



# Sharing Knowledge with Your Suppliers: Enablers & Barriers

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***Executive Briefing 2007-03***

Sharing knowledge within supply bases an increasingly important challenge for purchasing professionals. This briefing looks at some of the critical factors, such as trust, cooperation, and relationship duration and their impacts on the ability to transfer knowledge between buyer and supplier. Some suggestions for appropriate resource allocation are made.

## Background

There was a time when sharing knowledge with suppliers would have been considered foolhardy, perhaps even dangerous. To discuss product and/or process design with external parties made little commercial sense in an environment of arms-length, cost-down relations. Over the past fifteen years such attitudes have started to change. Notions of 'partnerships' and 'open book costing' started to permeate organisational consciousness, changing attitudes towards the supply base. In particular, Japanese practices called for greater transparency and openness within collaborative exchange structures.

This is all very well, but unfortunately knowledge is 'sticky'<sup>1</sup> and transfer is subject to a number of constraints. Indeed, sharing knowledge and stimulating change is enough of a challenge within one's own organisation, let alone within suppliers. Furthermore, the desire to engage in learning needs to be balanced with the need for protection. Stories of contract manufacturers entering a prime's market after reverse engineering or knowledge misappropriation are becoming all too common. This research seeks to examine some of the enablers and barriers to sharing knowledge within a supply base. It is aimed to coordinate resource constrained activity towards delivering

the biggest 'bang for your buck' when working with suppliers.

## Problems and Objectives

This research was guided by the notion that in addition to the transfer of goods and services, business relationships may also act as a vehicle to access and/or acquire capabilities from a partner firm. The distinction between access and acquisition is an important one. Access relationships are concerned primarily with leveraging existing complementary resources and capabilities within partner firms, but with the intention of maintaining distinct bases of capabilities. On the other hand, acquisition relationships are vehicles used to learn new skills and capabilities from a partner firm in order to modify existing resource profiles. That is not to say that these objectives are mutually exclusive. For example, a nascent biotechnology firm may use its relationship with an incumbent pharmaceutical firm for the purposes of both accessing a partner's reputation, while simultaneously attempting to acquire marketing competences through a learning process. However, the focus here is on the acquisition process.

Critical to this discussion is the notion that knowledge transfer is a function of the form of relationship operating between the two partners. In other words, the type of relationship operating between the buyer and supplier will determine the degree to which transfer is successful. Of course there are many different facets to a buyer-supplier relationship, however, this study focuses on four of the most important:

- extent of cooperation
- level of trust,
- relationship duration
- supplier performance

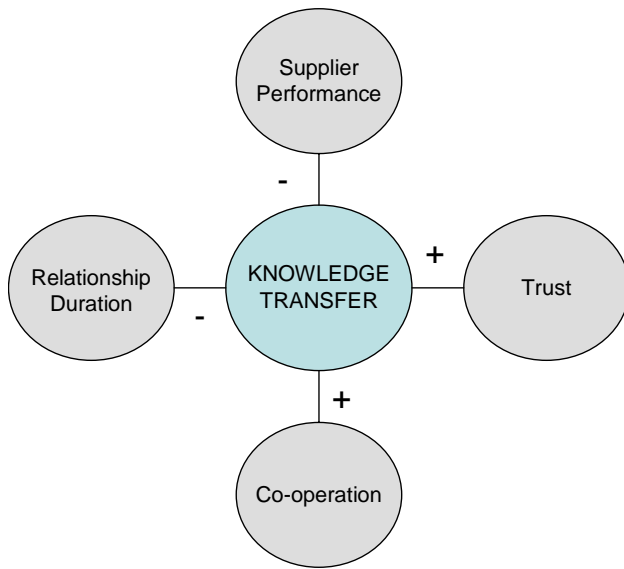
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<sup>1</sup> Szulanski (1996)

This leads to the question:

*“How do the characteristics of buyer-supplier exchange influence inter-firm knowledge transfer?”*

The various relationships examined are illustrated in Figure 1 (below):



## Method

We sampled 500 United Kingdom manufacturing firms from a database held by Conquest Business Media<sup>2</sup>. Of the 104 respondents the vast majority were at the level of Purchasing Manager or above with an average tenure of over 10 years.

## Results

The results show that cooperation does have a positive effect on the level of knowledge transfer in a buyer-supplier relationship. While this may seem obvious, it is the process of cooperation that is important. Several factors, including the frequency and breadth of communication, the level of socialisation (see executive briefing 2006-02) and relational

contracting, all play a major role in easing the transfer of knowledge.

The relationship between cooperation and knowledge transfer is, however, not as straightforward as it first appears. Using statistical modelling we can show that other factors confound the direct effect. The level of trust and supplier performance both have an important interaction effect on this relation. Positive interaction effects refer to relations that are ‘supercharged’ with the introduction of a third factor, whereas negative interaction effects refer to relations that are ‘dampened’ by the introduction of a third factor. In this study, it is shown that trust has a positive interaction effect but that supplier performance has a negative interaction effect. In other words, the ability to be able to transfer knowledge is optimal where relationships are either: a. infused with both high levels of cooperation and high levels of trust, or b. have high levels of cooperation but low levels of supplier performance. The reasons for this are discussed in the next section.

Finally it would also appear that the length of the relationship has an important role to play in the transfer of knowledge. In theory one would expect that knowledge transfer would grow over the lifecycle of a relationship. However, the results show that the reverse is true, that buyers tend to share more in the early stages of the exchange. First, it may be that the knowledge exchange is required to get a partner up to scratch. For example, Nike usually deals with three stages of supplier. The third stage consists largely of suppliers in low skill-low wage areas. Nike will send engineers to the supplier factories to develop production capabilities that may be 30 - 40 years out of

<sup>2</sup> Industries include: fabricated metal products, office machinery and computers, electrical machinery and apparatus, medical, precision and optical instruments, motor vehicles, and furniture.

date<sup>3</sup>. Second, it may be that the relationship deteriorates over time as partners become aware of each others opportunistic behaviour. Several of our respondents referred to the 'growing sense of unease' that their suppliers may actually be looking to enter their market using process and product knowledge acquired through the course of the relationship. In such cases, buyers were quick to reduce levels of openness or even switch suppliers.

## Discussion

In addition to the findings above we wish to focus specifically on the effect of supplier performance. Interestingly our research identified a negative interaction effect of supplier performance on knowledge transfer. This finding firstly shows that when a firm is concerned with knowledge transfer, for example in high technology industries, they should attempt to select suppliers that already have a recognised level of high performance. Secondly, it demonstrates that buyers should not spend disproportionate amounts of time and effort (and therefore cost) with high performing suppliers, because they are going to naturally gain knowledge transfer from the supplier's innate ability. Finally, and perhaps most importantly this finding demonstrates that knowledge transfer is not a uni-directional process, it is bi-directional. By that, we mean that whilst the buyer has a propensity to receive information; known as absorptive capacity, the supplier also must have the capability to *transmit* the knowledge to the buyer in such a manner that it can be recognised and used. This transmission ability we can term 'diffusion capacity' which is the supplier's ability to transmit knowledge in a clear and codified manner to the buyer firm. Naturally cooperation mechanisms open the

door for this transmission to take place, indeed the use of socialization mechanisms and the building of relational capital allow the supplier to understand *how* and *what* knowledge is required and in what format.

Figure 2 demonstrates this finding in the form of a simple matrix. We examine supplier performance (high and low performers) and the levels of cooperation (high and low).

**Figure 2 - Knowledge Transmission**

		<b>B</b>	<b>D</b>
Cooperation	HIGH	Moderate transfer problems Resource fit	Few transfer problems Resource redundancy
	LOW	<b>A</b>	<b>C</b>
		Severe transfer problems Resource gap	Few transfer problems Resource fit
		LOW	HIGH
		Supplier Performance	

**Quadrant A**, is where the supplier is a low performer i.e. low levels of diffusion capability and the buyer's strategy is for low levels of cooperation i.e. limited socialization, relational capital, building of trust and so on. Relationships in this box are subject to 'severe knowledge transfer problems' and thus resource gaps are created.

**Quadrant B**. Where cooperation strategies are high i.e. significant investment in socialization mechanisms, but supplier performance is low, we find a resource fit and the buyer and supplier encounter moderate transfer problems. Resource fit is achieved because in order to improve knowledge transfer rates between the buyer and supplier increased cooperation is required.

<sup>3</sup> Gadde and Hakansson, 2001

**Quadrant C** is a situation where the supplier is a high performer and the level of cooperation between the buyer and supplier is minimal. This is in fact a perfect fit. The inter-firm relationship only requires a limited amount of investment to facilitate knowledge transfer. Here the supplier has a large propensity of diffusion capacity and the buyer has large amounts of absorptive capacity.

**Quadrant D**, is where there are large amounts of cooperation and the supplier is also a high performer. In this box there are redundant resources i.e. resources are being wasted putting in place cooperation mechanisms that are simply not adding any value to the inter-firm exchange. This strategy causes 'resource redundancy' and should be avoided.

This model should allow practitioners to think about the type and level of cooperation investment and the ability of the supplier to perform within that relationship. It should also focus the minds of managers on the investment required to manage and maintain these relationships and question the resource utilisation.

## Recommendations

1. *Cooperation with key suppliers is critical.* This study offers advice on the acquisition of knowledge from the supply base. First and foremost, it recognises the importance of cooperation with key suppliers. Although there has been a shift towards strategic purchasing and greater collaboration within the supply chain over the past two decades, there still exists clear evidence of arms-length relations. Whilst it is naïve to recommend that all exchange relations become cooperative, it is imperative for those relations where firms wish to transfer

tacit knowledge. Knowledge transfer decisions should thus be incorporated into network design, where it has obvious implications for sourcing strategies and supply base optimisation.

2. *Trust is vital in vertical exchange relations.* Trust encourages openness in the source unit by reducing uncertainty in the future behaviour of the partner firm. Further, trust increases the perceived veracity of the knowledge where the actions of the partner are likely to be reliable and in the best interests of the relation. Organisations should therefore be mindful of the level of trust in their own organisation as well as seeking trustworthy parties to engage in knowledge transfer.
3. *Supplier's capabilities are critical to the transfer of knowledge.* High levels of diffusion capacity at the source can reduce the heavy costs of establishing and maintaining collaborative exchange while maintaining comparable levels of knowledge transfer between organisations. Firms can use Figure 1 to establish the appropriate level of cooperation for differing levels of supplier performance.



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