

**INVESTIGATING THE MEANING OF SUPPLIER-MANUFACTURER  
PARTNERSHIPS – AN EXPLORATORY STUDY**

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**Keywords** *Partnerships, Supplier Management, Supply Chain, Manufacturing, Supply Base*

**Abstract** *Supplier partnerships can be key in enhancing the performance of manufacturing companies. Consequently, partnership has been strongly recommended by academics and practitioners alike. Surprisingly, the concept of partnership is only poorly understood. Many authors have identified the advantages that it can bring but far less has been published on the attributes of partnership itself. What is known is that partnerships are ‘close’ relationships and thus, the level of relationship closeness is an appropriate angle for exploring supplier partnerships. Research was conducted using the Repertory Grid Technique with an exploratory sample of 10 managers from 4 German engineering companies. It revealed that supplier partnerships are very different from other forms of relationship and identified 5 distinct attributes of partnerships. These findings have a number of implications for both practitioners and researchers.*

## **Introduction**

In the current international competitive environment, many manufacturers are focusing on supplier management as a means for achieving long-term competitive advantage. Supplier management — “organising the optimal flow of high-quality, value-for-money materials or components to manufacturing companies from a suitable set of innovative suppliers” (Goffin et al., 1997: 422) — is crucial for several reasons. Suppliers can have a significant influence on a manufacturer’s performance, through their contributions to cost reduction, new product design and enabling the constant improvement of quality (Monczka et al., 1993). Consequently, studies of the supply chain have traditionally looked at the physical flow of materials and products but increasingly they are focusing on the relationships between the different organizations involved.

There is strong recognition in the practitioner literature of the importance of supplier relationships and the need to establish “partnerships” has been widely espoused (e.g., Forsyth, 2001; Fretty, 2001; Kerns, 2000). Rackman (2001: 32) states that “successful partnerships are about radically redesigning a business relationship...[and] partnership creates new value that could not be achieved within the existing vendor/customer roles.” Both suppliers and manufacturers can gain from partnerships and the automotive industry has spearheaded this

development. It is often claimed that car manufacturers now work almost exclusively in partnership with their suppliers (e.g., Arminas, 2000). Consequently, many recent practitioner articles have focused on prescribing how partnership can best be achieved (e.g., Rackham, 2001; Kador, 2000), or existing relationships strengthened (Kerns, 2000).

Although the importance of supplier management has also been recognised by academics and many studies have pointed to the advantages to be gained from partnerships (e.g., Monczka et al., 1993; Lamming, 1993; Helper and Sako, 1995; Carr and Pearson, 1999; Spina and Zotteri, 2000), few studies have looked at the real meaning of partnership. Therefore a gap exists in previous empirical work; although the importance of partnership is apparent although its exact nature is less well understood. For example, the definitions of partnership tend to focus on what they achieve (e.g., Landeros, et al., 1995), or on relatively vague concepts such as the “meeting of minds” they represent (Ellram and Hendrick, 1995), rather than identifying specific attributes. In fact, partnership has become a “buzzword” and as Brennan (1997: 768-769) notes, “fashionable managerial expressions are prone to over-use, abuse and consequently to devaluation,..., the same fate awaits, or may already have befallen ‘buyer/supplier partnership’.”

In order to address the gaps in the literature, this paper describes research, which investigated how managers perceive the exact nature of supplier relationships, including partnerships. The current study, which is part of a wider programme of research on supplier management in Germany, used an innovative approach to studying relationships: the repertory grid technique (which is widely used in psychology). This technique probed purchasing managers’ understandings of the relationships their companies have with their suppliers. The results are important as they provide a clearer understanding of partnerships and demonstrate the viability of an innovative methodology for investigating supplier relationships. In order to place the research in context, this paper starts with a review of business relationships in general, before moving on to cover the specific literature on supplier partnerships. Then the repertory grid methodology, which appears to have been used for the first time in studying supplier management, is discussed. Finally, the results and their implications are presented.

## **Business Relationships**

In discussing business relationships either a “vendor” or a “partner” perspective can be taken (Ring, 2000). A vendor perspective is based on a transactional point of view, whereas a

partner perspective is grounded in a relational standpoint. Many authors treat the terms business relationship and alliance synonymously. Both perspectives seem to be valid also for alliances (Ring, 2000). A transactional vendor approach represents a loose alliance; a partnership perspective is common in a strategic alliance where the alliance is embedded in the strategies of each of the partners (e.g., Koza and Lewin, 2000). So, the form of the alliance can be anything from a loose and informal coalition to a highly sophisticated network of formal business partners.

Although strategic alliances are an interesting research field when debating partnerships, the discussion in this paper is restricted to business relationships between manufacturers and suppliers in the supply chain. These sorts of relationships are typically called “buyer-supplier relationships,” and will be referred to throughout this paper as supplier relationships for short.

Supplier relationships are a subset of business relationships. At least two parties are involved in a relationship (Fournier et al., 1998) and they attach a “business-like” character to it (Stuart, 1997), in order to create value for each other (Walter et al., 2001). This means that one party exchanges some “value-package” (e.g., consisting of products, services, knowledge, mutual goals, trust), which the other side finds worthwhile to compensate in the form of some other “value-package” (e.g., monetary compensation, long-term relationship, share of business). This type of exchange can take various forms in business. For instance, when discussing relationships in the supply chain, Cooper et al., (1997) introduce an overview (see Figure 1) that spans from dyadic (two organisations) to vertical integration of several companies with the manufacturer being a shareholder in its suppliers and customers (i.e., Keiretsu).

Take in Figure 1
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Gentry (1996) states that partnerships are the foundation on which an effective supply chain can be built. In order to arrive to a fuller understanding of supplier-manufacturer partnerships, the link between the two parties needs to be studied. Hence, the dyadic perspective is a sound viewpoint to adopt. Focusing on the dyad is relatively new (Robicheaux and Coleman, 1994) and Wilson (1995: 343) concludes: “Our knowledge about relationships is at an early stage. We need to improve our concept definitions.”

## Supplier Partnerships

### *Partnership Definitions*

During the past decade there has been an increase in research into supplier relationships and partnerships. Given this high level of interest, it is not surprising to find that more than ten different attributes of partnership have been identified (see Table 1).

Take in Table 1
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What is surprising is that previous definitions of partnership differ widely in the attributes they include. For example, Brennan (1997) sees partnership in terms of dependency between the two parties. While Ellram and Hendrick (1995) define partnership as a relationship between two firms which involves a commitment over an extended period of time, the sharing of information, as well as the risks and rewards of the relationships.

Definitions of partnership in the literature often exhibit the following characteristics:

- They are vague and rarely include measures (of the degree of partnership), which could help in operationalising the concept (e.g., Landeros et al., 1995).
- Where measures are included in definitions, these are based on the authors' perceptions, and are not empirically tested (e.g., Ellram, 1995).
- Different definitions from different research show inconsistency, which suggests that different attributes are measured.
- Where definitions identify partnership attributes, these are usually based on very limited empirical evidence.

On the whole, partnerships can be characterised by a high level of commitment, mutual dependency, trust, and a long-term orientation where the sharing of information as well as risks and rewards are typical. However, a consistent definition of partnership based on empirical evidence cannot be found in the literature and no commonly accepted theoretically derived definition yet exists.

### *The Nature of Partnerships*

The relationship between manufacturers and suppliers can take many forms (Webster, 1992). This can be seen on a continuum ranging from purely discrete transactions at one end, to long-term relational exchanges between interdependent partners at the other (Mohr and Nevin, 1990). Webster's representation of this range is shown in Figure 2.

Take in Figure 2

Webster suggests that there is only one type of partnership. However, Lambert et al., (1996) propose that there are three kinds, depending on their "short-term" (Type 1), "long-term" (Type 2) and "long-term with no-end" (Type 3) character (see Figure 3).

Take in Figure 3

Substantial resources are required to successfully manage long term relationships (Dwyer et al., 1987; Simpson and Mayo, 1997). Although it is helpful to use the time dimension to differentiate between partnership types (as Lambert et al., have), in practice, it cannot be assumed that a manufacturer and a supplier in a long-term relationship see themselves in partnership. It could be that the manufacturer has purchased the product from the supplier over several years due to a consistently low price. Their relationship may not go anywhere beyond the placing of an order and its delivery. Partnerships are a special form of supplier-manufacturer relationship; they are much closer than other forms and a deeper analysis than that of simply the time dimension.

### *Partnerships as a Close Form of Relationship*

Lambert et al., (1996) contend that partnerships are "closer" than other types of relationships, and Ellram (1991) defines partnerships similarly in terms of "close sharing relationships." Similarly, Macbeth (1998) perceives partnerships as contrasting strongly with "distant relationships."

According to Ford (1984), manufacturers and their suppliers now emphasize close relationships, rather than "playing the market," where they focused solely on cost reduction. Ford also suggested that relationship closeness could be explained in terms of 5 dimensions:

geographical, time<sup>1</sup>, technological, cultural, and social. In contrast, Kalwani and Narayandos (1995) make the point that the level of closeness may indicate the presence of nothing more than joint action and expected continuity of the relationship.

Homburg (1995) argued that a clear definition of relationship closeness and a way of measuring the degree of closeness are lacking. He conducted about 30 qualitative interviews in various industry sectors and concluded that “closeness” between suppliers and industrial buyers can be enhanced in terms of four dimensions: 1) product, service, and logistics; 2) supplier interaction; 3) supplier’s commitment; and 4) atmosphere. Unfortunately, he did not explain how he analysed the interviews and derived the dimensions. In addition, it is not clear to what extent his results may be generalised.

### *Monitoring Supplier Relationships*

Traditionally, three measures have been used for determining supplier performance: price, delivery and quality (Smith et al., 1963) and these are also typically used in selecting suppliers (Weber et al., 1991; Holmlund and Kock, 1996). Today, however, it is argued that focusing mainly on price is inappropriate as it is “perhaps one of the most defined characteristics of primitive purchasing” (Lamming, 1993: 148). Lamming did not suggest that price is irrelevant, but the relative emphasis between the traditional factors has changed over time and other factors might be more important. Thus, in addition to quality, delivery and price a manufacturer looks to their suppliers for design expertise and other capabilities (Pearson and Ellram, 1995). In this vein, both Kolay (1993) and Monczka et al., (1995) stress that it is essential to identify and audit the strategic capabilities of potential suppliers, such as their ability to contribute to product development.

In the literature a move from the three criteria used in traditional purchasing towards the more comprehensive set of criteria in modern supplier management is evident and Table 2 illustrates this change. The table shows that the criteria used for selecting and monitoring suppliers in traditional approaches to purchasing were unit price (first), followed by quality and speed of delivery. Price has often been the criterion given the most emphasis. While, quality tended to be looked at from the conformance point of view, i.e., if the supplier’s quality simply met the current required level, it was acceptable. Current thinking proposes a wide set of criteria and so, monitoring and selecting suppliers became more complicated in

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<sup>1</sup> The length of the relationship.



the supplier management approach. In this complexity, the supplier relationship plays an essential part.

Take in Table 2
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Just as the role of price has diminished in evaluating supplier performances in many sectors, quality has become a more critical factor. However, quality no longer simply applies to the product itself but also to the service and other aspects of the supplier-manufacturer relationship. For instance, a good relationship is a prerequisite to good problem solving and co-operation in product design. However, empirical evidence is lacking whether manufacturers really use the wider list of factors (indicated in the right-hand column in Table 2) in their selection of suppliers and monitoring of performances.

### *Previous Studies – Methodological Issues*

The various approaches to partnership research which have previously been used can be categorised as follows:

- Single informant: researchers often rely on the information of one individual within each company. Yet, a multiple respondent approach is more beneficial (Tanner, 1999; Stuart, 1997) as “individual parties to a relationship tend to have somewhat unique perspectives on the ongoing interaction, resulting in part from their particular positions in the exchange network” (Heide and John, 1992: 39). It is not surprising that individual managers perceive the partnership construct differently (see New and Payne, 1995 for a discussion about the methodological problems of logistics research).
- Quantitative studies: researchers typically approach the field (usually investigating it using a postal survey) with a preconceived view about partnerships (e.g., Ellram and Hendrick, 1995; Mudambi and Schründer, 1996; Saxton, 1997). In this way scholars do not uncover the attributes of partnerships as they miss capturing the views of the experts in the field, i.e., the practitioners.
- The issue of “closeness” is overlooked: Although authors agree that partnerships are close relationships, they do not use relationship closeness as the starting point for their investigations (e.g., Ellram, 1991; Saxton, 1997).
- Scope too wide: Exploratory studies are typically based on a cross-industrial sample (e.g., Anderson and Narus, 1990), neglecting that managers’ views might be coloured

by the industrial context, organisational sizes, etc. For example, supplier-wholesaler relationships may differ to those between suppliers and manufacturers (Weitz and Jap, 1995). Although cross-industrial samples would allow investigating the different research contexts, the sample sizes of each sector are often too small.

## **Conclusions on the Literature**

There are four main conclusions to be drawn from the literature:

- 1) Supplier partnerships are increasingly important, although the concept itself is poorly understood.
- 2) There is some consensus concerning the nature of partnerships; they are generally recognised as close business relationships. However, although researchers are in agreement that the degree of relationship closeness is a good angle for exploring partnerships, this approach has not previously been operationalised.
- 3) Many researchers explore partnerships using a postal questionnaire, which does not provide the opportunity to look at the concept in detail.
- 4) Most previous investigations of partnerships tend to focus on the purchasing manager (and director). However, while the purchasing executive might be in the best position to respond, a multiple respondent approach (e.g., purchasing, quality management, vice-president operations) might be necessary to present a wider picture.

## **Methodology**

From the literature, it is clear that there is a real need of an empirical study of the attributes of manufacturer-supplier partnerships. The key research question for this exploratory study was “what are the main attributes of supplier-manufacturer relationships (including partnerships)?” Various methods could have been used to answer this question but, as mentioned earlier, the term partnership has been used so extensively that it is becoming debased (Brennan, 1997). Consequently, a survey approach would not be effective in obtaining unbiased views from managers. Relationships are a relatively complex topic and so it is crucial to probe their meaning and move beyond managers’ views that are based on clichés, such as “our supplier relationships are based on partnerships.” Therefore, face-to-face interviews were used so that managers’ views could be studied in-depth. However, a problem

remained: would reliable, meaningful answers be obtained to direct questions, such as “what sort of relationships do you have with your suppliers?” Pilot investigations, as part of an earlier programme of research (refer to Szwejczewski et al., 2001), had shown that such questions inevitably elicited “buzzwords” and little detailed understanding. Clearly a different methodology was required and repertory grid technique was chosen, as it is a powerful research tool for probing interviewees’ understanding of complex topics.

### *Repertory Grid Technique*

The technique is particularly useful for exploring topics where interviewees find it hard to articulate their opinions and experiences with clarity (Hussey and Hussey, 1997; Goffin, 2002). Kelly (a mathematician by training who later qualified and worked as a clinical psychologist) developed the technique in the 1950s. It is based on his central belief that everyone, consciously or sub-consciously, develops categories to explain all of the situations they face. The repertory grid technique enables such categorisations to be identified during an interview. The name repertory grid does not come from “repetition,” but from the fact that the technique probes an individual’s “repertoire” of categorisations for the range of situations, physical entities, etc. that they have encountered. This repertoire is captured in a grid that will be explained later in greater detail. Originally, the technique was used to explore how patients viewed their relationships with friends and their families and it “is an attempt to stand in others’ shoes, to see their world as they see it” (Fransella and Bannister, 1977: 5).

To understand the technique, consider a repertory grid interview investigating working relationships. The interviewee would be asked to name some colleagues with whom they work. These could be called colleagues A, B, C, D, E and F, for instance. The colleagues are termed the elements of the test and each name is written on a separate postcard-sized card. After the cards have been annotated with the colleagues’ names, the interviewee is presented with a random set of three cards (termed a triad). As the triad is presented, the interviewee is asked, “why is working with two of these colleagues similar and different from working with the third?” A typical response — termed a construct — could be that two of the people were “easy to work with,” whereas working with the third “is difficult.” The way in which the interviewee differentiates between the elements in the triad reveals one aspect of how working relationships are viewed. In this vein, Kelly (1955a, 1995b, 1963) defined a construct as, “a way in which two or more things are alike and at the same time different from one or more

things.” Each of the interviewee’s elements (colleagues) is then rated against this first construct, usually on a 5-point scale (with 1 defined as maximum and 5 as minimum).

Further triads are used to identify — “elicit” in repertory grid terminology — further constructs. The interviewee is not allowed to repeat a construct and so each new triad elicits at least one new construct, which forces the interviewee to think deeply about working relationships. Following each construct, the interviewee is required to rate the elements against it using the same 1-5 rating scale. These ratings form the repertory grid, as shown in Figure 4.

Take in Figure 4

In Figure 4, the six elements of the test are shown across the top of the grid. Down the side of the grid are the constructs elicited during the interview. The randomly selected first triad consisted of Elements B, E, and D and this is indicated with asterisk signs in the grid. Many different triads can be presented, however, it is advisable to select only card combinations where at least two elements will be changed between each triad, as this is important to obtain meaningful constructs (Bender, 1974). In addition, limiting the number of triads reduces the risk of fatiguing the respondent.

It can be seen that the Colleague B is rated as “1” (*easy to work with*) but Colleague D is difficult to work with and received a rating of “5”. The ratings indicate not only how interviewees view their colleagues; they also give information on the importance of particular constructs. For example, the ratings on the construct *experienced* are not as widely spread (they only range from 1 to 2) as those for *clever, quick* (where the ratings range from 1 to 5). This shows that the latter construct differentiates more strongly between the elements. Overall, the repertory grid technique involves identifying suitable elements, eliciting constructs and obtaining the ratings (Gammack and Stephens 1994). In total, the constructs and the explanations provided by respondents, together with the ratings, form a rich pool of qualitative and quantitative data.

### *Applying the Technique to Supplier Management*

In understanding supplier relationships from the manufacturer’s perspective, suppliers were the elements in the repertory grid interview. Interviewees were asked to name nine suppliers with whom their companies regularly conduct business. To cover a range of different relationships, the interviewees were asked to name three suppliers with whom they had close

relationships, three distant and three average relationships. This approach ensured that the choice of elements (i.e., suppliers) was meaningful to the participant, which was important for the technique to work effectively (Tindall, 1994). It also avoided the possibility of the researcher introducing any bias by asking the interviewees to talk directly about the suppliers with which they had a partnership.

The name of each supplier was written on a separate card, which had been pre-numbered in a random sequence. The sequence was 5, 1, 8 (for close relationships i.e. partnerships); 6, 9, 4 (for average relationships); and 7, 2, 3 (for distant relationships), which enabled the selection of random groups of cards (Goffin, 2002). When a triad was presented to the respondent, they were asked, “in what way are two suppliers similar and different from the third in terms of the relationship you have with them?” Therefore, each triad was used to elicit constructs, i.e., how interviewees perceived their relationships with suppliers and each construct was expressed in the form of a word or a phrase, whatever came most naturally to the respondent (Levy and Dugan, 1956). A typical construct was “level of relationship maintenance,” i.e., how well the supplier was perceived to maintain the relationship with the manufacturer. In short, the interviews identified a range of constructs, describing the manufacturers’ relationships with their suppliers.

The interviews were recorded so that close attention could be paid to the respondents’ own explanations (Charmaz, 1995). As each construct was identified, further questions were used to probe its meaning so as to achieve the “production and maintenance of [a] mutual understanding” (Drew, 1995: 77).

After each construct was elicited, each of the elements (suppliers) was then rated on the 1-5 (perceptual) scale, as recommended by Tindall (1994) and Gammack and Stephens (1994). In the study, the scale anchors were *very good* (1), *neutral* (3) and *very poor* (5). The rating exercise indicates the relative importance of constructs while at the same time explaining the differences of supplier relationships.

The analysis of repertory grids was based on both the verbal explanations of constructs (i.e., attributes) provided by interviewees and from the numbers in the resulting grids (Smith, 1986; Goffin, 1994; Goffin, 2002).

### *Sample*

The repertory grid interviews formed part of a larger programme of research into supplier management at German manufacturing companies and was linked to the International Best

Factory Awards programme. This programme, which provides a benchmarking service for companies in Germany, Italy and the UK, has created a comprehensive database on manufacturing performance (New and Szwejczewski, 1995). This database has been used for a wide range of investigations of manufacturing performance (e.g., New et al., 1998a,b; Goffin et al., 2000), including previous studies of supplier management (Goffin et al., 1997; Lemke et al., 2000). Typically, the database has provided detailed background information that has been used to select companies for further research.

As an exploratory sample, nine companies were selected from the Engineering sector in the German database. These were companies that had entered the awards programme in 1997 and had co-operated with earlier supplier management research (see Szwejczewski et al., 2001).

It can be argued that manufacturers dominate the relationship with their suppliers, since they select suppliers and place orders. For this reason, the research at this stage exclusively focused on the views of managers involved in supplier management from the manufacturer's side. Taking a dyadic approach and contrasting the views of manufacturers with those of suppliers would be a fertile area for further research.

Nine German companies were contacted and four agreed to participate in the research. At two companies, two managers were interviewed and at the remaining two firms three managers took part in the study. All ten interview respondents were responsible for purchasing or supplier management in their organisations. The repertory grid interviews took approximately 40 minutes per manager and were conducted in the year 2000.

## **Results**

From the 10 repertory grid interviews, 37 constructs (i.e., attributes of partnership) emerged. Although a detailed individual analysis of each repertory grid is possible (an example is presented later), the key issues are the exploration of the constructs of supplier relationships across all respondents as well as in identifying the most important constructs of partnership. Both will be outlined.

### *Relationship Constructs*

Table 3 shows the Top-20 most frequently mentioned constructs (from a total of 37).

The frequency count necessary for identifying a “Common Construct” is left open for interpretation in the repertory grid literature. The decision was taken that a construct that has been mentioned by at least 25% of the respondents (i.e., by 3 or more) carries more importance in explaining supplier relationships than constructs that have been mentioned by fewer. The constructs that fulfil the requirement range from *personal business relationship* (i.e., personal vs. pure business-like) to *openness* (i.e., very open vs. indirect and diplomatic) and these have been indicated in grey in Table 3.

The results presented in the table suggest that the classic differentiators of *delivery performance* and *quality* are still important in supplier relationships. Somewhat surprising, the *price* was mentioned only by two respondents, indicating its low priority for the respondents when describing supplier relationships. Recent research in German manufacturing has shown that all three factors (delivery, quality and price) are frequently used as key measures of supplier performances and in selecting suppliers (Lemke et al., 2000). Aside from the three classic differentiators, the repertory grid technique was able to uncover additional constructs of relationships such as flexibility, location and complaint handling. Nevertheless, does the frequency of all factors explain supplier partnerships sufficiently? The Top-20 relationship constructs have been further analysed with this question in mind.

### *Most Important Partnership Constructs*

A construct’s frequency count is a good indication of its importance. However, it does not uncover the relative importance of the constructs to the respondents as it ignores the values of the repertory grids (i.e., the rating of the elements against each construct). This means that in the frequency table (Table 3) common constructs are included which do not have the power to differentiate between close, average, and distant relationships (the three supplier groups used in the repertory grid technique). The relative importance of a construct can be quantified by determining its variability. The variability of a construct is a measure of the spread of its ratings (in the evaluation process) compared to all the other constructs. The higher the variability of a construct is the greater is its importance to the respondent.

The variability of each construct was calculated using FlexiGrid 6. This software package is the standard tool used for analysing repertory grid data. It computes a variability index in terms of the percentage of the total variance for each respondent. The variability of a

given construct represents its contribution in explaining the total variance. It is therefore dependent on the number of constructs produced by a respondent. If all the constructs can explain the total variance equally, the variability for each construct would be the same. For instance, if a respondent mentions 5 constructs, the average variability would be 20 (i.e.,  $100 / 5$ ). If the respondent mentions 10 constructs, the individual variability of each of constructs would be 10 (i.e.,  $100 / 10$ ). The variability index of a given construct is therefore higher in a set of 5 constructs than among 10, although the same ratings may have been used. In a set of 10, a given construct has to “compete” against more constructs when explaining the total variance. This means that individual variability indexes cannot easily be compared across all the respondents, as the number of mentioned constructs is not the same; some respondents could mention 5 constructs, others 10 etc.

Therefore, in order to arrive at a comparable base across all respondents in this study, the variability of each construct was weighted by the average number of constructs (10.2 in this research). In other words, the variability values have been normalised as if they all came with the same number of constructs (see Table 4).

Take in Table 4
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Taking 10.2 constructs as the standard per interviewee, the average variability index was 9.8 (i.e.,  $100 / 10.2$ ). A construct with an index greater than 9.8 means that the construct differentiates more clearly between the three supplier groups (i.e., close, average, and distant), while a construct with an index less than 9.8 indicates that the three supplier groups “scored” almost equally on it. In short, a construct with a low variability index is not particularly important when explaining supplier partnerships, because it accounts only for a small proportion of the total variance in the data. The constructs that are above average in importance are highlighted in grey in Table 4.

As shown in Table 4 the constructs *volume of turnover* to *feedback* clearly discriminate between relationship types (i.e. have variability from 14.8 to 9.9 in grey). The managers interviewed consider the constructs *complaint handling* down to *price* less important in differentiating between supplier relationship types. However, only two managers differentiate partners from other supplier relationships with *Volume of Turnover*. It is thus not a common construct, albeit, it is important for the two managers of the sample.



To sum up, two basic requirements help in identifying the most important constructs of partnership across the sample: 1) A sufficient number of respondents identify these constructs; and 2) the construct has the power to differentiate between the three relationship groups (as represented by its variability index). Five factors fulfil both requirements; these are the key partnership constructs and are highlighted in bold in Table 4. Supplier partnerships can thus be characterised as follows:

- The *personal business relationship* is very well developed on a personal level rather than being purely at the business level (i.e., merely take the order and then deliver products).
- The partner supplies a *special product*, typically tailor-made for the manufacturer.
- The partner contributes in the *new product development* process.
- The supplier partner is capable of active *relationship maintenance* in terms of company visits and a regular telephone contact.
- The supplier's *location nearby* not only for interaction purposes, but also to ensure speedy deliveries.

By contrast, the low variability values for *quality*, *delivery performance*, and *price* suggests that partnerships do not differ from normal business relationships in terms of these classic criteria.

In addition, each repertory grid has been analysed with the statistical packages FlexiGrid 6, WebGrid II and SPSS 10. A typical Principle Component Analysis (PCA) output is shown in Figure 5:

Take in Figure 5

PCA generates a map of the personal constructs of a given respondent and present this, in two-dimensional component space. This space consists of two axes (termed “components”), which is based on the correlations between elements (i.e., suppliers) and constructs (i.e., relationship attributes). These correlations are often referred to as “factor loadings” and PCA visualises to what degree a given construct loads on, or correlates with a given component. Put differently, the level of correlation is indicated by how closely the construct poles are located to the component axes.

The example in Figure 5 shows that the Component 1 and Component 2 we derived from the 12 constructs elicited and the circle is annotated with the poles of the respondent's constructs. The constructs “customer importance,”<sup>2</sup> “personal relationship,”<sup>3</sup> and “seriousness”<sup>4</sup> (numbers 4, 10 and 11) have very strong correlation with Component 1, whereas only the “price”<sup>5</sup> (construct 7) strongly correlates to Component 2. The component map shows that the interviewee's perception of supplier relationships is largely explained by the four constructs most closely related to the two components. It furthermore illustrates that the level of Seriousness to the business, A-Customer classification, and a Personal Relationship are closely associated with each other from the respondent's viewpoint.

The two components explain about 78% of the total variance and provide the coordinates on which the nine suppliers can be located on the map (in relation to all constructs). It can be seen that the “partnership group” (i.e., supplier number 1, 5, 8) differ greatly from “distant suppliers” (i.e., 2, 3, and 7). The “average suppliers” (i.e., 4, 6, 9) are between these two extremes. In Figure 5, partnership supplier 8 is characterised by *active relationship maintenance, commitment, involvement in new product development processes, a relationship on a personal level, and delivers special tailor-made components*. By contrast, the respondent describes a distance relationship, for instance supplier 3, as a *large cooperation that delivers a low volume of standard components*.

## Discussion and Conclusion

Research into partnerships is an important topic for both academics and practitioners alike. While, the notion of supplier partnerships is often discussed in the literature, there has been little empirical work carried out to identify the attributes of partnerships in the supply chain. The research covered in this paper addressed this omission by examining the German engineering sector.

Based on the findings, it is possible to empirically differentiate between common attributes of relationship and those of partnership (see Figure 6). This shows sets of attributes, Set 2 contains all of the attributes of supplier relationships that were empirically identified by this study, for example, *volume of turnover, organisational size, quality, and price*. Some of

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<sup>2</sup> The construct “Customer Importance” represents how the manufacturer perceives to be classed by its supplier. Only the respondent in the example has mentioned this construct and the two poles are *A-Customer* and *C-Customer*.

<sup>3</sup> The two poles of the construct “Personal Relationship” are *Personal Relationship* and *Pure Business Relationship*.

<sup>4</sup> “Seriousness” has the two poles *Serious* and *Questionable* and has been mentioned only by the respondent in the example.

<sup>5</sup> The two poles of the construct “Price” are *Higher Price* and *Lower Price*.

these have already been anecdotally identified in the extant literature (see overlap of Set 1 and 2). However, certain factors such as trust and dependency (refer to Tables 1 and 2) were mentioned in the literature but were not verified in this empirical study (see Set 1). From Figure 6, it can be seen that 5 attributes (*personal business relationship, special product, new product development, relationship maintenance, and location nearby*) help to differentiate partnerships as a special type of supplier relationships (see Subset 3).

Take in Figure 6
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Overall, Figure 6 shows that the classic factors of *delivery performance, quality* and *price* are important in supplier relationships (see Table 3), which confirms the findings of previous research (Lemke et al., 2000).

In the following, the analysis disclosed which relationship constructs have the power to discriminate between partnerships and other forms of supplier relationships. It is striking that *delivery performance, quality, and price* are low ranking when it comes to explaining partnerships (refer to Table 4). This means that all suppliers, irrespective of whether they are partners or not, have to fulfil these basic requirements. The three constructs have merely become hygiene factors that manufacturers expect to find when dealing with all suppliers. Interestingly, partners go beyond the basic requirements and clearly excel with regard to the *personal business relationship* they have with the manufacturer. Moreover, they deliver highly *specific products* to the manufacturer and are involved in the *new product development* processes. They are capable of *relationship maintenance* actively and are typically *located within close range* of the manufacturer. The importance of the latter construct partly supports Ford's (1984) impression that closeness can be measured in terms of geographical distance (beside other dimensions).

The results of the research have implications for researchers, who need to capture a fuller understanding of supplier partnerships. Rather than defining a partnership concept before embarking on data collection, it seems more sensible to first explore the attributes of partnerships (i.e., constructs) via a qualitative research approach.

It is surprising to find that *trust* and *commitment* were not identified as key partnership attributes by the managers interviewed (Morgan and Hunt, 1994; McCutcheon and Stuart, 2000). It is possible that the findings apply only to the engineering industry and so cannot be generalised beyond it. Therefore, it would be fruitful to explore how trust and commitment

relate to supplier partnerships in other industry sectors. Also, do manufacturers treat partnerships differently and if so, in what ways? A partnership needs a more resource-intensive supplier management approach. What is the “return on partnership investment” as compared to other forms of supplier relationships? Also, how would a supplier describe the partnership with the manufacturer? Are the factors similar or radically different? In what way do partnership factors influence the way suppliers are being selected? Does the subjective side come into supplier selection at all (e.g., *personal relationship* vs. *pure business-like*)? Finally, some manufacturers appear not to establish supplier partnerships with larger organisations – why is this the case? Does power-imbalance inhibit the development of partnerships?

The findings also have ramifications for suppliers; offering high quality products, on-time for a reasonable price is an outdated order qualifier. In short, the three classic factors are not the key elements for developing a partnership any more. With this in mind, suppliers need to revise their competitive strategy not only to ensure they are selected, but also to be promoted to the partnership status. In order to be attractive to a manufacturer as a potential partner, suppliers need to ensure that they are able to offer specialised parts, have an excellent new product development capability and be good at relationship maintenance.

According to Friedrich et al., (1995), partnerships are not commonly found in Germany. In contrast, the current research has shown that partnerships do exist in Germany and these can clearly be distinguished from other forms of supplier relationships. The contrary finding of Friedrich et al. might be explained by the fact that the partnership constructs are more clearly defined today.

An interesting area for further research would be to investigate if manufacturers have adapted their supplier management approach to deal with partners. It would be interesting to see whether this special form of supplier relationship is managed in a more sophisticated way, because supplier partnerships irreducibly are important in manufacturing today and warrant greater management attention.

## References

- Akinc, U. (1993), "Selecting a Set of Vendors in a Manufacturing Environment", *Journal of Operations Management*, Vol. 11, pp. 107-122.
- Anderson, J.C. and Narus, J.A. (1990), "A Model of Distributor Firm and Manufacturer Firm Working Partnerships", *Journal of Marketing*, Vol. 54 No. 1, pp. 42-58.
- Arminas, D. (2000), "Better By Supplier Design", *Supply Management*, 10. August 2000, p. 17.
- Bender, M.P. (1974), "Provided versus Elicited Constructs: An Explanation of Warr and Coffman's Anomalous Finding", *British Journal of Social and Clinical Psychology*, Vol. 13, pp. 329-330.
- Brennan, R. (1997), "Buyer/Supplier Partnering in British Industry: The Automotive and Telecommunications Sectors", *Journal of Marketing Management*, Vol. 13 No. 8, pp. 759-775.
- Burt, D.N. (1989), "Managing supplies up to speed", *Harvard Business Review*, Vol. 67 No. 4, pp. 127-35.
- Carr, A.S. and Pearson, J.N. (1999), "Strategically Managed Buyer-Supplier Relationships and Performance Outcomes", *Journal of Operations Management*, Vol. 17, pp. 497-519.
- Charmaz, K. (1995), "Grounded Theory", in Smith, J.A., Harré, R. and Langenhove, L. (Eds.), *Rethinking Methods in Psychology*, Sage, London, pp. 27-49.
- Cooper, M.C., Ellram, L.M., Gardner, J.T. and Hanks, A.M. (1997), "Meshing Multiple Alliances", *Journal of Business Logistics*, Vol. 18 No. 1, pp. 67-89.
- Drew, P. (1995), "Conversation Analysis", in Smith, J.A., Harré, R. and Langenhove, L. (Eds.), *Rethinking Methods in Psychology*, Sage, London, pp. 64-79.
- Dwyer, F.R., Schurr, P.H. and Oh, S. (1987), "Developing Buyer-Seller Relationships", *Journal of Marketing*, Vol. 51 No. 2, pp. 11-27.
- Ellram, L.M. (1990), "The supplier selection decision in strategic partnerships", *Journal of Purchasing and Materials Management*, Vol. 26 No. 4, pp. 8-14.
- Ellram, L.M. (1991), "Life-Cycle Patterns in Industrial Buyer-Seller Partnerships", *International Journal of Physical Distribution & Logistics Management*, Vol. 21 No. 9, pp. 12-21.
- Ellram, L.M. (1995), "Partnering Pitfalls and Success Factors", *International Journal of Purchasing and Materials Management*, pp. 36-44.

- Ellram, L.M. and Hendrick, T.E. (1995), "Partnering Characteristics: A Dyadic Perspective", *Journal of Business Logistics*, Vol. 16 No. 1, pp. 41-64.
- Ford, D. (1984), "Buyer/Seller Relationships in International Industrial Markets", *Industrial Marketing Management*, Vol. 13 No. 2, pp. 101-112.
- Forsyth, G. (2001), "Collaboration is coming – just not overnight", *American Shipper*, Vol. 43 No. 3, pp. 36-38.
- Fournier, S., Dobscha, S. and Mick, D.G. (1998), "Preventing the Premature Death of Relationship Marketing", *Harvard Business Review*, Vol. 76 No. 1, pp. 42-51.
- Fransella, F. and Bannister, D. (1977), *A Manual for Repertory Grid Technique*, Academic Press, London.
- Fretty, P. (2001), "Partnering Pays", *Industrial Distribution*, Vol. 90 No. 5, p. 13.
- Friedrich, S.A., Hinterhuber, H.H. and Rodens, B. (1995), "Supply Chain Management: Partnerschaft für den Konsumenten", *Gablers Magazin*, Vol. 9 No. 11/12, pp. 58-63.
- Gallouj, C. (1997), "Asymmetry of Information and the Service Relationship: Selection and Evaluation of the Service Provider", *International Journal of Service Industry Management*, Vol. 8 No. 1, pp. 42-64.
- Gammack, J.G. and Stephens, R.A. (1994), "Repertory Grid Technique in Constructive Interaction", in Cassell, C. and Symon, G. (Eds.), *Qualitative Methods in Organizational Research: A Practical Guide*, Sage, London, pp. 72-90.
- Gentry, J.J. (1996), "Carrier Involvement in Buyer-Supplier Strategic Partnerships", *International Journal of Physical Distribution & Logistics Management*, Vol. 26 No. 3, pp. 14-25.
- Goffin, K. (1994), "Understanding Customers' Views: A Practical Example of the Use of Repertory Grid Technique", *Management Research News*, Vol. 17 No. 7/8.
- Goffin, K. (2002), "Repertory Grid Technique", in Partington, D. (Ed.), *Essential Skills for Management Research*, Sage, London.
- Goffin, K., Szejcowski, M. and New, C. (1997), "Managing Suppliers: When Fewer Can Mean More", *International Journal of Physical Distributions & Logistics Management*, Vol. 27 No. 7, pp. 422-436.
- Goffin, K., Szejcowski, M., Sweeney, M. and New, C. (2000), "Product Innovation in UK Manufacturing Companies", *International Journal of Manufacturing Technology and Management*, Vol. 2 No. 1-7, pp. 620-631.

- Graham, T.S., Daugherty, P.J. and Dudley, W.N. (Fall 1994), "The Long-Term Strategic Impact of Purchasing Partnerships", *International Journal of Purchasing and Materials Management*, Vol. 30 No. 4, pp. 13-18.
- Harland, C.M. (1996), "Supply chain management – relationships, chains and networks", *British Journal of Management*, Vol. 7, Special Issue (March), pp. S63-S80.
- Harrison, A. (1990), "Co-makership as an extension of quality care", *International Journal Quality & Reliability Management*, Vol. 7 No. 2, pp. 15-22.
- Heide, J.B. and John, G. (1992), "Do Norms Matter in Marketing Relationships?", *Journal of Marketing*, Vol. 56, pp. 32-44.
- Helper, S.R. and Sako, M. (Spring 1995), "Supplier Relations in Japan and the United States: Are they Converging?", *Sloan Management Review*, pp. 77-84.
- Holmlund, M. and Kock, S. (1996), "Buyer Dominated Relationships in a Supply Chain - A Case Study of Four Small-Sized Suppliers", *International Small Business Journal*, Vol. 15 No. 1, Issue 57, pp. 26-40.
- Homburg, C. (1995), "Closeness to the Customer in Industrial Markets: Towards a Theory-Based Understanding of Measurement, Organizational Antecedents, and Performance Outcomes", *Zeitschrift für Betriebswirtschaft*, Vol. 65 No. 3, pp. 309-331.
- Hussey, J. and Hussey, R. (1997), *Business Research*, Macmillan Press, London.
- Kador, J. (2000), "Love-hate business relationships", *Electronic Business*, Vol. 26 No. 10, p. 54.
- Kalwani, M.U. and Narayandas, N. (1995), "Long-Term Manufacturer Supplier Relationships: Do They Pay Off for Supplier Firms?", *Journal of Marketing*, Vol. 59 No. 1, pp. 1-16.
- Kanter, R.M. (1994), "Collaborative Advantage: Successful Partnerships Manage the Relationship, not just the Deal", *Harvard Business Review*, Vol. 72 No. 4, pp. 96-108.
- Kelly, G.A. (1955a), *The Psychology of Personal Constructs: Volume One - A Theory of Personality*, Routledge, London.
- Kelly, G.A. (1955b), *The Psychology of Personal Constructs: Volume Two - Clinical Diagnosis and Psychotherapy*, Routledge, London.
- Kelly, G.A. (1963), *A Theory of Personality: The Psychology of Personal Constructs*, W. W. Norton & Company, London.
- Kerns, C.D. (2000), "Strengthen Your Business Partnership: A Framework and Application", *Business Horizons*, Vol. 43 No. 4, pp. 17-22.

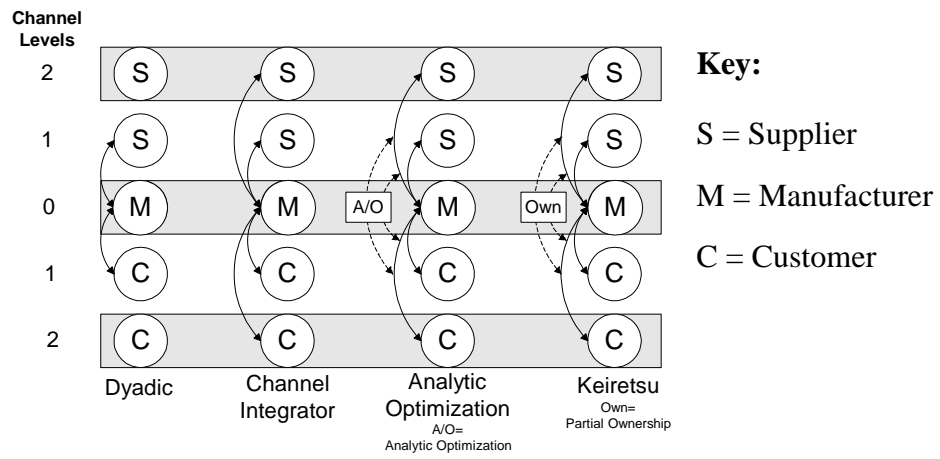
- Kolay, M.K. (1993), "Suppliers asset base - appreciating or depreciating?", *International Journal of Operations & Production Management*, Vol. 13 No. 8, pp. 72-86.
- Koza, M. and Lewin, A. (2000), "Managing Partnerships and Strategic Alliances: Raising the Odds of Success", *European Management Journal*, Vol. 16 No. 2, pp. 146-151.
- Krause, D.R. and Ellram, L.M. (1997), "Success Factors in Supplier Development", *International Journal of Physical Distribution & Logistics Management*, Vol. 27 No. 1, pp. 39-52.
- La Londe, B.J. and Masters, J.M. (1994), "Emerging logistics strategies: Blueprints for the next century", *International Journal of Physical Distribution & Logistics Management*, Vol. 24 No. 7, pp. 35-47.
- Lambert, D.M., Emmelhainz, M.A. and Gardner, J.T. (1996), "Developing and Implementing Supply Chain Partnerships", *International Journal of Logistics Management*, Vol. 7 No. 2, pp. 1-17.
- Lamming, R. (1993), *Beyond Partnership: Strategies for Innovation and Lean Supply*, Prentice Hall, London.
- Landeros, R., Reck, R. and Plank, R.E. (Summer 1995), "Maintaining Buyer-Supplier Partnerships", *International Journal of Purchasing and Materials Management*, Vol. 31 No. 3, pp. 3-11.
- Langfield-Smith, K. and Greenwood, M.R. (1998), "Developing Co-Operative Buyer-Supplier Relationships: A Case Study of Toyota", *Journal of Management Studies*, Vol. 35 No. 3, pp. 331-353.
- Larson, P.D. (1994), "Buyer-supplier co-operation, product quality and total costs", *International Journal of Physical Distribution & Logistics Management*, Vol. 24 No. 6, pp. 4-9.
- Lee, H. and Wellan, D.M. (1993), "Vendor survey plan: a selection strategy for JIT/TQM Suppliers", *International Journal of Physical Distribution & Logistics Management*, Vol. 23 No. 7, pp. 39-45.
- Leenders, M.R., Nollet, J. and Ellram, L.M. (1994), "Adapting purchasing to supply chain management", *International Journal of Physical Distribution & Logistics Management*, Vol. 24 No. 1, pp. 40-2.
- Lemke, F., Goffin, K., Szwajczewski, M., Pfeiffer, R. and Lohmüller, B. (2000), "Supplier Base Management: Experiences from the UK and Germany", *International Journal of Logistics Management*, Vol. 11 No. 2, pp. 45-58.



- Levy, L.H. and Dugan, R.D. (1956), "A Factorial Study of Personal Constructs", *Journal of Consulting Psychology*, Vol. 20 No. 1, pp. 53-57.
- Levy, P., Bessant, J., Sang, B. and Lamming, R. (1995), "Developing integration through total quality supply chain management", *Integrated Manufacturing Systems*, Vol. 6 No. 3, pp. 4-12.
- Lyons, T.F., Krackenberg, A.R. and Henke, J.W. (1990), "Mixed motive marriages: what's next for buyer-supplier relations", *Sloan Management Review*, Vol. 29 No. 3, pp. 29-36.
- Macbeth, D. (1998), "Partnering - Why Not?", Paper Presented at *The Second Worldwide Research Symposium on Purchasing and Supply Chain Management*, London, England (01.-03. April 1998), pp. 351-362.
- McCutcheon, D. and Stuart, F.I. (2000), "Issues in the Choice of Supplier Alliance Partners", *Journal of Operations Management*, Vol. 18, pp. 279-301.
- Metcalf, L.E., Frear, C.R. and Kirshnan, R. (1992), "Buyer-Seller Relationships: An Application of the IMP Interaction Model", *European Journal of Marketing*, Vol. 26 No. 2, pp. 27-46.
- Mohanty, R.P. and Deshmukh, S.G. (1993), "Use of analytic hierarchic process for evaluating sources of supply", *International Journal of Physical Distribution & Logistics*, Vol. 23 No. 3, pp. 22-8.
- Mohanty, R.P. and Deshmukh, S.G. (1993), "Use of analytic hierarchic process for evaluating sources of supply", *International Journal of Physical Distribution & Logistics*, Vol. 23 No. 3, pp. 22-8.
- Mohr, J. and Nevin, J.R. (1990), "Communication Strategies in Marketing Channels: A Theoretical Perspective", *Journal of Marketing*, Vol. 54, pp. 36-51.
- Monczka, R.M., Callahan, T.J. and Nichols, E.L. (1995), "Predictors of relationships among buying and supplying firms", *International Journal of Physical Distribution & Logistics Management*, Vol. 25 No. 10, pp. 45-59.
- Monczka, R.M., Trent, R.J. and Callahan, T.J. (1993), "Supply base strategies to maximize supplier performance", *International Journal of Physical Distribution & Logistics Management*, Vol. 23 No. 4, pp. 42-54.
- Monczka, R.M., Trent, R.J. and Callahan, T.J. (1993), "Supply base strategies to maximize supplier performance", *International Journal of Physical Distribution & Logistics Management*, Vol. 23 No. 4, pp. 42-54.
- Morgan, R.M. and Hunt, S.D. (1994), "The Commitment-Trust Theory of Relationship Marketing", *Journal of Marketing*, Vol. 58, pp. 20-38.

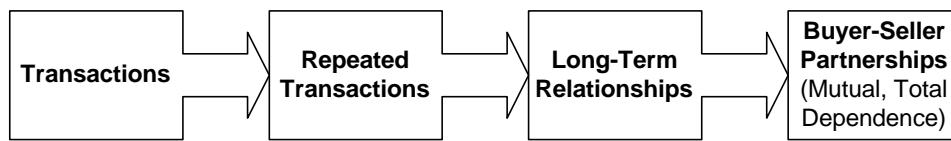
- Mudambi, R. and Schründer, C.P. (1996), "Progress Towards Buyer-Seller Partnerships: Evidence from Small and Medium-sized Manufacturing Firms", *European Journal of Purchasing & Supply Management*, Vol. 2 No. 2/3, pp. 119-127.
- New, C. and Szwajczewski, M. (1995), "Performance Measurement and the Focused Factory: Empirical Evidence", *International Journal of Operations & Production Management*, Vol. 15 No. 4, pp. 63-79.
- New, C., Goffin, K., Szwajczewski, M. and Pfeiffer, R. (1998a), "Comparative Operational Performance of UK and German Manufacturing Plants", *International Journal of Business Performance Management*, Vol. 1 No. 1, pp. 65-78.
- New, C., Szwajczewski, M., Goffin, K., Pfeiffer, R. and Lohmüller, B. (1998b), "Vergleich der Leistungsdaten von Unternehmen: Großbritannien/Deutschland", *Der Betriebswirt*, No. 4, pp. 22-25.
- New, S.J. and Payne, P. (1995), "Research Frameworks in Logistics: Three Models, Seven Dinners and a Survey", *International Journal of Physical Distribution & Logistics Management*, Vol. 25 No. 10, pp. 60-77.
- Pearson, J.N. and Ellram, L.M. (1995), "Supplier Selection and Evaluation in Small Versus Large Electronics Firms", *Journal of Small Business Management*, Vol. 33 No. 4, pp. 53-65.
- Rackham, N. (2001), "The Pitfalls of Partnering", *Sales & Marketing Management*, Vol. 153 No. 4, p. 32.
- Ring, P.S. (2000), "The Three T's of Alliance Creation: Task, Team and Time", *European Management Journal*, Vol. 18 No. 2, pp. 152-163.
- Robicheaux, R.A. and Coleman, J.E. (1994), "The Structure of Marketing Channel Relationships", *Journal of the Academy of Marketing Science*, Vol. 22 No. 1, pp. 38-51.
- Saxton, T. (1997), "The Effects of Partner and Relationship Characteristics on Alliance Outcomes", *Academy of Management Journal*, Vol. 40 No. 2, pp. 443-461.
- Scott, C. and Westbrook, R., (1991), "New strategic tools for supply chain management", *International Journal of Physical Distribution & Logistics Management*, Vol. 21 No. 1, pp. 23-33.
- Simpson, J.T. and Mayo, D.T. (1997), "Relationship Management: A Call for Fewer Influence Attempts?", *Journal of Business Research*, Vol. 39 No. 3, pp. 209-218.
- Smith, D.V., Lowe, B.G., Lyons, D.H. and Old, W.H. (1963), *The Development Project Committee on Standards for Vendor Evaluation*, National Association of Purchasing Agents, New York.

- Smith, M. (1986), "An Introduction to Repertory Grids - Part One", *Graduate Management Research*, Vol. 3 No. 1, pp. 4-17.
- Spina, G. and Zotteri, G. (2000), "The Implementation Process of Customer-Supplier Partnership: Lessons From A Clinical Perspective", *International Journal of Operations & Production Management*, Vol. 20 No. 10, pp. 1164-1182.
- Stuart, F.I. (1997), "Supplier Alliance Success and Failure: A Longitudinal Dyadic Perspective", *International Journal of Operations & Production Management*, Vol. 17 No. 6, pp. 539-557.
- Stuart, F.I. (1993), "Supplier Partnerships: Influencing Factors and Strategic Benefits", *International Journal of Purchasing and Materials Management*, Fall, pp. 22-28.
- Szwejczewski, M., Goffin, K., Lemke, F., Pfeiffer, R. and Lohmüller, B. (2001), "Supplier Management in German Manufacturing Companies: An Empirical Investigation", *International Journal of Physical Distribution & Logistics Management*, Vol. 31 No. 5, pp. 354-373.
- Tanner, J.F.Jr. (1999), "Organizational Buying Theories: A Bridge to Relationships Theory", *Industrial Marketing Management*, Vol. 28 No. 3, pp. 245-255.
- Tindall, C. (1994), "Personal Construct Approaches", in Banister, P., Burman, E., Parker, I., Taylor, M. and Tindall, C. (Eds.), *Qualitative Methods in Psychology: A Research Guide*, Open University Press, Buckingham, pp. 72-91.
- Walter, A., Ritter, T. and Gemünden, H.G. (2001), "Value Creation in Buyer-Seller Relationships: Theoretical Considerations and Empirical Results from a Supplier's Perspective", *Industrial Marketing Management*, Vol. 30 No. 4, pp. 365-377.
- Weber, C.A., Current, J.R. and Benton, W.C. (1991), "Vendor Selection Criteria and Methods", *European Journal of Operational Research*, Vol. 50, pp. 2-18.
- Webster, F.E. (1992), "The Changing Role of Marketing in the Corporation", *Journal of Marketing*, Vol. 56, pp. 1-17.
- Weitz, B.A. and Jap, S.D. (Fall 1995), "Relationship Marketing and Distribution Channels", *Journal of the Academy of Marketing Science*, Vol. 23 No. 4, pp. 305-320.
- Wilson, D.T. (Fall 1995), "An Integrated Model of Buyer-Seller Relationships", *Journal of the Academy of Marketing Science*, Vol. 23 No. 4, pp. 335-345.



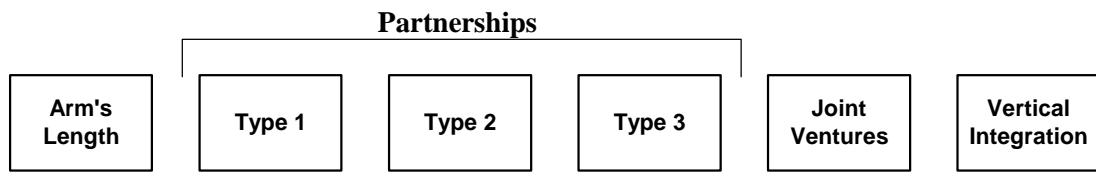
**Figure 1: The Multiple Paths to Supply Chain Integration**

Source: Based on Cooper et al. (1997: 71).



**Figure 2: The Range of Supplier Relationships**

Source: Based on Webster (1992: 5).



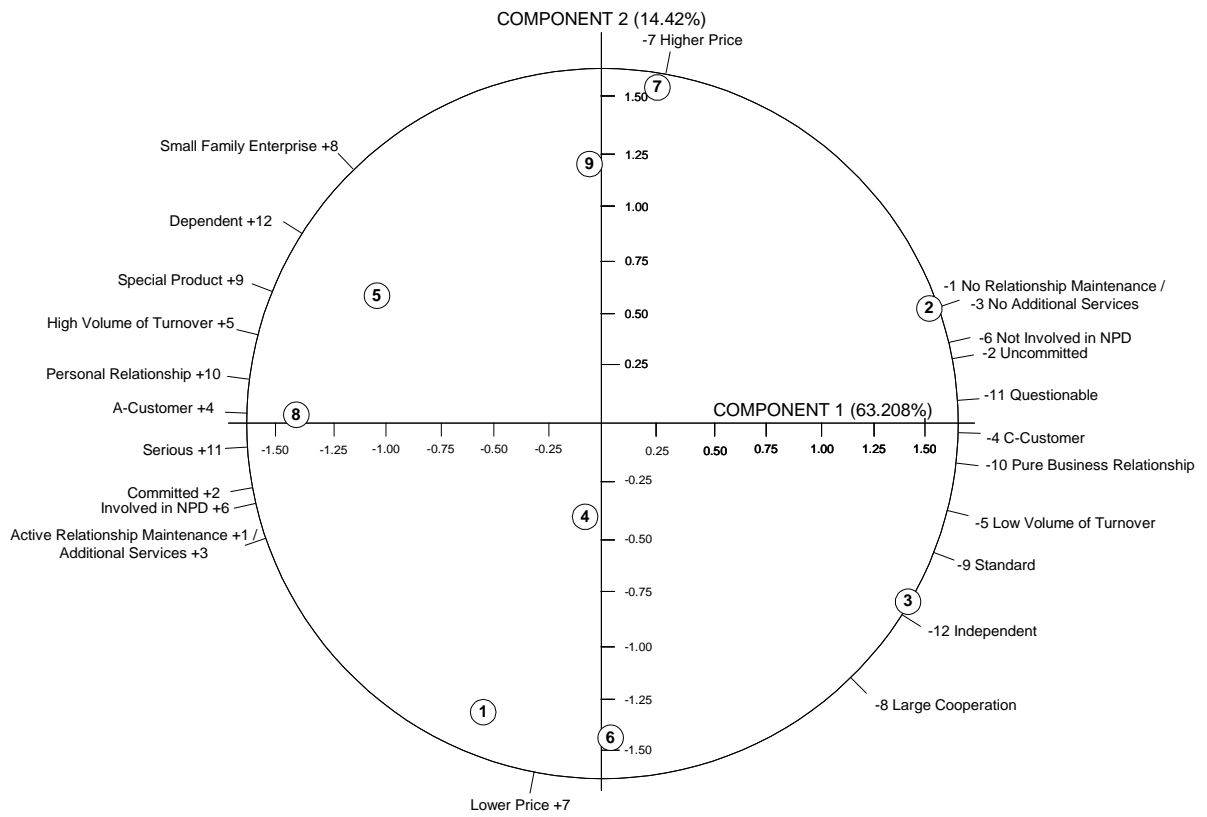
**Figure 3: Types of Relationships**

Source: Lambert et al. (1996: 2).

Constructs	ELEMENTS						POLE
	CARD 1 Colleague B (Boss)	CARD 2 Colleague E	CARD 3 Colleague D	CARD 4 Colleague C	CARD 5 Colleague A	CARD 6 Colleague F	
Easy to work with	*1*	*4*	*5*	5	1	1	Difficult
Directive	1	4	5	*3*	*4*	*4*	Relaxed
Clever, quick	*2*	5	*3*	4	*1*	1	Slow
Friendly	4	*2*	1	*3*	1	*1*	Cold
Political	*3*	*3*	5	1	*5*	5	Fair
Experienced	2	2	*1*	*2*	2	*2*	Inexperienced

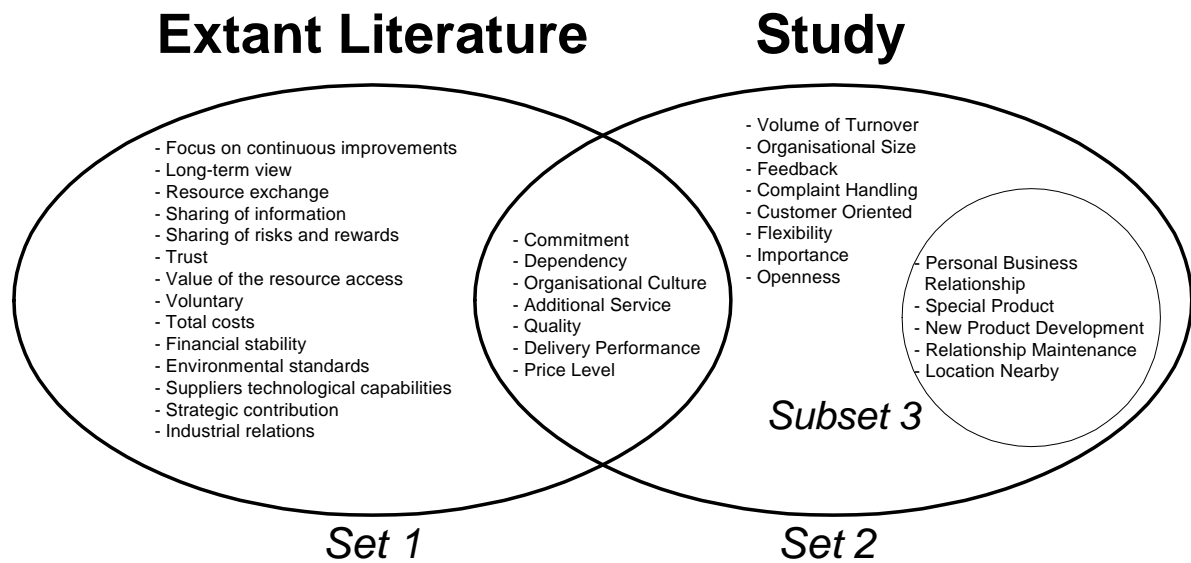
**Figure 4: A Repertory Grid on Working Relationships – Example**

Source: Goffin (2002).



**Figure 5: Example of a Principle Component Analysis for one respondent (Modified FlexiGrid 6 Output)**





**Figure 6: Venn Diagramm of the Attributes of Supplier Relationships and Partnerships**

<b>Partnership Attribute</b>	<b>Brennan (1997)</b>	<b>Ellram and Hendrick (1995) / Ellram (1995)</b>	<b>Graham et al. (1994)</b>	<b>Gentry (1996)</b>	<b>Saxton (1997)</b>	<b>Scott and Westbrook (1991)</b>	<b>Stuart (1993)</b>	<b>Webster (1992)</b>
<b>Closeness</b>						X		
<b>Commitment</b>		X	X	X				
<b>Co-operation</b>								
<b>Dependency</b>	X					X	X	X
<b>Focus on continuous improvements</b>				X				
<b>Long-term View</b>			X	X			X	
<b>Resource Exchange</b>					X			
<b>Sharing of Information</b>		X	X	X				
<b>Sharing of Risks and Rewards</b>		X	X	X				
<b>Trust</b>						X		X
<b>Value of the Resource Access</b>					X			
<b>Voluntary</b>			X					

**Table 1: Different Views on the Partnership Concept**

<b>Traditional Approach</b>	<b>Supplier Management Approach</b>
<ul style="list-style-type: none"> <li>• <i>Unit price is the main emphasis</i> (Lamming, 1993)</li> <li>• <i>Quality</i></li> <li>• <i>Speed of delivery</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Total costs</i> (Larson, 1994; Harrison, 1990)</li> <li>• <i>Quality</i> (Burt, 1989), <i>quality record</i> (Larson, 1994; Harrison, 1990) and <i>supplier's use of TQM</i> (Mohanty and Deshmukh, 1993; Levy et al., 1995)</li> <li>• <i>Delivery and cycle times</i> (La Londe and Masters, 1994; Leenders et al., 1994; Lyons et al., 1990; Mohanty and Deshmukh, 1993) including <i>JIT delivery capability</i> (Burt, 1989; Lee and Wellan, 1993)</li> <li>• <i>Financial stability</i> (La Londe and Masters, 1994; Burt, 1989; Ellram, 1990)</li> <li>• <i>Environmental standards</i> (La Londe and Masters, 1994)</li> <li>• <i>Supplier's technological capabilities</i> (Monczka et al., 1993; Burt, 1989; Ellram, 1990) and <i>strategic contribution</i> (Kolay, 1993)</li> <li>• <i>Service</i> – flexibility, guarantees, technical support, etc. (Mohanty and Deshmukh, 1993)</li> <li>• <i>Industrial relations</i> (Burt, 1989)</li> <li>• <i>Organisational cultural aspects</i> (Leenders et al., 1994; Harland, 1996; Ellram, 1990)</li> <li>• <i>Risks</i> (Lyons et al., 1990; Ellram, 1990)</li> </ul>

**Table 2: Traditional Purchasing vs. Supplier Management**

<b>Factors</b>	<b>Frequency</b>
Personal Business Relationship	7
Special Product	7
Relationship Maintenance	6
Flexibility	6
Quality	5
Delivery Performance	5
Location Nearby	4
Dependency	4
New Product Development	3
Complaint Handling	3
Organisational Culture	3
Importance	3
Openness	3
Volume of Turnover	2
Organisational Size	2
Commitment	2
Feedback	2
Customer Oriented	2
Additional Services	2
Price	2

**Table 3: The Top-20 Constructs of Supplier Relationships (from a total of 37)**

<b>Factors</b>	<b>Variability</b>	<b>Frequency</b>
Volume of Turnover	14.8	2
<b>Personal Business Relationship</b>	<b>13.5</b>	<b>7</b>
Organisational Size	12.5	2
<b>Special Product</b>	<b>12.4</b>	<b>7</b>
<b>New Product Development</b>	<b>11.3</b>	<b>3</b>
<b>Relationship Maintenance</b>	<b>11.2</b>	<b>6</b>
<b>Location Nearby</b>	<b>11.1</b>	<b>4</b>
Commitment	10.7	2
Feedback	9.9	2
Complaint Handling	9.1	3
Customer Oriented	8.9	2
Dependency	8.7	4
Organisational Culture	8.3	3
Flexibility	8.0	6
Additional Services	7.6	2
Quality	7.4	5
Importance	6.7	3
Delivery Performance	6.6	5
Openness	6.6	3
Price	3.0	2

**Table 4: The Five Partnership Constructs**