THE ROLE OF INCENTIVES IN BUYER-SUPPLIER RELATIONSHIPS: INDUSTRIAL CASES FROM A UK STUDY

A PAPER FOR THE WORK-IN-PROGRESS STREAM

Andrew Cox, Chris Lonsdale and Glyn Watson
CBSP, Birmingham Business School,
Winterbourne, 58 Edgbaston Park Road,
The University of Birmingham, UK, B15 2RT.

Tel: 44 121 414 7593 / Fax 3217
Email: lonsdacm@bss3.bham.ac.uk

Abstract

This paper investigates the role of incentives in the formation and conduct of buyer-supplier relationships. It draws upon evidence collected during a two-year, EPSRC-funded research project[1]. In this research project, the authors tested the proposition that the manner in which buyer-supplier relationships are formed and conducted is significantly affected by the incentive structure that exists between the two parties. In our view, the incentive structure is determined by the power relationship that exists between the two parties.

The research was based upon a model of generic relationship types. According to this model, buyer-supplier relationships are characterised by two main elements: the

[1] The EPSRC is a UK Government-funded research council.

nature of the interaction between the two parties and the manner in which the surplus value in the relationship is divided between the two parties. In this paper, we first describe this relationship management model and then provide case evidence on its utility. One of the conclusions drawn in the paper, which is written from the point of view of the buyer, is that the concept of power can provide managers with a critically important predictive tool that can help them to manage the risks of industrial purchasing. The implications of power and incentives, however, rules out any thoughts of there being any 'best practice' form of buyer-supplier relationship, something that has been maintained in many quarters over the past decade.

Introduction: Incentives and Buyer-Supplier Relationships

Whilst the relationships that are developed between buyers and suppliers in business markets are complex, it is important that academics studying the subject do not try to build models that incorporate too many variables. The role of the academic is to assess the relative importance of the variables they have identified and build their models around those key variables. This principle is particularly important to bear in mind when academics are basing their work on behavioural theories of the firm, which is the case with the present authors and seems to be the case with many working under the IMP banner.

As Peter Earl comments: '[Behavioural economics] gets its 'behavioural' tag from working on the principle that, before attempting to construct simplifying models …, the analyst should study the kinds of problems that actually confront decision-makers and how they actually behave in coping with them. This is quite close to what

philosophers of science call an *inductive* method of theorising … However, there is no such thing as theorising without having some kind of prior beliefs about cause and effect: behavioural theorists, like any others, have to hypothesise at the outset about which facts they should gather and which potential relationships they should ignore' (Earl, 1995, p28).

Taking this advice, we have developed our thinking along the following lines. First, we have modelled buyer-supplier relationships along two dimensions: the share of surplus value and the nature of the interaction between the two parties. These two dimensions provide us with six different generic relationship types. In terms of the factors that lead to these different types of relationships being developed, we have investigated the impact of transactional salience (that is, commercial and/or operational importance), transactional uncertainty, asset specificity and buyer-supplier power. We can look at these two sets of variables in turn.

The Nature of Buyer-Supplier Relationships in Business Markets

For us, the two most important questions regarding buyer-supplier relationships concern the nature of the commercial outcome and the nature of the interaction between the two parties. When we think about the commercial outcome of a buyer-supplier relationship, we can simply use the concept of surplus value provided by economics. The surplus value in a relationship between a buyer and a supplier can be broadly defined as the difference between the costs of production of the supplier (which, of course, includes normal profits) and the utility function of the buyer.

When we look at buyer-supplier relationships we are interested in the extent to which the two parties are able to obtain a share of the surplus value. The share of the surplus value obtained by the buyer is, of course, called the consumer surplus. The share of the surplus value obtained by the supplier is, of course, called the producer surplus. Our assumption is that both parties are seeking to maximise their share of surplus value, albeit sometimes in the medium rather than the short-term. This would be true whether we adhere to a view of business behaviour characterised by simple self-interest seeking or one characterised by opportunism, that is, self-interest seeking with guile (Williamson, 1985). It is important to note, however, that the battle over surplus value is not always over a static amount of value. In certain buyer-supplier relationships the surplus value will be a static entity. However, buyers and suppliers, whilst still interested in obtaining the largest possible share of surplus value, can work together to increase the surplus value created by the interaction. Indeed, this brings us on to discussing the second dimension of buyer-supplier relationships – the nature of interaction.

The IMP Group rejects the idea that buyer-supplier relationships in business markets adhere to neat dichotomies, such as that between arm's length and collaborative interactions (Turnbull, Ford and Cunningham, 2002). This is, of course, true. However, it is often useful to simplify reality when we are seeking to draw out general theoretical principles. This is what we do here. So, although we see different types of buyer-supplier interaction as falling on a continuum related to the level of investment required, in this paper we eventually settle on a dichotomy to assist with the presentation of our argument.

When thinking about the nature of buyer-supplier interaction, we find it quite useful to begin from the starting point of an arm's length relationship. We define such a relationship as consisting of interaction that merely consists of a level of contact necessary to exchange the essential commercial details regarding order placement, order fulfilment and payment. The key point here is that the nature of the relationship reflects a desire on the part of one or both parties to minimise on the costs of undertaking the transaction.

Relationships that involve greater levels of contact can then be placed along a continuum. This continuum concerns the level of investment that is required to undertake the different collaborative activities that might be suggested by one or both parties. What these activities might be will vary from relationship to relationship, but can be understood with reference to the categories developed by Cannon and Perreault (1999). Cannon and Perreault argued that the way in which buyers and suppliers interact could be divided into a number of dimensions. We have taken and slightly adapted four of these dimensions: product / process information exchange, operational linkages, co-operative norms and relationship-specific adaptations.

Product / process information exchange can include the transfer of proprietary technical information, the transfer of cost information and the transfer of forecasting information. Operational linkages are systems and procedures that are developed by the two parties to facilitate the flow of goods, services, payment or information. Examples could be a just-in-time arrangement or an e-procurement system, for example where the supplier posts its catalogue on the buyer's intranet. Co-operative

norms are the agreed standards of conduct that underpin the interaction between the two parties, whatever they might be in a particular relationship.

Finally, relationship-specific investments refer to the non-transferable investments that are often made in business relationships. These could be adaptations to products or processes, training in particular systems or the location of facilities close to either the buyer or supplier's site. Different types of relationship-specific adaptations have been well documented over the years (Hakansson, 1982; Williamson, 1985).

A pure arm's length relationship, therefore, does not include any of these activities. Closer relationships, on the other hand, involve a greater or lesser investment in such activities. The key, however, is the level of investment required for the type of relationship being suggested.

Influences on the Types of Relationships Developed

In the previous section, we described what we believe to be the two key dimensions of buyer-supplier relationships: the share of surplus value and the nature of interaction. However, what determines the way in which surplus value is shared and how the two parties interact? For us, there are a number of *key* variables. In terms of the share of surplus value, this is a function of the power relationship that exists between the two parties – or, to put it another way, the incentive structure that exists. Power has been defined as the ability of actor A to make actor B act in a manner that B would not otherwise have done (Lukes, 1974). From here it has been argued that power comes from dependency (Emerson, 1962) and information (Akerloff, 1970).

When viewed in this way four generic power structures can be identified: dominance, interdependence, independence and dependence (Emerson, 1962; Campbell and Cunningham, 1983; Cox et al, 2000; Cox et al, 2002). When applied to the surplus value created in a buyer-supplier relationship, power causes the division of that surplus value to vary. This is the case even if the surplus value has been increased through close working relationships – either through cost reduction or utility enhancement (Lonsdale et al, 2003). In the different circumstances of power, therefore, there will be different amounts of consumer and producer surplus.

The key influences on the nature of interaction in buyer-supplier relationships are more varied. The first factor is transaction salience. Purchases of small commercial value are unlikely to lead to a desire on the part of either party to undertake collaborative activities, unless it is of high operational importance to the buyer and then a case may be made (for example, a low cost, but high importance, valve in the oil industry might warrant investment in improved metal technology or the like). The reason for this is quite simply that the proportional transaction costs make such efforts unattractive. Second, is transactional uncertainty. At the time of contracting, the two parties may not be totally clear about the exact nature of the good or service that is required by the buyer. As a result, two parties may need to work together in order to develop a solution. This could involve the exchange of proprietary information, the holding of joint design forums and the making of specific investments. Uncertainty over demand may also lead to an exchange of information if, for example, the two parties enter into a vendor managed inventory agreement. Uncertainty, therefore, is a driver of collaboration.

Third, even where there is little uncertainty over the buying firm's requirements, there may be a *need* for relationship-specific adaptations if the transaction is of high or medium asset specificity. It might be argued that because of the absence of economies of scale, transactions of high asset specificity should be undertaken internally, but they often are not at the present time. Therefore, asset specificity is also a driver of collaboration.

However, we need to introduce a fourth element into the analysis. This is, again, the buyer-supplier power relation. We need to include this as just because one party might desire a particular type of interaction doesn't mean that this desire will be shared by the other party. If the other party holds the power in the relationship then it is likely that its view will hold sway. For example, it may be that a buyer wishes to undertake joint investments with a supplier. However, if that supplier views the buyer as a 'nuisance' customer, it will probably not wish to dedicate its scarce resources to satisfying such a wish.

Figure 1. Generic Buyer-Supplier Relationship Types

If we put all of the above discussion together we can develop a rule of thumb model that identifies six generic relationship types. As we have already discussed, this is obviously very broad-brush, but it does allow us to see how the key variables affect the type of relationships that are to be found in business markets. The model can be seen in Figure 1. The model includes the prediction of which type of relationships are likely to be found in which power circumstances.

Case Evidence on the Role of Incentives in Buyer-Supplier Relationships

In the research project, we looked at a number of buyer-supplier relationships from a range of different industrial sectors in the UK. These included two engineering sectors, financial services, beverages, oil construction, general construction, meat and healthcare, although some of the cases were from the sponsor's support supply chains. We were interested to explore the potential of using the concept of power as a predictive tool. What we expected to find was managers, in both buying and supplying firms, using the concept, albeit often implicitly, in deciding how to interact with third parties and in coming to a view as to what commercial returns they should expect from the interaction. A selection of our findings is shown below. Shortage of space means that the results can only be presented in summary form.

Case 1 – The Purchase of a Fuel System in an Engineering Sector

Annual Spend with Supplier - £60million	**Uncertainty Surrounding Purchase -** High
Level of Asset Specificity - High	**Buyer/Supplier Power -** Supplier Dominance
Customer Importance to Supplier - Medium/High	**Type of Relationship -** Supplier-Skewed Adversarial Collaborative

Case 2 – The Purchase of Specialist Machined Components in an Engineering Sector

Annual Spend with Supplier - £25million	**Uncertainty Surrounding Purchase -** Low
Level of Asset Specificity - Medium/High	**Buyer/Supplier Power -** Supplier Dominance
Customer Importance to Supplier - Low	**Type of Relationship -** Supplier-Skewed Adversarial Arm's-Length

Case 3 – The Purchase of High Technology Engine Casing in an Engineering Sector

Annual Spend with Supplier - £12million	**Uncertainty Surrounding Purchase** – High
Level of Asset Specificity - High	**Buyer/Supplier Power -** Supplier Dominance
Customer Importance to Supplier - Low	**Type of Relationship -** Supplier-Skewed Adversarial Arm's-Length

Case 4 – The Purchase of a Vehicle Reverser Unit in an Engineering Sector

Annual Spend with Supplier - £31million	**Uncertainty Surrounding Purchase** – High
Level of Asset Specificity - High	**Buyer/Supplier Power -** Interdependence
Customer Importance to Supplier - High	**Type of Relationship -** Non-Adversarial Collaborative

Case 5 – The Purchase of Television Advertising by a Firm in a Beverage Sector

Annual Spend with Supplier - £2million	**Uncertainty Surrounding Purchase** – High
Level of Asset Specificity - High	**Buyer/Supplier Power -** Supplier Dominance
Customer Importance to Supplier - Medium	**Type of Relationship -** Supplier-Skewed Adversarial Collaboration

Case 6 – The Purchase of Film Production Services by an Advertising Agency

Annual Spend with Supplier - £5million	**Uncertainty Surrounding Purchase -** High
Level of Asset Specificity – Low/Medium	**Buyer/Supplier Power -** Interdependence
Customer Importance to Supplier - High	**Type of Relationship -** Non-Adversarial Collaborative

Case 7 – The Purchase of Drink Dispense Equipment in a Beverage Sector

Annual Spend with Supplier- £6million	**Uncertainty Surrounding Purchase -** Low
Level of Asset Specificity - Medium	**Buyer/Supplier Power -** Interdependence
Customer Importance to Supplier - Medium	**Type of Relationship -** Non-Adversarial Collaborative

Case 8 – The Purchase of Printed Materials by a Financial Institution

Annual Spend with Supplier - £6million	**Uncertainty Surrounding Purchase -** Low
Level of Asset Specificity - Low	**Buyer/Supplier Power** – Buyer Dominance
Customer Importance to Supplier - High	**Type of Relationship -** Buyer-Skewed Adversarial Arm's-Length

In this section, we have presented a selection of the cases we have looked at in our two-year study (in total we looked at 19). The results fell very much in line with our expectations. The division of surplus value in the eight buyer-supplier relationships presented in this paper was highly influenced by the buyer-supplier power relation. In terms of the nature of interaction in relationships, this was also affected in the way we expected. Our expectations can be described in two statements. First, we expected three variables to drive the perceived *need* for a certain type of interaction on the part

of one or both parties – these were salience of purchase, uncertainty surrounding purchase and asset specificity. However, second, we also expected that the power relation between the two parties would determine whether the incentives existed for the wishes of one of the parties to be granted by the other.

In case 2 we see a classic case of a 'nuisance' customer trying in vain to get a dominant supplier interested in undertaking collaborative activities (joint quality improvement and cost reduction initiatives in this instance). A similar situation was seen in case 3. In cases 1 and 5, the dominant suppliers do value the customers enough to invest the resources in collaborative activities, but the increase in surplus value due to the collaboration is largely kept by those suppliers. Similar spins on the same principles are seen in the other cases in this paper and in the project in general. It leads us to confirm our view that we can make general, but important, predictions about relationship behaviours. The idea that we can predict with reasonable certainty those circumstances when certain relationship overtures are - and are not - likely to be answered by the other party, and on what terms, is surely not without significance. It also answers a crucial need on the part of managers, who wish to avoid large-scale relationship mistakes.

Our evidence suggests that managers in both buying and supplying organisations, either explicitly or implicitly, make their relationship decisions and frame their relationships expectations around general assessments of (a) what they think the costs will be of a particular type of interaction, (b) what they think the returns will be from a particular type of interaction, (c) what they think the uncertainty is around the potential returns from the interaction and (d) how they think the power relation will

affect how the gains from the interaction are shared between the two parties (Cox et al, 2003; Cox et al, 2004).

Conclusion

For us, the concept of power should be at the centre of any study of buyer-supplier relationships. Power affects the expectations of the two parties over what commercial returns should accrue to them from a relationship. It also affects the willingness of the two parties to invest in collaborative activities. As important, it also affects the willingness of the two parties to share the costs of relationship-specific investments (if they are unbalanced, without credible commitments, the result is lock-in for one party). It also affects the willingness of the two parties to share sensitive information.

As a result, an understanding of the power relation (which is often stable, with the relative stability also being subject to prediction[2]) should, from the point of view of the purchasing manager, inform both the supplier selection and the relationship management decision as he or she attempts to manage risk proactively.

It is important to remember that just because business relationships are complex does not mean that all aspects are random. Whilst space limitations have not permitted a detailed discussion of our ideas and contentions (not to mention our evidence), we have hopefully started to make the case that power can be used as a predictive concept, can allow us to being to see through the complexity of business markets and can be used avoid serious management errors.

[2] There is not the space to discuss the issue of the stability of power structures in this paper, but it is discussed in Lonsdale (2003).

References

Akerloff, George (1970), 'The Market for 'Lemons': Quality Uncertainty and the Market Mechanism', *The Quarterly Journal of Economics*, 84 (3), 488-500.

Campbell, Nigel and Cunningham, Malcolm (1983). 'Customer Analysis for Strategy Development in Industrial Markets', *Strategic Management Journal*, 1, 360-380.

Cannon, Joseph and Perreault, William (1999), 'Buyer-Seller Relationships in Business Markets', *Journal of Marketing Research,* 36, 439-460.

Cox, Andrew, Sanderson, Joe and Watson, Glyn (2000), *Power Regimes*, Boston: Earlsgate Press.

Cox, Andrew, Ireland, Paul, Lonsdale, Chris, Sanderson, Joe and Watson, Glyn (2002), *Supply Chains, Markets and Power*, London: Routledge.

Cox, Andrew, Ireland, Paul, Lonsdale, Chris, Sanderson, Joe and Watson, Glyn (2003), *Supply Chain Management: A Guide to Best Practice*, London: Financial Times Pearson.

Cox, Andrew, Lonsdale, Chris, Sanderson, Joe and Watson, Glyn (2004*), Business Relationships for Competitive Advantage*, London: Palgrave Macmillan. Forthcoming.

Earl, Peter (1995), *Microeconomics for Business and Marketing*, Cheltenham: Edward Elgar.

Emerson, Richard (1962), 'Power-Dependence Relations', *American Sociological Review*, 27, 31-41.

Ford, David (ed) (1997), *Understanding Business Markets*, London: Dryden.

Hakansson, Hakan (1982), *International Marketing and Purchasing of Industrial Goods*, Chichester: John Wiley.

Lonsdale, Chris, Cox, Andrew and Watson, Glyn (2003), 'Developing Fit-for-Purpose Buyer-Supplier Relationships', *Proceedings of the Institute of Supply Management Conference*, Tennessee: ISM.

Lonsdale, Chris (2003), *The Relative Stability of Buyer-Supplier Power Structures and its Implications for Management*, Working Paper, Department of Commerce, The University of Birmingham.

Lukes, Steven (1974), *Power: A Radical View*, New York: Free Press.

Turnbull, Peter, Ford, David and Cunningham, Malcolm (2002), 'Interaction, Relationships and Networks in Business Markets: An Evolving Perspective,' in *Understanding Business Marketing and Purchasing*, David Ford (ed), London: International Thomson Business Press, 3-18.

Williamson, Oliver (1985), *The Economic Institutions of Capitalism*, New York: Free Press.

Figure 1. Generic Buyer-Supplier Relationship Types

Adversarial **Arms-length** BUYER DOMINANCE / INDEPENDENCE	**Adversarial** **Close** **BUYER DOMINANCE**	**SKEWED (BUYER)**
Non-Adversarial **Arms-length** **INTERDEPENDENCE**	**Non-Adversarial** **Close** **INTERDEPENDENCE**	**BALANCED**
Adversarial **Arms-length** **SUPPLIER DOMINANCE**	**Adversarial** **Close** **SUPPLIER DOMINANCE**	**SKEWED (SUPPLIER)**

SHARE OF SURPLUS VALUE

ARM'S-LENGTH **COLLABORATIVE**

WAY OF WORKING

Source: Adapted from Cox, Andrew (1999), 'Improving Procurement and Supply Competence', in *Strategic Procurement Management: Concept and Cases*, Richard Lamming and Andrew Cox (eds), Boston: Earlsgate Press.