile industry, *Business History Review* 65.

Helper, S. and M. Sako 1995, Supplier relations in the auto industry in Japan and the USA: Are they converging? *Sloan Management Review* Spring: 77-84.

Ingersoll Engineers 1995, Partnership or conflict? The automotive component supply industry: a survey of issues of alignment. (Ingersoll Engineers, Ruby.)

Joskow, P.L. 1988, Asset specificity and the structure of vertical relationships: Empirical evidence, *Journal of Law, Economics and Organization* 4(1), 95-118.

Jarillo, J.C. 1988, On strategic networks, *Strategic Management Journal* 9, 31-41.

Lane, C. and R. Backman 1996, Risk, trust and power: The social construction of supplier relations in Britain and Germany, Paper presented at the Work, Employment and Society conference, University of Kent, 12-14 September.

Macaulay, S. 1963, Non-contractual relations in business: Preliminary study, *American Sociological Review* 28(2), 55-67.

Macneil, I.R. 1974, Contracts: Adjustment of long-term economic relationship under classical, neo-classical, and relational contract law, *Northwestern University Law Review* 72, 584-906.

Mauss, Marcel 1966 *The gift* (Routledge and Kegan Paul, London and Henley).

Mohr, J. and R. Spekman 1994, Characteristics of partnership success: Partnership attributes, communication behavior, and conflict resolution techniques, *Strategic Management Journal* 15, 135-152.

Powell, Walter W. 1996, Trust-based forms of governance, in Kramer, R. M. and Tyler, T.R. (eds) *Trust in organizations: frontiers of theory and research*. (Sage, London.)

Ring, P.S. and A.H. Van de Ven 1994, Developmental processes of cooperative interorganizational relationships, *Academy of Management Review* 19: 90-118.

SMMT & DTI 1994, A review of the relationships between vehicle manufacturers and suppliers. (Society of Motor Manufacturers and Traders and the UK Department of Trade and Industry, London).

Sabel, C. F. 1992. Studied trust: building new forms of co-operation in a volatile economy, in Pyke, F. and W. Sengenberger eds., *Industrial districts and local economic regeneration*. (International Institute for Labour Studies, Geneva).

Sabel, C.F. 1994. Learning by monitoring: the institutions of economic development, in Smelser, N.J. and Swedberg, R. (eds.) *The handbook of economic sociology*. (Princeton University Press, Princeton, N.J.).

Sako, M. 1991. The role of "trust" in Japanese buyer-supplier relationships, *Ricerche Economiche XLV*: 449-474.

Sako, M. 1992. Prices, quality and trust: inter-firm relations in Britain and Japan. (Cambridge University Press, Cambridge).

Sako, M. 1996. Suppliers' associations in the Japanese automobile industry: Collective action for technology diffusion. *Cambridge Journal of Economics*.

Sako, M. 1996. The informational requirements of trust in supplier relations: evidence from Japan, Europe and the United States, in Lazanc, N. and Lorenz, E. (eds) *The economics of trust and learning*. (Edward Elgar), forthcoming.

Sitkin, S. B. and Roth, N.L. 1993. Explaining the limited effectiveness of legalistic 'remedies' for trust/distrust, *Organization Science* 4 (3), 356-92.

Smitka, M. 1991, *Competitive ties: Subcontracting in the Japanese automotive industry*. New (Columbia University Press, York).

Smitka, M. 1992, Contracting without contracts. in Sitkin, S.B. and Bies, R.J. Eds. *The legalistic organisation*. (London: Sage).

Traxler, F. 1995, Two logics of collective action in industrial relations? in Colin Crouch and Franz Traxler (eds) *Organized industrial relations in Europe: what future?* (Avebury, Aldershot).

Walker, G. and D. Weber 1984, A transaction cost approach to make-or-buy decisions, *Administrative Science Quarterly* 29, 373-391.

Williamson, O. E. 1975. *Markets and hierarchies*. (The Free Press, New York).

Williamson, O. E. 1979, Transaction-cost economics: the governance of contractual relations, *Journal of Law and Economics* 22, 3-61.

Williamson, O.E. 1983, Credible commitments: using hostages to support exchange, *American Economic Review*, 73, 519-40.

Williamson, O. E. 1985. *The economic institutions of capitalism*. (The Free Press, New York).

Williamson, O. E. 1993, Calculativeness, trust, and economic organization, *Journal of Law and Economics* 36, 453-486.

Zucker, L. 1986, Production of trust: institutional sources of economic structure, *Research in Organisational Behaviour* 6, 53-111.

Table 1: Trust and Opportunism in Japan, the USA, and Europe

	Japan (N=472)	USA (N=671)	Britain (N=123)	Germany (N=51)	Latin Catholic Europe (N=52)
Contractual trust We prefer to have everything spelt out in detail in our contract.*	24.03	16.62	15.25	27.45	14.00
Competence trust The advice our customer gives us is not always helpful.*	48.37	31.25	35.51	28.57	39.58
Goodwill trust We can rely on our customer to help us in ways not required by our agreement with them.	38.81	37.24	42.50	50.00	64.00
Fairness We can depend on our customer always to treat us fairly.	67.88	42.41	40.00	54.00	54.90
Customer opportunism Given the chance, our customer might try to take unfair advantage of our business unit.	23.94	55.85	32.50	26.00	26.00

Note: The figures show the percentages responding 4 or 5 on a five point scale (5=strongly agree, 4=agree, 3=neither agree nor disagree, 2=disagree, 1=strongly disagree). The statements (*) for contractual trust and competence trust are reversed, so the figures are the percentages responding 1 or 2.

Table 2: Ordered Probit Estimation of Determinants of Trust and Opportunism

Independent variables	Contractual Distrust	Competence Distrust	Goodwill Trust	Fairness	Customer Opportunism
CONTRACT	0.088*	-0.000	-0.002	-0.001	-0.001
TRADING	0.000	-0.002	-0.002	-0.004	0.004
COMMIT	-0.001	-0.003*	0.004***	0.004**	-0.005***
TECHG	-0.003	-0.087***	0.064***	0.011	-0.003
TECHDIF	0.001	0.001	-0.003 †	-0.007***	0.004**
CUSTINFO	0.020	-0.121**	0.222***	0.188***	-0.182***
INFODIF	0.029	0.028	0.001	-0.041*	0.047**
USA	0.563***	0.640***	-0.210**	-0.866***	0.758***
UK	0.297 †	0.330**	0.034	-0.485***	0.671***
GERMANY	0.102	0.562**	0.089	-0.345*	0.619***
LATIN	0.475**	0.346*	0.417**	-0.157	0.552***
Log Likelihood	-1627.5815	-1660.8079	-1593.8821	-1600.5942	-1836.0586
Pseudo R2	0.025	0.037	0.025	0.066	0.059
N	1137	1118	1144	1144	1143

*** p<.001

** p<.01

* p<.05

† p<.10

Table 3: Cross-lagged Tests of the Link between Contract Lengths and Trust

	Japan	USA	Britain	Germany	Latin Catholic Europe
Dependent variable: TRUST NOW					
Independent variable: CONTRACT 4 YEARS AGO	-0.035	-0.087 †	0.028	-0.142	0.273*
Adjusted R ²	-0.001	0.005	-0.008	-0.0001	0.056
N	441	457	121	51	51
Dependent variable: CONTRACT NOW					
Independent variable: TRUST 4 YEARS AGO	0.0395	-0.084 †	-0.027	-0.016	0.094
Adjusted R ²	-0.0007	0.005	-0.008	-0.022	-0.013
N	441	473	123	47	47

*** p<.001
 ** p<.01
 * p<.05
 † p<.10

Figure 1
High Trust Suppliers Controlled Costs Better in Japan
Average annual cost changes 1991/2-1992/3

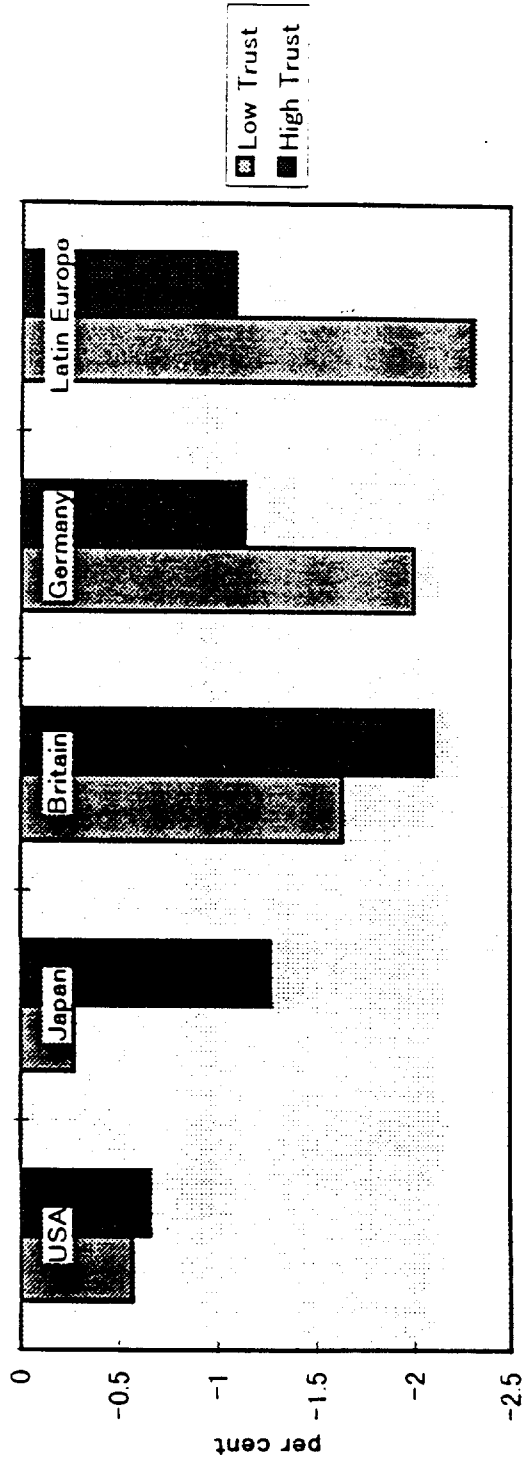


Figure 2
High Trust Suppliers Defended Their Profit Margins Better in
USA Average annual percentage point change 1993/4

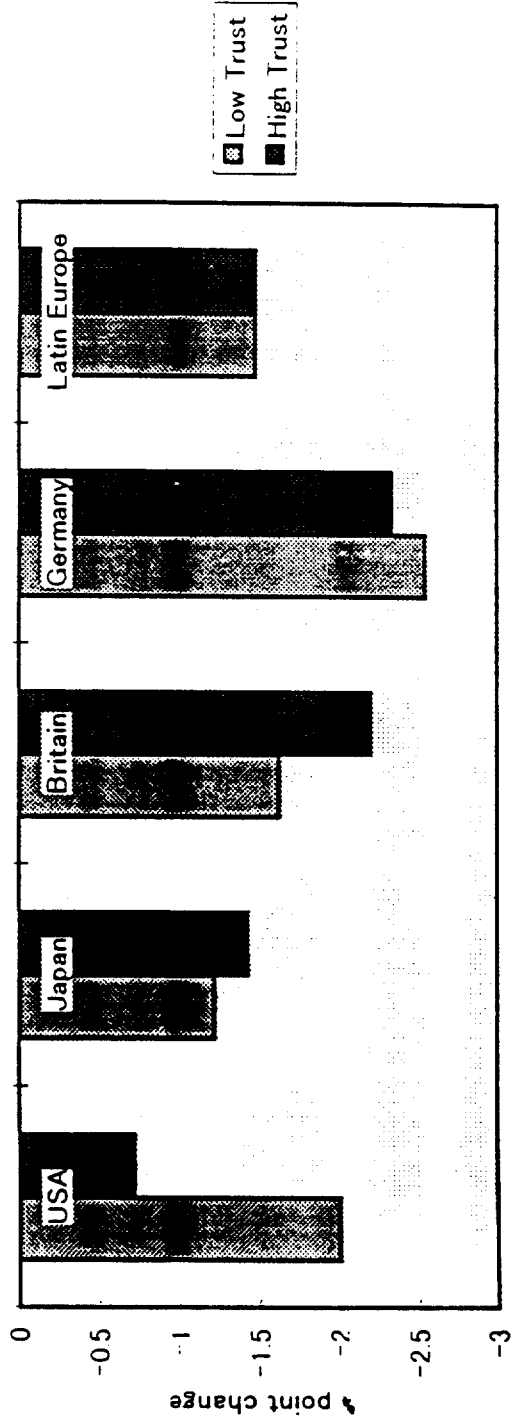


Figure 3
High Trust Suppliers were Better at Just-in-Time Delivery

('Use of JIT has allowed our business unit to increase delivery frequency without increasing costs')



Figure 4

High Trust Suppliers are Better at Joint Continuous Improvement

Average % of time spent on 'joint efforts to improve the product or process'

