



Efficiency versus value maximisation in co-manufacturing relationships

Co-manufacturing
relationships

309

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Abstract

Purpose – This paper examines two co-manufacturing relationships, which were efficient with the aim of understanding why they were not value maximising.

Design/methodology/approach – The paper utilises a methodology designed by Wilding and Humphries and based on Williamson's organisation failure framework. Using a case study approach, it is applied in a new context to provide insights into the dynamics within two co-manufacturing relationships in the food-manufacturing industry.

Findings – The relationships are judged as operationally efficient by both sides but frustrations and conflicts have emerged over time, leading to a real danger of relationship breakdown. These problems are caused by failure to involve co-manufacturing partners in strategy discussions, shortcomings in relationship management, and lack of recognition of partners' developing capabilities.

Research limitations/implications – The paper challenges the transaction cost economics (TCE) focus on efficiency in the context of co-manufacturing relationships and advocates a relational perspective to value maximisation.

Practical implications – The findings indicate that an undue focus on operational efficiency in the management of close, long-duration co-manufacturing relationships may result in a reduction in innovation and a failure to maximise value.

Originality/value – The paper provides empirical support for arguments in favour of dynamic efficiency, rather than the static efficiency implied by TCE. These findings are of great importance to companies engaged in strategically important co-manufacturing relationships, as they demonstrate how "negative spiral behaviours" can develop.

Keywords Food manufacturing processes, Partnership, Supplier relations, Transaction costs

Paper type Research paper

1. Introduction

Many practitioners have embraced business-to-business relationship management as a way of lowering costs and improving products and services (Ryals and Humphries, 2007a). Disappointingly, however, achieving the relationship's full potential has often proved to be more difficult, costly and time consuming than first thought (Christopher, 2005; Cooper *et al.*, 1997; Kemppainen and Vepsalainen, 2003). It is more than ten years, since Dyer (1997) suggested that the pursuit of transaction efficiency brought the risk of increased governance costs to overcome opportunistic behaviours in hybrid (collaborative) relationships. The result was a reduction in overall relationship value achieved. Researchers such as Cooper *et al.* (1997) and Logan (2000) have attempted to seek theories and remedies by examining relational dynamics.



This paper addresses these issues through an established research tool based upon Williamson's (1975) organisation failure framework, extending its application to provide detailed insights into the co-operative dynamics within two long-term co-manufacturing relationships in the food manufacturing industry with the aim of understanding the frictions that had arisen and whether or not these efficient relationships were value maximising. The results support and extend the arguments of Ghoshal and Moran (1996) and Ghoshal (2005) into a co-manufacturing context, indicating that the application of traditional efficiency-driven measures such as those advocated by transaction cost economics (TCE) may actively invite failure in such relationships. The research suggests that there are complex dynamics at play in value maximisation, which are not addressed by the transactional focus of TCE (Ghoshal and Moran, 1996).

2. Literature review

Supply chain management (SCM) is deeply concerned with operational efficiency and supply chain integration (Fawcett *et al.*, 2008; Bagchi *et al.*, 2005). There is empirical evidence that close, long-term relationships between customers and suppliers have a beneficial impact on performance (Christopher, 2005; Giannakis and Croom, 2004), although attention needs to be paid to the strategic, as well as to the operational, aspects of the relationship (van Echtelt *et al.*, 2008; Harland *et al.*, 2001; Sako *et al.*, 1994). Higher integration appears to be positively correlated with improved supplier performance (Bagchi *et al.*, 2005; Konijnendijk and Wijngaard, 1991), yet researchers have found that integration and information sharing is often limited (Fawcett *et al.*, 2008; Kempainen and Vepsalainen, 2003; Ryals and Humphries, 2007a), perhaps because of customer reluctance to share information with their suppliers (Bagchi *et al.*, 2005; Lamming *et al.*, 2001). These issues of integration, duration, and strategic as well as operational relationships, are of particular relevance to co-manufacturing.

2.1 Co-manufacturing relationships

Co-manufacturing (sometimes also called co-makership – Bevan, 1989; Konijnendijk and Wijngaard, 1991; Smith, 1990) refers to a close partnership between suppliers and manufacturers (and sometimes between competing suppliers) in which the parties commit to long-term relationships, working to common aims and objectives (Bevan, 1989) and aiming to achieve continuous improvement and shared benefits by jointly developing products, exchanging information openly, establishing specialized processes and resolving problems by working together (Dale, 1990; Konijnendijk and Wijngaard, 1991; Sako *et al.*, 1994; Vallespir and Kleinhans, 2001; Harland *et al.*, 2001).

In co-manufacturing relationships, the supplier (co-manufacturer) is considered to be an extension of the customer's operation, with the objective of reducing costs and increasing efficiency for both parties by allowing each to concentrate on its core strengths (Backler, 1991; Bevan, 1989; Christopher, 2005). Instead of the usual linear supply chain relationship, co-manufacturing relationships exhibit a more integrated process (Konijnendijk and Wijngaard, 1991; Harland *et al.*, 2001) in which, for example, the "supplier" may receive semi-processed product from the "customer" which he then processes and re-supplies back to the customer for additional processing or in finished goods form for onward distribution (Lamming, 1993; Christopher, 2005). Thus, co-manufacturing is associated with the integration of both lean and agile methods to improve business competitiveness (Cooper *et al.*, 1997; Dyer, 1997;

Jui-Chin and Chen, 2007). Through a close collaborative manufacturing relationship, a company can acquire access to another's design creativity and manufacturing skill and increase its flexibility of response to market conditions, whilst shared information and collaborative planning reduce the need for safety stock and cut process costs (Konijnendijk and Wijngaard, 1991). SCM is used to manage uncertainty and complexity, provide continuity of supply, assure future capacity, and thus improve service to end consumers (Backler, 1991; Bevan, 1989). In this way, co-manufacturing offers a solution to the "make or buy" dilemma of TCE; and promises-reduced costs and higher returns (Logan, 2000; Vallespir and Kleinhans, 2001).

However, researchers have noted that value maximisation has not always followed even the most determined efforts to implement integrating policies such as co-manufacturing (Fawcett and Magnan, 2002; Ryals and Humphries, 2007a). In fact, the additional management effort required to achieve operational collaboration can seemingly be more trouble than it is worth and still not bring the much-heralded benefits of seamless processes facilitated by end-to-end information flows (Lamming *et al.*, 2001; Christopher, 2005; Cooper *et al.*, 1997; Dyer, 1997). Perceptions of unbalanced dependency can create feelings of insecurity and "imprisonment"; for example, when a customer has invested in specialised information technology (IT) links to the supplier such that changing the source of supply becomes expensive or difficult (Cox *et al.*, 2003; Buvik and Reve, 2001; Lonsdale, 2001). The resultant management difficulties, staff and organisational upheavals and poor focus on end customers, also reduce perceived relationship success (Humphries and Wilding, 2003). Relationship duration may be negatively correlated with supplier performance, perhaps because the suppliers become complacent or because their market perceptions are blunted (Bagchi *et al.*, 2005; Lamming *et al.*, 2001). These indications that relationships may deteriorate over time makes long-duration co-manufacturing relationships an important research context.

Much of the research conducted to date has focused on the impact on supplier performance of supply chain integration (Bagchi *et al.*, 2005). Gibbs and Humphries (2009), Halldorsson *et al.* (2007) and Williamson (2008) note the prevalence of the "make or buy" decision in SCM, and the influence of TCE as a theoretical perspective on this decision. However, Humphries and Wilding's (2003) work suggests that there is another perspective, which is the performance of the relationship. In the following sections, we review the literature relating to TCE and to relationship management in a supply chain context.

2.2 TCE perspectives

TCE is a widely used theoretical perspective for academic work in the field of co-manufacturing and SCM (Dyer, 1997; Halldorsson *et al.*, 2007; Ireland *et al.*, 2002; Muthusamy and White, 2006; Vandaele *et al.*, 2007; Wilding and Humphries, 2006). TCE is concerned with the efficiency rationale of business decisions and their impact on processes (Gibbs and Humphries, 2009; Lamming *et al.*, 2001; Rugman and D' Cruz, 2000; Williamson, 1996, 2008). TCE propounds an approach to investment appraisal which evaluates the costs of negotiating and enforcing contracts in an uncertain, open market on one hand and the internal control and management overheads associated with in-house production on the other (Faulkner and de Rond, 2000; Palmer, 2002). In other words, the focus is on cost minimisation and the pragmatic evaluation

of “make or buy” decisions (Gibbs and Humphries, 2009; Logan, 2000; Williamson, 2008). This evaluation includes the risk of investing in relationship-specific assets (Halldorsson *et al.*, 2007), a risk which also involves the uncertainty of contracts and the potential for organisations and individuals to act opportunistically (Dyer, 1997; Rugman and D’ Cruz, 2000; Williamson, 1996). These specific asset investments have been correlated with superior performance (Dyer, 1997) and include unrecoverable items such as time and resources, which are relatively inflexible in that they cannot readily be redeployed to support other relationships (Williamson, 2008). They can also generate mutual dependence and serve as hostages against opportunism whilst prolonged, beneficial confidence-building transactions take place (Cox *et al.*, 2003; Dyer, 1997; Faulkner and de Rond, 2000). However, successful collaboration involves an increased cost of governance (relationship management) to manage the greater complexity (Dyer, 1997; Halldorsson *et al.*, 2007). Much of the work in the TCE field focuses on the management of these risks (Halldorsson *et al.*, 2007) and the danger of opportunistic behaviour (Lin, 2006; Skjoett-Larsen *et al.*, 2003).

The TCE paradigm of self-interest and a focus on efficiency (Williamson, 1979, 1996, 2008) has attracted criticism as likely to lead, if applied in practice, to opportunism and reduced performance (Ghoshal and Moran, 1996). Ghoshal and Moran (1996, p. 24) argued that: “[...] the use of rational controls adversely affects the feelings of both the controller and the controllee concerning their relationship”. Similarly, Skjoett-Larsen *et al.* (2003) noted that the transactional elements emphasised by TCE were of low importance in their study of collaborative planning, forecasting and replenishment; and Williamson (2008) himself has recently challenged the role of TCE in SCM. Camuffo *et al.* (2007) found that close cooperative supplier/customer relationships are subject to other influences, beyond those focused on process efficiency, which affect their overall performance and value creation. Thus, the management and understanding of supply chain relationships requires a relational perspective (Halldorsson *et al.*, 2007; Lin, 2006).

2.3 Relational perspectives

Some researchers have considered network theory approaches to SCM research (Halldorsson *et al.*, 2007) emphasising the importance of interpersonal relationships and of communication (Fawcett *et al.*, 2008; Halldorsson *et al.*, 2007; Lin, 2006). Notably, Williamson (1975) has found evidence for a “negative spiral”, in which high dependency and reliance on a single source reduces options for management action and generates proximity friction (Humphries and Wilding, 2004). Negative spiral behaviours result from an excessive focus on cost reduction, in which self, rather than joint, interest leads to satisficing performance, higher management costs, and “opportunistic behaviours” which in turn lead to pressures to revert to adversarial transactions (Faulkner and de Rond, 2000; Rugman and D’ Cruz, 2000; Williamson, 1996). Still worse, a reliance on key individuals can lead to breakdowns in information processing, failures to collaborate and erratic decision making (Hanbrick *et al.*, 2001; Konijnendijk and Wijngaard, 1991).

By contrast, others have argued for a “virtuous spiral” in which the partners become more effective as their relationship develops, through experience and active management of the learning process (Luo and Park, 2004; Lambert *et al.*, 1998). In the virtuous spiral view, cooperation induces further cooperation over time, as does the emergence of trust and loyalty, producing positive behaviour and outcomes such

as creativity and value creation (Dyer, 1997; Humphries and Wilding, 2003, 2004; Muthusamy and White, 2006), although this requires investment in the relationship (Wilding and Humphries, 2006). Both the negative and positive dimensions are shown in Table I.

The contrast between TCE and the relational perspective in SCM can be clearly seen in the area of innovation.

2.4 *SCM and innovation*

Innovation is an important driver for the formation of co-manufacturing relationships (Backler, 1991; Bevan, 1989). TCE suggests that closer relationships with suppliers and dedicated assets might reduce flexibility (Lin, 2006); the relational perspective calls for closer and earlier collaboration between supplier and customer to support innovation (van Echtelt *et al.*, 2008; Wagner, 2009), and suggests that the ability to access the assets and competencies of other firms may be a source of competitive advantage (Halldorsson *et al.*, 2007). Certainly, closer involvement with supply chain partners is becoming more common (Bagchi *et al.*, 2005; Christopher, 2005; Sako *et al.*, 1994).

2.5 *Research context*

This research explores two cases of long-duration co-manufacturing relationships in which operational efficiency was high but where, in both cases, signs of negative behaviour spirals had emerged. The study builds on the work of Humphries and Wilding (2003, 2004) and Wilding and Humphries (2006), whose model has been applied extensively in public and private sector relationships across a range of industries. It extends the use of their model to co-manufacturing relationships, with a view to understanding why some are not value maximising.

3. **Research methodology**

Consistent with an abductive approach, which cycles between theory and empirical study, extending an existing approach (set out by Ryals and Humphries, 2007a) and aiming at producing a further set of research propositions (Kovács and Spens, 2005, 2007), the research methodology used a multiple embedded case study design (Yin, 2002). It employed a quantitative survey followed by a qualitative (semi-structured interview) procedure to clarify the validity of the quantitative data (Mangan *et al.*, 2004). This approach is consistent with the “methodological fit” advocated by Edmondson and McManus (2007). Kovács and Spens (2007) note that abductive research can incorporate both qualitative and quantitative elements. Case studies were carried out with a global

Negative spiral behaviours	Positive spiral behaviours
Bounded rationality	Creativity: innovation, dynamism and high performance
Uncertainty/complexity	Stability: relationship-specific investments, synchronisation of objectives and joint planning
Information impactedness	Communication: transparency, frequent, open dialogue and information sharing
Opportunism	Reliability: effectiveness and efficiency of joint operations
Small numbers	Value: win-win relationship

Source: Wilding and Humphries (2006)

Table I.
Spectrum of
co-manufacturing
relationship dynamics

snack manufacturing company and two of its co-manufacturing partners, allowing an in-depth examination of the phenomenon under study and its context (Eisenhardt, 1989; Yin, 2002), strengthening the internal validity of the research. This triangulated approach was adopted to enhance the empirical reliability of the results (Jick, 1979).

3.1 Participating companies

The research subjects were a main partner (customer), a division of a global manufacturer of snack foods, and two of its co-manufacturing partners (CM1 and CM2). The customer owns a number of high profile, global brands and is part of a major corporation with an annual turnover of \$18bn. Its prime business is based on very large, continuous production of its standard lines. Some years ago, to bring an influx of creativity and specialist expertise into the business, new product development and seasonal production were sourced from CM1 and CM2 on a co-manufacturing basis. The co-manufacturers were both small- to medium-sized enterprises that manufactured speciality snack products and focused on a limited number of product lines. In the early stages of both relationships, the customer made considerable investments in training, quality systems, IT connectivity and business process linkages to the co-manufacturers. Gradually, CM1 and CM2 were integrated into the management information system and production control systems of the customer, and both had R&D links and used the same quality standards as those of the customer. Other aspects of integration included common raw materials and packaging suppliers.

CM1 is a family firm located on the European mainland employing 58 people. The relationship with CM1 provided 33 per cent of the customer's requirement for specialised, healthy eating food products, worth €4.5m per year. During CM1's eight-year relationship with the customer, the consequently higher assured order levels had enabled considerable product and business process improvements. These had resulted in an increased reputation for CM1 and new business from other major food manufacturers, some of whom competed with the customer. By the time of the study, CM1 prided itself on being extremely innovative, dynamic, flexible and having world-class expertise in its field. It was able to carry out customised production runs at short notice to develop new products quickly and innovatively, yet was markedly more cost-efficient than its competitors.

CM2 is a UK family firm with 84 employees that manufactures 80 per cent of the customer's requirement for seasonal products. The relationship was 21-year old and worth £12m (US\$24m) per year. The main strengths of CM2 were its flexible and efficient production methods, which had resulted in a considerable reduction in supply chain stockholding costs for the customer. CM2 benefited by investing in state-of-the-art equipment, developing very streamlined processes and effective business practices, and by a strong and growing reputation that, like CM1, had brought it substantial new business from the customer's competitors.

3.2 Phenomenon of interest

As integration had increased, day-to-day relationship management had been handed down from senior managers to operational teams, similar to those responsible for each of the customer's main production lines. Despite their operational efficiency, there was evidence in both relationships of the "downward spiral" of frustration and self-interest described by Williamson (1975). In the months before the research began, there had

been increased friction and a growing feeling of disquiet on both sides. This had become so disruptive that the customer had been driven to examine the market for alternative sources of supply but concluded that no other companies could come close to these co-manufacturers' ability to provide specialist products at an attractive cost. Therefore, it had decided that its only option was to concentrate on maintaining and improving the existing relationships.

3.3 Data collection method

The collection and analysis of the data used the Wilding and Humphries (2006) methodology, bringing two important benefits. First, it provided reliability because this methodology has been widely tested and applied in a number of different industries and contexts, and second, generalisability, as its widespread use meant cross-case comparisons could be made.

A relationship manager on each side of each partnership identified all available personnel from a cross-section of roles and managerial levels who were knowledgeable about the relationship, a respondent-driven sampling method designed to provide a "census of experts" (Sapsford, 1999). The survey sought perceptions of relationship success and failure from which percentage satisfaction scores for each measure were derived. These scores were then aggregated by averaging for each dimension. Data were collected under the five dimension categories of "creativity", "stability", "communication", "reliability" and "value" (Table I) using questions derived from the literature. The Cronbach's alpha scores of the categories were as follows: value (0.88), reliability (0.76), creativity (0.80), stability (0.77) and communication (0.76), all indicative of a high level of internal consistency and reliability (Bowman and Ambrosini, 1997). In Case Study 1, the customer nominated eight questionnaire respondents and the co-manufacturer (CM1) provided 12. In Case Study 2, the customer nominated eight respondents and the second co-manufacturer (CM2) provided nine, giving an overall total of 37 respondents. The respondents were nominated because of their knowledgeability and their willingness to participate. There was a 100 per cent response rate. Following the survey, four semi-structured interviews in each relationship (two on each side) were carried out using the same five-dimension framework. The interviewees were senior managers self-selected as being relationship "experts" in their organisation. The total data capture was approximately 14 hours.

4. Results

The results from both case studies are presented in both quantitative and qualitative forms. The percentage satisfaction rates (Figures 1 and 2) provide a high-level analysis of the main dimensions of the case study relationships and this is sufficient to support the qualitative data in exposing the relationship dynamics. The results portray a mixture of operational efficiency yet sub-optimal value creation.

4.1 Case Study 1

The charts in Figure 1 compare the averaged questionnaire perceptions of both parties across each of the five research dimensions and the overall average in percentage satisfaction scores. The overall joint relationship success score was 90 per cent with general similarities in the patterns of results, which suggests there was agreement over the strengths and weaknesses of the relationship. Communication (79 per cent)

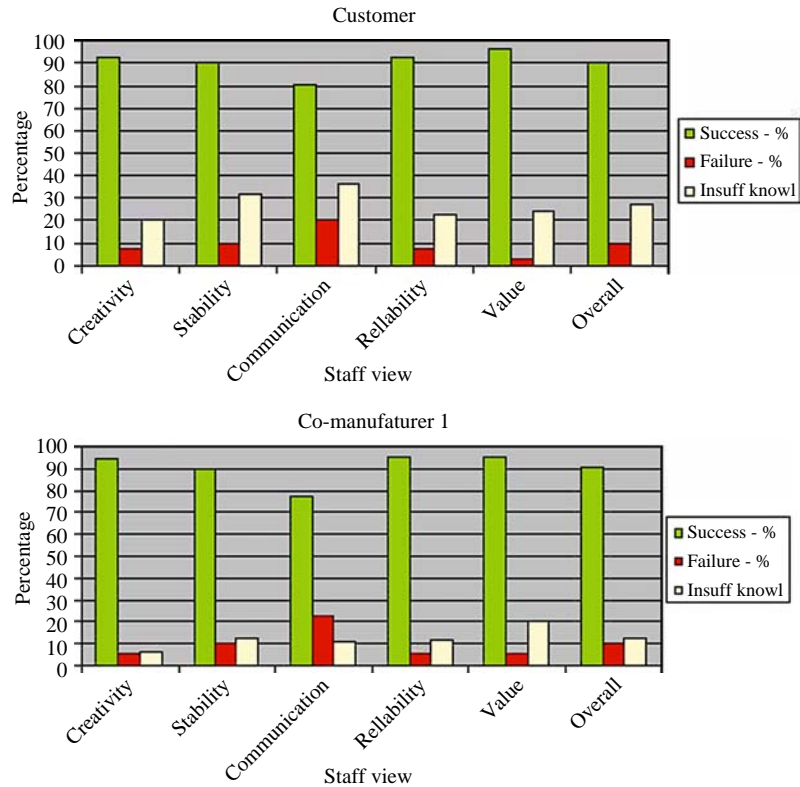


Figure 1.
Comparison of
relationship quality
perceptions for Case 1

was the least successful aspect. The responses from the customer contained considerably higher “insufficient knowledge” scores (27 per cent) than those of CM1 (12 per cent); this was because the reduced strategic importance accorded to this relationship had caused it to “fall below the customer’s management horizon” (Figure 1).

On the creativity dimension, both parties were highly satisfied (93 per cent) with the incentives to innovate and seek high performance. However, CM1 perceived that its larger partner’s bureaucracy hampered its ability to innovate. The relationship was seen as very stable, with both sides exhibiting strong satisfaction (90 per cent) with the relationship-building factors.

Nevertheless, some comments made by the customer suggested a patronising attitude towards CM1. Clearly, the customer viewed CM1 as very much a junior partner in the relationship, probably reflecting the extreme difference in size between the two organisations. On its part, CM1 expressed some reservations about the way that the customer treated it, and also commented adversely on the customer’s bureaucracy and internal management, whilst acknowledging the importance of the relationship. Table II provides illustrative quotations for each dimension, comparing and contrasting the views of the customer (the main manufacturer) and CM1 (the co-manufacturing supplier).

Although the survey results indicated a high level of joint satisfaction with the quality of relationship communications, instances of negativity and uncertainty were

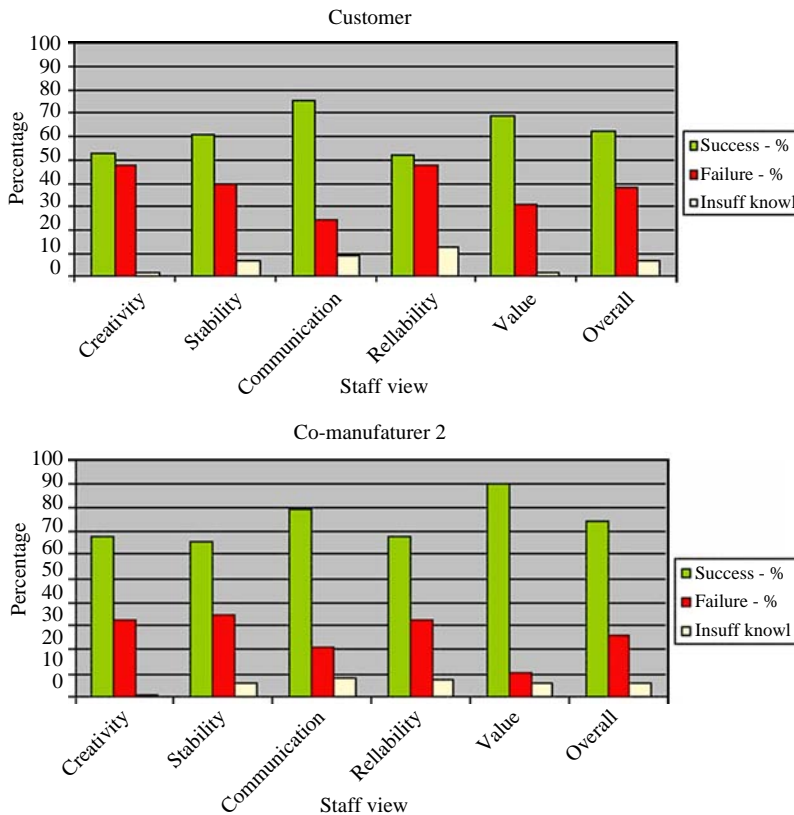


Figure 2.
Comparison of relationship quality perceptions for Case 2

expressed by both sides. For example, both sides expressed reservations about the system for order placing. Because of different technology platforms, orders had to be placed by phone and stock cover followed up every two to three months. This was described as “time-consuming and expensive.”

On reliability, despite high overall levels of satisfaction (over 90 per cent, Figure 1) with the delivery of operational outputs and processes, and comments about the closeness of the relationship (Table II), the interviewees suggested that the relationship had come under workload pressure problems, especially from CM1’s perspective. These pressures related to the actions of the customer in changing processes and people frequently, which CM1 experienced as disruptive. These changes were symptomatic of the customer’s increased focus on process and reduced focus on relationship management. CM1 was also frustrated that, although it could see clear, joint opportunities to reduce costs and improve the materials ordering process, the customer was not willing to address them.

High overall levels of satisfaction (over 90 per cent, Figure 1) were expressed by both companies over the value and future potential of the relationship; although CM1 expressed a desire for some explicit acknowledgement by the customer of the value it delivered (Table II). In other words, CM1 did not just want to be a co-manufacturing

Dimension	Customer	CMI
Creativity	<p>“Combining their flexibility and innovation with our know-how ensures we have a long-term, productive relationship” “We can be confident that they will do everything in their power to deliver results”</p>	<p>“Their willingness to invest in technology is very helpful” “We are very dynamic but their bureaucracy can hold us back”</p>
Stability	<p>“They have an open book with us and trust us so that when we work together on costing, we agree the ‘right’ price” “We exercise our power over them in a paternalistic way”</p>	<p>“We enjoy learning from our customer; we have developed considerably with their support” “Sometimes they demand results without first understanding what they want”</p>
Communication	<p>“I do not feel I have a close relationship with the other company or the resources to spend on improving it” “It’s a disadvantage that the other company is not on our IT system and does not work on a capacity requirements planning basis. We have to place orders by phone and follow up our stock cover every two to three months” “We have a strong relationship built on long cooperation and close project management”</p>	<p>“Trust is built up because of clear, direct communications” “Perhaps too many [customer name] planners are involved with placing orders and this causes confusion”</p>
Reliability	<p>“Everyone likes working together” “All we want is success for each other”</p>	<p>“The payment process is poor; they are slow to settle our invoices” “They change their people very often which can be disruptive to the relationship” “We could both do more to reduce costs including improving the way raw materials are ordered and the way we service new opportunities, but they do not seem to listen to our ideas” “Our values are very similar: honesty, transparency, quality and value”</p>
Value	<p>“Everyone likes working together” “All we want is success for each other”</p>	<p>“Sometimes I wish they would write to us and tell us how well we had done. This would really motivate the staff”</p>

partner, it wanted its importance to the customer to be acknowledged. CM1's people had noticed the apparent "downgrading" of the relationship. The quotations in Table II illustrate the differences in focus between the two parties, with respondents from the customer discussing predominantly operational issues whereas respondents from CM1 often mentioned strategic issues and value-adding opportunities.

4.2 Discussion of Case 1

A fundamental issue in the relationship between the customer and CM1 was the difference in perspective about the strategic importance of the relationship. The customer was a large bureaucratic company with somewhat ponderous internal processes which, despite the important strategic benefits of the relationship, had begun to treat CM1 as just one among a number of small suppliers. CM1 was small, dynamic and highly innovative and wanted to get closer to the customer to make the relationship even more productive, but it believed that the customer did not recognise this potential and was not open to a dialogue on innovation. Despite the generally positive relationship dynamics, the emergent issues were already causing friction.

4.3 Case Study 2

Just before the research took place, the growing frictions between CM2 and the customer had come to a head with a serious dispute about packaging. CM2 was using the customer's materials and also using its packaging supplier. The packaging supplier was geared up to providing long runs of standard packaging to the customer. However, CM2 had developed a world-class precision packaging method for which the standard packaging materials were unsuitable in terms of quality. Moreover, the packaging company was unable to supply sufficiently flexibly. As a result of these frictions, CM2 had invoked penalty clauses in its contract with the customer and refused to assist with solving the problems.

The results for the second case study are shown in Figure 2 and Table III and are rather less positive than in the first case study. The overall relationship success score was 68 per cent and, although the customer was less positive than CM2, the patterns of responses between customer and co-manufacturer were similar (Figure 2). Both sides agreed that the best aspect of the relationship was communication (77 per cent). Since, by contrast, communication was the weakest aspect of Case Study 1, communications difficulties were unlikely to be the primary cause of the frictions that had emerged in both relationships. The weaker aspects of the relationship between the customer and CM2 were creativity and reliability with averaged scores around 60 per cent. There was a major difference in opinion over value, where the customer was considerably more negative than CM2, probably because of the contractual disputes about packaging.

In Table III, each dimension is examined in turn and quotations are used to illustrate the results. The quotations illustrate the rather wide gulf that had opened up between these two companies and the frustration experienced by CM2 because it was unable to engage the customer in a strategic conversation.

Within the creativity dimension, there were considerable differences in opinion between the two companies. There was a desire for more innovation, especially on the CM2 side, but the current way the relationship worked did not appear to allow either side much scope to explore new ideas. CM2 managers complained of a "not invented here" attitude and of not being taken seriously by the customer.

Table III.
Case 2 illustrative
quotations

Dimension	Customer	CM2
Creativity	<p>"In one instance they billed us for defective packaging and then were unhelpful in resolving the problem with the supplier"</p>	<p>"When we put our ideas forward we meet a 'not invented here' attitude and are dismissed/not taken seriously. Their performance measures are focussed at low levels rather than the overall outcome. This is the system they use with their own factories but it does not match the service they buy from us" "We get extremely frustrated with their lack of passion and their inability to 'fix' issues, i.e. supply chain deficiencies over the years"</p>
Stability	<p>"They pull in the same direction as us because it is in their interest to do so" "They will not bend over backwards to help us"</p>	<p>"They do not involve us in [developing] longer term objectives and strategies on markets and the supply chain, as we do with other customers" "They want us to bend the rules all the time and our failure to do so may come across as inflexible and unfriendly"</p>
Communication	<p>"There are strong differences in approach between us, which leads to misunderstandings on both side. We could do more to educate them about how our operation works" "We do not get much out of our opposite numbers but their bosses are more open. We get different outputs from different levels – different points of view"</p>	<p>"I have tried to explain that our multi-product, multi-customer business can make us appear intransigent and been thanked for making the situation clearer We never sit down with them to have an open planning discussion about the wider issues of stockholding, demand and sales plans as I do with our other customers. We talk about policies only when there are problems"</p>

(continued)

Dimension	Customer	CM2
Reliability	<p>"If you go back ten years everything was done by hand. They have automated all that and become very good at continuous improvement and process streamlining"</p> <p>"They will not work with the suppliers to resolve problems. One is refusing to renew its contract next year"</p> <p>"They have developed an internally cost-effective procedure that has added to our transportation costs. They are not deliberately opportunistic, just self-centred"</p>	<p>"They are one of the most honourable businesses to be found and I completely trust their goodwill in the relationship"</p> <p>"The supply chain has been plagued by capacity problems during peak periods. Each year they promise to improve for next year but it never happens"</p> <p>"Last year hardly a day went by when we did not experience manufacturing difficulties because of their supply chain problems"</p>
Value	<p>"They make about 80 (of our product. Despite all the issues, we get it when we want it in the required quantity and quality"</p> <p>"We are trapped – we do not have manufacturing capability ourselves. However, we are not struggling to escape because they deliver despite being inflexible and quirky"</p>	<p>"This is a relationship which could deliver a lot more than it currently does and so I am very strongly motivated to get it right"</p>

Table III.

Another area of complaint related to performance measurement. CM2 felt that it consistently fulfilled its objectives, sometimes having to overcome considerable problems to do so, and yet the weekly performance measures imposed by the customer did not necessarily reflect this success, because the performance measures were low level operational rather than based on an evaluation of overall service. There were concerns on both sides over operational activities that reduced scope for initiative, and over slow progress in resolving long-standing problems.

With respect to stability, both companies agreed the relationship was soundly based with substantial joint investments in both machinery and systems. However, neither side appeared to have knowledge of the other's detailed strategies and long-term goals and were generally focused on operational targets. The respondents agreed that their opposite numbers were capable people with high integrity and were trusted to get things done, although different cultures and working patterns did not always interconnect.

The customer and CM2 agreed that communication within the relationship was strong, open and honest, although mainly formal and at a low level. However, supply chain performance and forecasting information was not always provided by CM2 in a timely fashion which, as discussed previously, had resulted in short deliveries from the customer's packaging and component supplier. There did not appear to be any regular visits or discussion of future directions or big issues that might arise between the partners and, indeed, the customer acknowledged that it could do more to inform its partner of its internal processes (Table III).

There was a discrepancy between the survey joint rating for reliability (60 per cent, Figure 2) and the actual delivery performance against the contract (100 per cent). It appeared that those practical aspects of the relationship, which worked well and conferred competitive advantage tended to be unacknowledged. Moreover, there was a considerable difference in perception between the customer and CM2 as to what the issues were. The customer was particularly concerned over continuous improvement, joint problem solving, openness and honesty and reliability (probably heavily influenced by the recent dispute about packaging). CM2 was anxious about administration services, cost reduction and quality ideas, and about abrupt changes that caused production-scheduling difficulties. As with the first case study, many of CM2's issues relate to the feeling that the customer under-valued them.

Despite a very high level of operational performance by CM2, this relationship was experiencing considerable friction and communication difficulties had led to some damaging behaviours. For example, cost-reduction initiatives were unilateral – one party might implement changes that resulted in increased costs for the other. In addition, acknowledged inefficiencies in the supply chain had resulted in very high extra charges.

In spite of these negative instances, this relationship was perceived to have high value (79 per cent), although this dimension also produced the most divergence of views (21 per cent, Figure 2). CM2 was far more optimistic about the relationship than the customer, who was very concerned about shared benefits and its freedom of action. Nevertheless, the customer benefited from seasonal flexibility and high-quality production, which it could not obtain in-house or from other market sources, and CM2 indicated that it was committed to the future of the relationship. Both were also pleased with the shared benefits, were willing to invest in the relationship and make joint improvement efforts. They were both concerned for their partner's success.

4.4 Discussion of Case 2

Under the stimulus of the customer, CM2 had grown and developed their joint business over many years and had become more efficient and ambitious as a result. Despite the continuing strategic importance of the relationship, the differences in approach (on the one hand bureaucratic and inflexible, on the other entrepreneurial and flexible) had created tensions that resulted in unreliable logistics, higher costs, frustrated staff, fragile cooperation and a lower incentive to innovate. The customer's gradual conversion from a strategic, entrepreneurial style of relationship management to one that concentrated on process management-frustrated CM2. The situation had deteriorated to the point where CM2 was effectively "working to rule", aiming only to meet contract obligations and refusing to co-operate with the customer to solve problems such as those with its third party packaging supplier. When asked why the customer marked CM2 down even though its contract performance targets were being met, a manager said: "it isn't what they do; it's the way that they do it". This behaviour indicated that relationship had already entered a downward spiral; at least in part because of the way the customer managed this strategically important relationship.

5. Discussion

The two cases presented in this paper were of similar operational efficiency. Both, however, could have produced greater value and, in both, behaviours that threatened to become "negative spirals" were emerging. Although the cases involved different products and stages of development, both were managed by the customer within a single co-manufacturing policy where some common issues were clearly apparent. Additionally, some of the more developed problems apparent in the longer duration relationship (Case 2) were emerging in embryonic form in the newer relationship (Case 1), as shown by the similar patterns but differing strengths of feeling recorded in the quantitative data.

A common cause of discord was the customer's failure to identify and utilise the capabilities that its suppliers could increasingly offer – a problem identified in the management of collaborative relationships by Ryals and Humphries (2007b). In Case 1, the lack of relationship care was leading to a failure to maximise value. In Case 2, the lack of relationship care had already undermined value and was leading to conflict. The operational management of both relationships was essentially static whereas the capabilities of the co-manufacturers were dynamic. This finding is an instance of the issue of "dynamic efficiency" identified by Ghoshal and Moran (1996).

Despite their differences in products and in duration, both relationships displayed several common themes. The first was strategic involvement. Both relationships were strategically important, yet a major cause of dissatisfaction for the co-manufacturers was their lack of involvement in joint strategy development. In both cases, the co-manufacturers displayed a better understanding of strategic issues such as market and product development, market share and market trends, than the customer. This was partly because the co-manufacturers traded with competitors (with the agreement of the customer), and therefore, had a wider perspective than the customer. Another reason was that the support teams who managed these relationships on behalf of the customer were operational staff carrying out routine process management functions, whereas the co-manufacturers both had entrepreneurially minded senior directors managing their relationships with customers. This second observation concurs with the findings

of Fawcett *et al.* (2008) and Wagner (2009), who note the importance of people, and of willingness to collaborate, in effective SCM. By “marginalizing” the co-manufacturers, the customer cut itself off from a valuable source of information on market opportunities. Backler (1991), Ryals and Humphries (2007b), Skjoett-Larsen *et al.* (2003) and Smith (1990) have identified involvement in strategic discussions and other activities such as joint planning as important components of collaborative business-to-business relationships; van Echtelt *et al.* (2008) also explored the importance of supplier involvement at both a strategic and operational level. Our research indicates that this applies to co-manufacturing relationships, thus providing the first research proposition:

- P1.* In co-manufacturing relationships that have strategic importance to the customer, failure to involve the co-manufacturing partners in strategy development reduces the identification of new market opportunities.

It is not unusual for co-manufacturing relationships to be driven by the need for innovation (Backler, 1991; Gibbs and Humphries, 2009), which can be difficult to sustain in larger firms (Smith, 1990). The relationships studied here were of strategic importance to the customer largely because of the co-manufacturers’ capacity to innovate. Both of the co-manufacturers were highly innovative companies and, to them, production efficiency was a mundane aim; they wanted to innovate. Both co-manufacturers commented that they had genuinely tried to have conversations about additional value creation with the customer’s purchasing managers, but had been rebuffed because the primary focus of the relationship management had turned to efficiency and process routinisation. Yet, the original reason why the customer had initiated business with these suppliers was to provide the dynamism and innovation that the customer lacked. Somehow, in the process of handing down the relationship from senior to middle managers, the customer had lost sight of this objective. As Fawcett *et al.* (2008, p. 45) note, “People are the key to successful collaborative innovation.” Moreover, joint investments in systems and infrastructure (relationship-specific assets), that had been extremely important in the early days of both relationships to underpin the developing businesses and cement commitment no longer featured as matters of current attention; they had become routinised. van Echtelt *et al.* (2008) uncover a similar issue at their case company, where a short-term focus and lack of supplier development eventually resulted in operational difficulties. Thus:

- P2.* In co-manufacturing relationships, focus on process routinisation will reduce innovation.

This loss of focus on process development and investment had, in turn, engendered both complacency and frustration, resulting in a number of communication and process breakdowns as well as a reduced willingness to co-operate to resolve problems. These effects, which are in line with the work by Bevan (1989), Hanbrick *et al.* (2001) and van Echtelt *et al.* (2008), were causing overall transaction costs associated with governance to increase because of the amount of management time spent on resolving disputes. Thus:

- P3.* In co-manufacturing relationships, focus on process routinisation will result in friction and ultimately in higher relationship management costs.

In both relationships, the customer's senior managers failed to keep pace with the developing capabilities and ambitions of the co-manufacturers. The customer still tended to think in terms of its co-manufacturers as junior partners, as they had been a decade or so earlier, but were underestimating and under-exploiting their ability to create additional value (Luo and Park, 2004) given their current skills and capabilities. Ironically, the customer desired flexibility and innovation as key outputs from the relationships and yet it contrived to manage the co-manufacturers in a way that suppressed these outcomes.

On both sides, the inter-organizational relationship was a "value-bearing asset" (Lin, 2006, p. 556). Over the years, both co-manufacturers had benefited substantially from their relationship with the customer. As well as handling increased product variety and volume (Konijnendijk and Wijngaard, 1991), their production capabilities had matured (Smith, 1990), their market understanding had developed considerably (Bevan, 1989), and in both cases the suppliers had (unrecognised by the customer) become best in class. This was not recognised because the contacts were being managed by the customer at too low a level to make best use of the developing knowledge and innovative capabilities of the suppliers. In Case 1, for example, the co-manufacturer had developed a revolutionary product format that enabled them to produce new, market-leading variants extremely rapidly. In Case 2, the co-manufacturer had designed new product formats and a world-class production capability.

Both these relationships were of relatively long duration where repeated transactions should have allowed trust and confidence to accumulate (Dyer, 1997; Lambert *et al.*, 1998). However, as time passed, the customer had failed to adapt and had even downgraded the perceived importance of the relationships despite their continued strategic importance and its growing dependence on the co-manufacturers – a risk identified by Konijnendijk and Wijngaard (1991). Although tensions over operational process issues (mostly planning and scheduling) had become evident, the partners continued to trust and admire their opposite numbers and maintained strong commitment because they continued to concentrate on the overall and potential value of the relationship (Faulkner and de Rond, 2000; Luo and Park, 2004; Lambert *et al.*, 1998). But, it was evident that, over time, a lack of flexibility, initially on the part of the customer, had allowed these process problems and associated staff frustrations to develop. The resultant negative spiral behaviours were beginning to compromise value maximisation. Thus, relationship development over time is important and lack of it can threaten even operationally successful relationships:

P4a. In co-manufacturing relationships, failure to develop the relationship will encourage the development of "negative spiral" behaviours.

P4b. In co-manufacturing relationships, even where value potential and commitment are high, "negative spiral" behaviours can develop.

5.1 Contribution to theory

Both Dyer (1997) and Williamson (1996) acknowledged the tension between maximising transaction efficiency and maximising transaction value in business-to-business relationships. Ghoshal and Moran (1996) went further, arguing that management practices based on TCE were likely to be positively damaging. In both cases

described here, the relationships were operationally efficient but deteriorating. The research provides empirical support for Ghoshal and Moran's (1996) arguments in favour of a dynamic efficiency approach, rather than the static efficiency implied by TCE, and suggests that the relational perspective could provide useful insights into value generation in co-manufacturing relationships. Our results also support the observations of Hanbrick *et al.* (2001) and Konijnendijk and Wijngaard (1991) on the dangers of dependency and proximity leading to increasingly negative behaviours and outcomes.

Moreover, the research generates useful insights into the dynamics of co-manufacturing relationships. In particular, we find that the intrinsic value of the relationships (Lin, 2006) engendered high degrees of toleration to problems, which manifested as frustration combined with a gritty determination to overcome issues and maintain the relationship (Backler, 1991; Bevan, 1989). This suggests that striking the balance between transaction efficiency and relational governance is not just a matter of offsetting opportunism with relationship-specific asset investments as suggested by Dyer (1997) and Williamson (1996), but a more complex dynamic comprising creativity, stability, communication/information sharing, reliability and joint profitability or value (Faulkner and de Rond, 2000; Rugman and D' Cruz, 2000; Humphries and Wilding, 2004).

There are some limitations relating to the single point sampling methodology which may be subject to the usual "noise" associated with key informant research (Sapsford, 1999). The findings were derived from a single case study customer company involving two co-manufacturing suppliers; further studies would be required to test the wider generalisability of the research findings. The application of a combination of qualitative and quantitative methods will always entail a compromise between rationality and interpretation (Mangan *et al.*, 2004; Wilding and Humphries, 2006). Nevertheless, the use of a well-tried methodology, albeit in a new context, with its rigorous attention to internal validity, provides a degree of confidence in the reliability of the research (Kovács and Spens, 2005, 2007) and to its wider applicability to co-manufacturing research and inter-business relationship research in general.

5.2 Contribution to practice

The research presented here contributes to our understanding of how co-manufacturing relationships should be managed through two insights into the causes of the problems and deterioration in both relationships. First, management tended to concentrate on addressing process problems (Dyer, 1997; Williamson, 1996) and ignored the review and maintenance of strategic objectives (Lamming *et al.*, 2001; Sako *et al.*, 1994; van Echtelt *et al.*, 2008). This had resulted in the customer managing its co-manufacturers in a way that did not fully acknowledge their core strengths (Christopher, 2005; Ryals and Humphries, 2007b) and failing to adapt as the relationship developed. The customer's focus on transaction efficiency was the reason why it failed to sustain relationship-specific assets, including the co-manufacturers' expertise, and this not only caused governance costs to rise (van Echtelt *et al.*, 2008), but also resulted in lost opportunities to realise value.

Second, managers' preoccupation with process issues and transaction efficiency allowed wider relationship management activities such as regular meetings to discuss innovative product development, marketing and supply chain matters to fall by the wayside. It is suggested that the customer had lost sight of why the relationships had

been created, which was to obtain innovative products and services from specialist firms who were experts in their field (Dale, 1990). This preoccupation with transaction efficiency resulted in sub-optimal relationship performance, an outcome not predicted by Dyer (1997) but identified as a relationship management problem by both Faulkner and de Rond (2000) and Lamming *et al.* (2001).

As a result of the research, both sides realised the need to take stock of their relationship and were intent on rectifying the issues that had emerged over time. Follow-up visits to all three parties within 12 months of the research revealed that extensive staff and management workshops had taken place to consider the research results. Joint projects had been initiated to improve process efficiency, and regular meetings were taking place to maintain the impetus for continuous improvement. Moreover, senior managers were holding regular meetings to review strategic issues. Finally, the need for periodic, formal, relationship performance reviews, not just operational measurement, was accepted by both the co-manufacturers and its customer.

6. Conclusion

Our research examined two co-manufacturing relationships that were generally considered to be operationally efficient but which experienced dissatisfaction and frustration on both sides. The research revealed that these relationships had unrealised potential for value creation. The results lend support to the arguments in favour of relationship, rather than efficiency based, management and suggest two specific areas that can cause relationships to degenerate over time and stifle innovation: failure to involve the co-manufacturing partner in strategy development; and an undue focus on process routinisation, associated with a failure to recognise the growing capabilities of the co-manufacturing supplier and to develop the relationship.

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