Towards A Managerial Model For Supplier Relationship Evaluation

Work-in-Progress Paper

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Abstract

Purpose of the paper and literature addressed: This paper discusses the concept of supplier evaluation and argues that supplier *relationship* evaluation is theoretically more consistent with an Industrial Marketing & Purchasing (IMP) perspective and practically more appropriate when applied in the context of long-term customer-supplier partnerships. The paper builds on purchasing models of supplier evaluation and literature on customer-supplier relationship characteristics and stages of development.

Research method: The paper draws on findings from five in-depth dyadic case studies of Taiwanese customers and suppliers, which involved 50 interviews with matching pairs of customers and suppliers.

Research findings: The findings identify patterns in the presence and nature of relationship characteristics at each of the three stages of a relationship; in the exploratory, developing and stable stages. The findings thereby link an extensive set of relationship characteristics to three stages of relationship maturity.

Main contribution: A model for evaluating the performance or 'quality' of supplier relationships is presented, specifying a set of relationship characteristics divided into stages of relationship development. The model provides a framework for supplier relationship evaluation and managerial implications of the model are outlined.

Keywords: Supplier relationship evaluation, relationship quality, performance

INTRODUCTION

Supplier evaluation (or assessment) is an important area of responsibility of purchasing and supply managers. Supplier evaluation involves buying companies evaluating suppliers on performance criteria such as cost, quality, delivery, and increasingly, a wide range of criteria related to, for example, suppliers' innovative capabilities, services and environmental or ethical standards. Supplier evaluation exercises are of significant importance to suppliers as buying companies typically use the results of these to determine which supplier contracts to terminate and which to invest in further, for example, through supplier development programmes (Modi and Mabert, 2007; Prahinski and Benton, 2004).

From an Industrial Marketing & Purchasing (IMP) interaction perspective (e.g. Håkansson, 1982) the practice of supplier evaluation would seem to be an example of a typical one-way approach to 'supplier management'. An interaction perspective implies that companies have to cope with the actions and reactions of other network actors and therefore customers do not

manage or control suppliers. Instead, companies manage the *relationships* of a myriad of actors, including suppliers; buying companies evaluating the performance of suppliers thus seems instinctively wrong from an interaction perspective.

Reviewing the supplier evaluation literature suggests that there is evidence of some recognition of the limitations of a simple one-way approach to supplier evaluation, for example, scholars in operations management (Prahinski and Benton, 2004) investigated supplier perceptions of the buying firm's supplier evaluation communication process and its impact on supplier performance. Marketing scholars have taken a step further by developing concepts that shift the unit of analysis from suppliers (firms) to customer-supplier relationships: Walter *et al.* (2001), Wilson and Jantrania (1994) and Ulaga and Eggert (2005), researched the concept of relationship value and Naudé and Buttle (2000) focused on relationship quality. Yet, very little of these two bodies of research is concerned with developing managerial frameworks for buying companies to evaluate customer-supplier relationship performance in a similar vein to established supplier evaluation models. We build on a small body of work that has sought to develop such relationship evaluation models, particularly Johnsen and Ford (2008) and Johnsen *et al*. (2008), who in turn build on earlier research by Lamming *et al.* (1996). This paper seeks to further the results from these research projects by developing a relationship evaluation model intended for managerial application.

In the following sections we provide a brief review of, first, supplier evaluation literature, and second, IMP approaches to the subject. We present the model developed by Johnsen *et al.* (2008) and identify how to further this work. We then explain the methodology and results from an empirical study, which we use to develop a more detailed model for supplier relationship evaluation, and conclude the paper by outlining conceptual and managerial implications.

THE CONCEPT AND PRACTICE OF SUPPLIER EVALUATION

Supplier evaluation programmes form an important ingredient in the arsenal of purchasing and supply managers' 'best practices'. As companies choose to engage in long-term relationships with a significant proportion of their suppliers, it becomes increasingly important to monitor their performance. Trust plays a critical role in the success of close customer-supplier relationships (Morgan and Hunt, 1994), but it is inadvisable to rely solely on blind trust (Kumar, 1996) and many companies therefore see ongoing supplier evaluation as a necessary relationship investment. Indeed, trust within customer-supplier relationships develops over time through proven performance and supplier evaluation is one way to build a company's confidence in supplier performance (Sako, 1992; Cousins and Stanwix, 2001).

Supplier evaluation involves assessing supplier performance on metrics related to outcomes, such as quality, delivery, price, service and flexibility, as well as internal or predictive metrics, such as defect rates, schedule realization and cost (Venkatraman and Ramanujam, 1986; Prahinski and Benton, 2004; Melnyk *et al.*, 2004). The latter are often process-focused measures that enable the buying company to understand the supplier's process capabilities (Modi and Mabert, 2007). Buying companies thus use evaluations to identify areas for supplier improvement, and ultimately to inform decisions about whether to terminate their business with under-performing suppliers. Generally, companies prefer the former course of action over replacing suppliers given high switching costs. Consequently, supplier evaluation is often regarded as a critical part of supplier development programmes (Modi and Mabert, ibid; Prahinski and Benton, ibid).

Supplier evaluation is clearly an important purchasing activity, however, an IMP interaction perspective would suggest that it should not be a question of evaluating supplier but supplier *relationship* performance: relationships can be seen as quasi-firms (Blois, 1972) that warrant separate evaluation. The interaction Model (Håkansson, 1982) follows much the same logic although it provides an conceptual structure to analyze customer-supplier relationships rather than a framework to evaluate the performance of relationships. More recent developments in industrial marketing, which follow an Interaction approach, have focused on how to analyze the *value* of customer-supplier relationships (e.g. Walter *et al.*, 2001). The relationship value literature (e.g. Wilson and Jantrania, 1994; Ulaga and Eggert, 2005), has developed understanding of the value that a supplier provides to a customer. But, firstly this literature focuses on the firm (supplier) as the unit of analysis (e.g. product support, service support, and supplier know-how - see for example Ulaga and Eggert, 2006), and, secondly relationship value i.e. relationship benefits divided by relationship cost, which is a different agenda.

The 'relationship quality' literature has developed along similar lines to our research into supplier relationship performance evaluation, although as argued by Johnsen *et al*. (2008) it also focuses predominantly on supplier rather than relationship performance - or at least operationalizes relationship quality as a mixture of firm-specific (e.g. 'customer orientation') and relationship-specific factors (trust, commitment) (Dorsch *et al.*, 1998; Walter *et al.*, 2003). Furthermore, the development of the Relationship Assessment Process (RAP) model (Lamming *et al.*, 1996) was based on the premise that supplier (or vendor) assessment exercises often turn into blaming exercises and therefore do not address root causes of supply chain problems. The RAP model focused specifically on the relationship as the unit of analysis rather than the supplier firm and found its way into industry, most notably through the Society of British Aerospace's SCRIA programme (Supply Chain Relationships in Action - http://www.sbac.co.uk/pages/66944688.asp). Giannakis (2007) has developed a framework that also focuses on performance measurement of supplier relationships, echoing some of the thinking underlying e.g. the RAP and relationship quality models. His model specifically focuses on identifying multiple perception gaps between customers and suppliers, which is arguably a very important issue to address in any customer-supplier relationship analysis. Research on supply chain relationship quality (Fynes *et al*, 2004; Qin *et al*, 2008) has continued along similar lines of thinking, often applying the dimension developed by Naudé and Buttle (2000), although this body of work is ultimately more concerned with testing impacts on supply chain management performance than developing a framework for supplier relationship evaluation and rarely take into account how relationship characteristics changes over time over the course of relationship development maturity.

SUPPLIER RELATIONSHIP EVALUATION FRAMEWORK: RELATIONSHIP CHARACTERISTICS

In this paper we build on a recent framework (Johnsen *et al.*, 2008) that follows in the footsteps of the RAP model and focuses on a set of structural relationship characteristics that chime with much of the IMP literature. Based on a synthesis of existing sets of characteristics, including Johnsen and Ford (2008) and Johnsen *et al.*, (2008), the set of relationship characteristics shown in Appendix 1 provides our point of departure.

The set of characteristics in Appendix 1 is identical to Johnsen and Ford (2008), with the addition of trust, which is emphasized in much customer-supplier relationship literature, although it only seems to have been explicitly addressed in more recent IMP research (Huemer, 2004). All the relationship characteristics are structural in nature and as such they

set the conditions for the relationship context in which customers and suppliers interact and in which processes such as adaptation and exchanges of information, knowledge, or finances take place.

One drawback of the set of characteristics presented in Appendix 1 is that they are largely static. As relationships develop over time it is important to identify how relationship characteristics evolve; this is particularly important from a relationship evaluation perspective as any evaluation would depend on the level of relationship maturity. The relationship characteristics can therefore become more dynamic by considering the stage of relationship development. We consider this aspect in more depth in the following section.

Relationship Development Stages

The 1980s saw the beginning of the development of a number of frameworks that tried to capture the complex dynamics of the relationship development process (Ford 1980; Frazier, 1983; Dwyer *et al*., 1987). What these models had in common was their interest in capturing how interaction differed across a range of relationship development stages and the role of individuals in the interactions at each crucial point of the process. Ford's (1980) model identified four relationship development stages; the pre-relationship stage, exploratory stage, developing stage and stable stage. The stages of Dwyer *et al*.'s (1987) model mirror those of Ford's (*ibid*.), but neither model includes the dissolution of the relationship which has been added in recent research (e.g. Alajoutsijarvi *et al.* 1999; Havila and Wilkinson, 2002). In the following we provide a brief overview of the three middle stages of development that seem pertinent to supplier relationship evaluation.

Exploration refers to the research and test phase in relational exchange (Dwyer *et al.,* 1987). In the exploratory stage customers and suppliers begin to engage in discussion and negotiation. Customers may test a supplier's potential through small orders and negotiation of terms or product specifications (Claycomb and Frankwick, 2010). There may be little mutuality and cooperation at the exploratory stage, but the level of inconsistency may be high as each company is dealing with unknown issues and raising questions.

In the developing stage interaction and learning between a customer and supplier grows in terms of intensity and develops through increasing mutuality and growth in commitment. The expansion stage is characterised by continuous improvement in the benefits obtained by the parties, contributing to their increasing interdependence (Dwyer *et al.,* 1987). Customers increase their purchases from suppliers and consider longer-term contracts (Claycomb and Frankwick, 2010). Cooperation and trust in the counterpart increases and power becomes increasingly shared (Wilson, 1995; Wilson and Jantrania, 1994).

If a relationship reaches the mature stage the parties can benefit from stability, mutual dedication, more balanced power and established domains of expertise (Rosson and Ford, 1982; Ganesan, 1994; Johnsen and Ford, 2008). However, one must also be aware of inertia or lack of initiative during the stable stage. Routines and institutionalisation may mean that the relationship is taken for granted and does not reach its full potential (Ford *et al*., 2003). As stable relationships build on trust, commitment and relationship-specific investments the

switching costs at this advanced stage are high (Ganesan, 1994; Wilson, 1995; Claycomb and Frankwick, 2010).

The purpose of this research is therefore to incorporate the relationship development stages into a supplier relationship evaluation model, identifying the presence and nature of relationship characteristics at each of the three stages of development/maturity: exploratory, developing and stable. In the following we outline the methodology for the empirical study that we build on to develop this model.

RESEARCH METHODOLOGY

For this study we conducted five in-depth case studies. The unit of analysis was the relationship between small and medium-sized suppliers and their larger customers operating in the Taiwanese electronics industry. Data was collected through face-to-face interviews with senior managers or directors of the supplier and customer firms, followed by participant observations of meetings. Thus, interviews were conducted with individual suppliers and customers which formed a relationship pair. For each case, five customer staff (e.g. vice president, managing director, purchasing manager, and others involved in supplier relationships) and five supplier staff (e.g. president, managing director, and marketing manager) participants were interviewed. A total of 50 respondents were interviewed during 49 semi-structured interviews with the customer and supplier personnel (Case B supplier had two participants interviewed together). Snowball sampling was used whereby the suppliers were contacted for the study and the customer contacts were introduced by the smaller suppliers. To protect confidentiality the researchers assigned an alias for each organisation and respondent. Appendix 2 highlights the background of each case company using the aliases adopted.

In the first stage of data collection, a semi-structured interview guide was employed with open-ended questions to enable the respondents to give their opinions and detailed information about the relationships under investigation. As all the respondents were located in Taiwan, the interviews were conducted in Taiwanese. The themes covered in the interviews included company background customer/supplier relationship background, characteristics of the relationship and the relationship development process and experiences between smaller suppliers and larger customers.

The data were tape-recorded and transcribed from the original recordings with the Taiwanese managers and then translated into English manually. Data analysis techniques involved coding for key ideas, and tabular displays and graphs, which presented the qualitative data without destroying its meaning (Miles and Huberman, 1994). Individual case analysis was processed by validation of the transcripts with respondents, translation of the transcripts to English from Taiwanese, and analysis and interpretation using role ordered and conceptually clustered matrices.

FINDINGS

The findings section is structured according to the three relationship stages, identifying the relationships in focus at each stage of development. Appendix 3 provides an overview of the findings.

Exploratory stage

In the exploratory stage the characteristics in focus were mutuality, conflict, cooperation interpersonal inconsistency, power and dependence and trust.

The relationships in the exploratory stage were characterised by relatively high levels of power by customers and relatively low levels of power by suppliers. Suppliers focused much of their attention on being tested or 'jumping through hoops' to achieve the desired results for their customers and gain their approval. The exploratory stage therefore focused on a growing awareness of mutuality as an increasingly important concern for the durability of the relationship.

Interpersonal inconsistency had the potential to increase problems and conflicts in the exploratory stage. Inconsistency arose from the misunderstandings that were prevalent in situations where the parties did not know each other's priorities and the firms' cultures and values were difficult to assess. Common ground was being sought in the relationships by both customers and suppliers, but this was difficult to achieve in relationships where there were still low levels of intensity, e.g. limited cross-fertilisation of staff, fewer meetings, limited involvement of higher-level management in interactions. Inconsistencies could be based on the perception on both sides of the relationship that the supplier was not performing to the best of its abilities as a result of making frequent mistakes in, for example, orders and product specifications.

"*The percentage of bad products in our company is high and customers always complain about this. We know that it is impossible to achieve zero-defects, but we will try our best to reach this goal. The operation strategies of our company are to reduce costs, increase profits, and improve the added value of our products.*" (Vice Managing Director, Supplier, D)

Despite these difficulties, the customers were prepared to offset problems in the exploratory stage against competitive prices and the ease of doing business with a supplier. Opportunities for cooperation and decisions about whether the relationships would last were, however, dependent on the supplier's performance, and so could have a significant impact on the potential for the relationship to continue to the next stage.

Trust was contractually-focused in the exploratory stage. The customers were the dominant partners in the relationships and distance between the parties and a lack of understanding of each other's priorities was high. However, there seemed to be tentative understanding that the relationships could potentially be of longer-term significance.

Developing stage

In the developing stage the characteristics in focus were trust, intensity, mutuality, cooperation, exclusivity and power and dependence.

Growing interdependencies were found to exist between suppliers and customers and the domains of expertise of customers and suppliers were growing more defined and delineated. Suppliers trusted their customer's goodwill, whereas customers trusted their supplier's capabilities in product specifications, technology and customer service. This demonstrated a

distinct imbalance between the level of trust developed by the customer and supplier in the developing stage of the relationship.

The relationships in the developing stage were characterised by greater mutuality and exclusivity than in the exploratory stage. Mutual adaptations were more common and were seen as an essential component in ensuring the longer-term viability of the relationship.

Suppliers tended to give concessions on prices and minimum order size in order to maintain the relationship with customers. Customers made concessions on preferred prices and delivery dates to satisfy suppliers. Although customers were often still focused on their own benefits in the developing stage, they were more likely to take consideration of mutual growth opportunities and weigh the two concerns in balance when taking decisions:

"*Even if Supplier A offers the same price as other suppliers, we always consider Supplier A first. This is because Supplier A's product quality is similar to that of other suppliers and we have a long-term relationship.*" (Purchasing Manager, Customer A)

The longer the involvement with the supplier, the more likely it seemed that customers would compromise or yield to a supplier's viewpoint in the developing stage.

The Stable Stage

In the stable stage the relationship characteristics in focus were power and dependence, trust, exclusivity and intensity.

Neither the customers nor suppliers showed significant problems in dealing with power and dependence in the stable stage. Company size differences also became less significant as the boundaries between power domains were more clearly identified and understood. Supplier E's managing director commented:

"*We have very strong technology. Thus, I do not worry about the relationship with Customer E.*"

The supplier's capabilities were better recognised by customers in the stable stage. No dominant organisation in the relationship took overall control over the strategic direction of the relationship and each party was recognised to control different aspects of the relationship. Thus, there were more balanced interdependencies between customers and suppliers. In addition, suppliers took a more forceful and prominent role in managing within their relationships.

The supplier's directors developed close personal friendships with managers and directors from the customer firm which contributed to the intensity of the relationship. Friendships were now also at stake if problems arose in the relationship, so both parties made efforts to retain the exclusivity that had developed over time and chose to work with the other above existing alternative relationships.

Suppliers had focused on improving capabilities, particularly in human resource, management and technological areas to reach the stable stage in their relationships with customers. Exclusivity and commitment was enhanced by each party focusing on retaining and enhancing the benefits and value of the relationship. In addition, trust had developed to the extent that both parties trusted each other's goodwill and ability to keep their promises.

"Supplier E has good product technology and their product quality is stable. We have built an especially friendly relationship. Supplier E always keeps their promise that any types of product sold to Customer E will not be sold to other customers." (Vice Managing Director, Customer E)

CONCLUSIONS AND MANAGERIAL LESSONS

The purpose of this research was to develop a model for supplier relationship evaluation. Following a literature review we identified a set of customer-supplier relationship characteristics: many such sets have been developed in past research, but for the purpose of identifying contemporary relationship characteristics we decided to use a recent set developed by Johnsen and Ford (2008) and Johnsen *et al.* (2008). However, none of these contributions specified how relationship characteristics may develop over time as relationships move from exploratory to developing or stable stages. We therefore also reviewed the literature on relationship development models and set out to empirically investigate how these two bodies of literature could be linked with a view to developing a model for supplier relationship evaluation.

Through five case studies of Taiwanese customer-supplier dyads we explored how the presence and nature of relationship characteristics were manifested at each of the three stages of maturity: exploratory, developing and stable. The findings enabled us to populate a table, shown in Appendix 3, with relationship characteristics patterns across the three stages of maturity. Conceptually, this offers a contribution to existing research as it links an extensive set of relationship characteristics to three stages of relationship maturity.

Practically, this provides an opportunity to develop a model that may help managers involved in supplier relationship evaluation i.e. purchasing, to assess the stage of maturity of a particular supplier relationship. Appendix 4 provides a managerially-focused model that draws from the empirical findings of this study and existing literature on customer-supplier relationship characteristics and stages of development. This model follows the same line of thinking as, for example, Lamming *et al* (1996), Giannakis (2007) and Johnsen *et al* (2008), so it is designed to assist managers in evaluating supplier relationship performance along a set of relationship characteristics. The three stages of maturity may be useful to managers in identifying areas of future relationship improvement. Building on lessons from the RAP programme (Lamming *et al*, ibid; Johnsen *et al*, *ibid*.), we would recommend that this model be used for strategic customer-supplier relationships (or partnerships) in conjunction with traditional supplier evaluation methods. Similarly to Giannakis (ibid) it would be advisable to collect matching data from suppliers and identify perception gaps and areas of relationship improvement. Established supplier evaluation theory (Modi and Mabert, 2007; Prahinski and Benton, 2004) suggests that the outcomes of such analysis must be communicated to the parties involved in the evaluation process to address problem areas and make sure performance measures result in improvement of the current state, and that analysis should be conducted periodically to monitor progress. Given the importance of inter-personal inconsistency we would further recommend cross-functional commitment and input to analysis, which is also consistent with Giannakis (*ibid*.).

We acknowledge that the paper builds on only five case studies from a particular context of smaller-suppliers-larger customers in the Taiwanese electronics industry. Therefore, we would caution any generalisations from the study and encourage further research in other research settings.

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Appendix 1. Definitions of Relationship Characteristics and Indicators

Characteristic	Definitions and Sources	Indicators
Mutuality	Extent to which two actors demonstrate their interest in the well-being of one another and how they seek common goals or interests (Ford et al., 1986).	- What is our level of concern in the well-being of the other party? - Do we pursue common goals or interests? - Are we willing to relinquish individual goals in order to increase the positive outcomes for other party, and thereby our own well-being (win-

		win)?
Particularity (Exclusivity)	Direction, uniqueness and commitment in a relationship, when compared to other relationships of the companies, or the extent of standardization/adaptation of interaction (Ford et al., 1986).	- What is the extent of dedicated exclusive efforts of one party e.g. production processes or designs of suppliers geared towards our specific needs? - To what extent is the other party committed to us in comparison with other relationships in its portfolio?
Co-operation	Extent of working together towards a shared aim or direction for the relationship (Ford et al., 1986; Håkansson and Henders, 1992).	- To what extent is the relationship characterized by co-operative rather than contentious interaction?
Conflict	Extent of perceived differences between parties, causing friction and disputes, but also potential for creativity (Ford et al, 1986; Håkansson and Henders, 1992).	- What is the extent of disagreement or disputes over e.g. specifications, or nature of orders or agreed designs?
Intensity	Extent of contact and resource exchange between firms in a relationship (Marrett, 1971; Ford and Rosson, 1982).	- What is the number of staff or groups involved in relationship? - How frequently do we meet face-to-face? - What is the extent of senior manager involvement in this relationship?
Inconsistency	The personal expectations and individual interests influencing interaction and the extent of perceived variation in other actor's approach to interaction between individuals or departments (Ford et al., 1986; Johnsen, 2005).	- Are there great differences between how individuals or departments interact with other party? - To what extent do we send or receive mixed messages from different parts of company or different individuals?
Power/ Dependence	Extent to which an actor - implicitly or explicitly - can get another actor to do something that they would not otherwise have done. (Dahl, 1961). Ability to reward and/or coerce other actors to attain compliant behavior (French and Raven, 1957) Dependence is the obverse of power as the more dependence of one party on another the less power the former has within that relationship. (Ford, 1980; Emerson, 1981; Håkansson and Gadde, 1992).	- What is our ability to persuade other party to do something they do not want to do? - Are we in a position to influence decisions and actions of other party? - What is the proportion of our business with other party? - To what extent are we reliant on other party's technology or knowledge e.g. where other party's technology or capability is unique or unmatched?
Trust	The expectation held by one actor about another that the other responds in a predictable and mutually acceptable manner (Sako, 1992; Morgan and Hunt, 1994).	- Are we confident that other party will adhere to the contract? - Are we confident that other party will perform tasks in excess of agreed terms and conditions? - Are we confident that other party has competence to be able to produce what contract requires?

Source: Adapted from Johnsen and Ford (2008) and Johnsen *et al*. (2008)

Appendix 2. Case study profiles

	Case A: Supplier A/Customer A	**Case B: Supplier B/Customer B**	**Case C: Supplier C/Customer C**	**Case D: Supplier D/Customer D**	**Case E: Supplier E/Customer E**
Annual turnover NT$	Supplier: 50 million Customer: 288 million	Supplier: 60 million Customer: 1 billion	Supplier: 200 million Customer: 25 billion	Supplier: 1billion Customer: 12 billion	Supplier: 20 million Customer: 93 billion
Employees	Supplier: 100 Customer: 410	Supplier: 53 Customer: 270	Supplier: 98 Customer: 19000	Supplier: 198 Customer: 2000	Supplier: 50 Customer: 49000
Activities[1]	Supplier: manufacture of chip resistors Customer: manufacture of resistors	Supplier: manufacture of light emitting diodes (LEDs) Customer: manufacture of semiconductor chips, light emitting diodes (LEDs)	Supplier: manufacture of integrated circuit (IC) semiconductor mould automatic cleaning system Customer: manufacture of integrated circuit (IC) semiconductor, IC packaging, IC test equipment, and various kinds of integrated circuit	Supplier: manufacture of home electronic appliances, and electronic cooling fans Customer: manufacture of tablet personal computers (PCs), liquid crystal display (LCD) PCs, laptops, and information appliances	Supplier: manufacture of transformers, power supplies, and integrated circuit (IC) boards Customer: manufacture of power supply products, opto-electronic components, modules, and systems
Number of respondents	10	10	10	10	10
Respondent roles	*Supplier:* managing director, domestic marketing manager, R&D manager, manufacturing director, supply manager *Customer:* vice-managing director, purchasing manager, customer, quality control manager, supply chain manager	*Supplier:* president, managing director, assistant manager, marketing manager, manufacturing director *Customer:* managing director, domestic department vice-managing director, purchasing manager, manufacturing director, product design manager	*Supplier:* president, managing director, marketing manager, R&D manager, manufacturing director *Customer:* production manager, purchasing manager, customer, module-manufacturing director, equipment engineer	*Supplier:* managing director, vice-managing director/manufacturing director, domestic marketing manager, domestic sales person, R&D manager *Customer:* vice-managing director, purchasing manager, customer, manufacturing director, R&D manager	*Supplier:* managing director, marketing manager, quality control manager, R&D manager, production manager *Customer:* vice-managing director, component quality control manager, purchasing manager, customer, R&D manager

Appendix 3: Summary of findings

	Maturity Stage		
	Exploratory Stage	***Developing Stage***	***Stable Stage***
Mutuality	- Goals focused on low price/reasonable quality (case B) - Some cooperation on price agreements & customer's support for supplier's technological solutions, but common goals/interests not yet established (case B) - Supplier gives up individual product technology goals to maintain relationship (case D) - Customer reduces price to maintain relationship (case D). - Companies have individual profitability goals & different long-term priorities (case D).	- Focus on making joint concessions to obtain mutual benefit and aim for target setting in discussion with other party (case C) - Goals & interests revolve around creating joint targets for prices, technological skills, product quality & good service (case A)	
Exclusivity		- Customer and supplier show growing adaptations & preference for working together above alternatives (case A)	- Very secure relationship. Customer and supplier make efforts to find opportunities to sustain their work together. Customised designs by supplier for customer add to exclusivity of relationship (case E)
Co-operation	- Long-term cooperation depends on supplier's performance & technological improvements tested/ monitored (case B)	- Cooperation in relationship takes priority over individual profit goals (case A) - Cooperation based on continued profitability for both companies (case C)	
Conflict	- Conflicts arise over price negotiation/ product specifications (case D)		
Intensity	- Relationship fairly insecure & distant but acceptable to both parties (case B)	- Relationship seems secure with strong and regular communication across functions and firms (case C)	- Long-term inter-firm friendships support continuation of relationship and development of exclusivity (case E)
Inconsistency	- Communication stifled by irregular meetings & lack of commitment from management (case D)		
Power/ Dependence	- Perception that supplier contributes more and customer gains more from relationship (case B) - Customer controls orders, product standards and can dictate final price of products (case B) - Different views of customer & supplier on who contributes most and who gains most (case D)	- Supplier controls provision of cheap product price, product design and good product quality/ Customer controls order placement & strategic direction (case A)	- Power fairly evenly balanced; supplier's strong design/technological capabilities contribute to recognised expertise (case E) - Company size does not influence relationship, focus on common development goals & shared influence (case E)
Trust	- Contractual trust - sign contract for every transaction (case B) - Customer insists on contracts (case D)	- Supplier A trusts customer's goodwill & Customer A trusts supplier's production & pricing competence (case A) - Supplier C trusts customer's goodwill, & Customer C trusts supplier's technological competence (case C)	- Goodwill trust between customer and supplier based on technological expertise and managerial skills that underpin interaction (case E)

Appendix 4. A Model for Supplier Relationship Evaluation

	Maturity Stage		
	Exploratory & Tactical	***Developing***	***Stable & Strategic***
Mutuality	- Goals differ for each party: no strategic alignment - Win-lose strategy	- Current goals aligned to achieve profitability for both parties - Partial strategic alignment	- Goals for future developed in tandem - Strategic alignment - Win-win: shared risks & rewards
Exclusivity	- Limited adaptation of each party - Limited relative commitment to relationship	- Concessions made by each party for mutual benefit - Security sought through commitment to relationship	- Long-term investment, adaptation & commitment over & above that of other relationships
Co-operation	- Initial ideas for cooperation explored - Cooperation depends on performance evidence - Limited information sharing: knowledge is power	- Joint projects & plans established to achieve improved capabilities for each party - Parties becoming more open with each other, but still guarded	- Long-term projects for enhancement & achievement of capability development e.g. supplier development programme - Transparency: high level of information sharing
Conflict	- Conflicts arise through lack of knowledge of other party's systems, processes and responsibilities: destructive conflicts - One-way conflict resolution/blaming	- Disagreements arise over integration of roles, responsibilities & targets - Partial moves towards joint problem-solving	- Experience of conflict & its resolution enhance debate and depth of understanding: constructive conflicts - Joint problem-solving
Intensity	- No commitment to regular interaction between individuals and teams - Single-interface - Low level operational involvement	- Regular pattern of interaction established with clearly defined roles & routines - More functions involved in relationship - Middle-management involvement	- Friendships and close professional ties underpin long-term interaction & patterns of behaviour/responses - Multi-interface & corporate (director) involvement
Inconsistency	- Different approaches to relationship within each party e.g. across functions - Different approaches to relationship over time creating inconsistent communication	- Common approaches to relationship begin to be defined - Communication patterns become established	- Both parties work to shared principles & patterns for communication - Behaviour & communication consistent over time & across functions
Power/ Dependence	- One-sided relationship - Stronger party controls strategic and tactical decisions e.g. ordering process, quality and prices - Weaker party concerned with proving capability/attractiveness	- Domains of expertise becoming defined and separate - Inter-dependent relationship strategy developing	- Commonly understood & firmly established distribution of power & expertise in different areas - Inter-dependent relationship strategy established
Trust	- Ensuring contractual compliance - Controlling performance through tight measures	- Focus on competence-based trust in defined areas for each party	- Focus on goodwill trust: helping each other out when necessary - Equal commitment to long-term health & growth of relationship