Pricing in Business-to-Business Research: Price as an Empirical Phenomenon

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1. Introduction and purpose

Pricing should reflect the importance of a customer, customer sensitivity, market position in different niches, competitor pricing, and costs to serve (Stern (1989)). What is price in business-to-business research? For some authors, price is the revenue-generating part of the marketing mix (Shipley and Jobber (2001); Noble and Gruca (1999)). Other researchers argue that price is a strategic variable, and not simply at the tactical level as a revenue-generating mechanism (Stern (1989)). One commonality of the conceptualisations of price in industrial marketing is as quantified shorthand for value. For example, Morris and Fuller comment, "…price is a quantified statement of the value being delivered to a user… (1989:142)). Customer perceived value should incorporate both intangible and tangible product attributes (Lancioni (1988)). This compares to other definitions such as the unit cost of a product plus a percentage mark-up. The classical economics definition is based upon the equilibrium point in the supply and demand curves whereby exchange takes place. In this paper we first provide a limited review of the ways in which price is considered in business-to-business research. The review consists of four areas: price as a structural variable, managerial pricing strategy, price, Transaction Cost

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Economics, and long-term contracts, and price, production, and cost. Our paper then continues with a discussion of price from an interactive and relationship point of view. A first preliminary framework is presented for analysing price in relation to other costs and revenue items within individual relationships as well as networks of relationships. The article is ended with an outline of a research program focused on analysing prices in relationships from buying firms point of view.

2. Literature Review

2.1. Price, Transaction Cost Economics, and Long-term Contracts

'Price' is, of course, one of the three governance mechanisms underpinning transactions between business actors. Firms are hierarchies and co-ordinated through authority. Markets are co-ordinated by the price mechanism. Industrial activity is conducted within the hierarchy when the costs of using the market are too high (market failure). In their classic article, Bradach and Eccles (1989) remind us that various combinations of the three control mechanisms are possible. In other words, an organisation can consist of architectures of control mechanisms because multiple activities are governed: the plural form.

Hence costs in TCE are related to efficiency in the organisation of make-or-buy transactions. Simplistically, lower transaction costs in the marketplace indicate that transactions should be conducted in this form. Conversely, higher transaction costs incurred from the use of the market make the use of a hierarchy the predicted outcome. In other words, the focus is upon the costs of governance or organising industry rather than production or other costs: "Transaction costs are expenditures associated with an economic exchange that vary independently of competitive prices and the product exchanged" (Dahlstrom and Nygaard (1999:161)). However, as Richardson succinctly reminds us, prices are market signals, and thus "prices by themselves can only be made to appear able to co-ordinate activities…through failure to disclose the planning that has to go on behind the scenes" (1998:8).

There is a small amount of research that has related TCE and price/costs in relationships. For example, researchers have attempted to operationalise transaction costs. Dahlstrom and Nygaard (1999) investigated how opportunism influenced bargaining, monitoring, and maladaption costs respectively. Other studies have investigated the impact of the organisation of the buyer-supplier interface upon the purchasing of repeat-buy goods (Noordewier and Johnson (1990)). "Adaptive" or

relational buyer-seller interfaces minimises transaction costs – the costs of acquiring goods - under conditions of uncertainty.

A larger area of study relates price to the contract form of governance. That is, how to price contracts for one-off capital projects or goods, and price as a contractual dimension within long-term relationships. Many industries, such as oil and construction, operate using competitive tendering between contractors and customers (e.g. Back and Sanders (1996), Akintoye and Skitmore (1992)). A contractor must formulate a competitive price-bid contract, and it might be that negotiations between the parties take place also.

Contracts can be regarded as a device to 'fix' or define aspects of an exchange relationship. In theory, at least, business actors plan the terms of a given contract at the beginning of their relationship (see Williamson 1979, 1983, 1985, 1991, 1991a, 1996). In this sense, price terms are agreed in advance and become part of the stability of a relationship in that price-production decisions are co-ordinated. For a more relational exchange, Williamson would expect some flexibility in the extent to which cost and price dimensions of a transaction/exchange can be specified. Van Mieghem (1999) distinguishes between price-only contracts (prices are fixed in advance) and incomplete contracts (prices are negotiated over time) in his discussion of the co-ordination of price-production decisions.

It is possible to consider a dynamic element in the use of such contracts in relationships via the re-introduction of the marketplace (e.g. Levy (1994), Li and Kouvelis (1999)). The stability achieved through setting prices in advance can be altered through the introduction of mechanisms for price-adjustment. The need for adjustments or contract flexibility rests upon the condition of price uncertainty. Such uncertainty can be managed through the use of what are essentially price insurance clauses, or the use of a contract with risk-sharing features. Levy (1994) states that in long-term industrial contracts the seller can meet market-based price clauses in one of two ways. These are (i) meeting competition clauses (meeting a lower price offered by another seller) and (ii) most favoured customer clauses. In other words, these are contract clause that guarantees prices relative to the market price at a given point in time. The sourcing of components can result in price uncertainties in the supply contract, particularly in the case of commodity goods (Li and Kouvelis (1999)). "Risk-sharing" contracts can be used which are enforced when the unit price for a given product increases or decreases beyond a set level.

In internal contracting situations contracts can be adopted in a similar way. Divisions within a multi-divisional company can be considered as price centres, and if product is exchanged between them, then a transfer price needs to be established (Ghosh (2000)). The dependent variables affecting price process and outcome are: fairness of the transfer price policy (compensation), inter-divisional conflict, firm profitability, and the negotiation time taken to reach an agreed price.

2.2. Price as a Structural Variable

At the industry level of analysis price has been related to the structural dimensions of a market. Studies of price collusion and price monitoring using a business history framing have been conducted using industries as varied as the Australian coal industry in the 1870s and the UK retail food industry in the 1950s (see Fleming (2000) and Morelli (1998)). Other researchers have related price competition to profitability and market share (Roy (2000), Zhang (1995), Srinivasan, Popkowski Leszczyc and Bass (2000), Mulhern and Leone (1995), and Bhardwaj (2001)). Research regarding the impact of price competition in industries has related price to market structure or market concentration (e.g. Symeonidis (2000), Walsh and Whelan (1999)). At the most simple, market position in an industry influences the impact of market-level price announcements. For example, should a market leader initiate a price change, multiple price imitations should follow. This argument of course assumes certain features of an industry, e.g. homogeneous goods. Studies have also been conducted that model the impact of product and process innovation upon price. Smolny (1998), using a dataset of SME in Germany, found that when the market structure includes a large number of product innovators, there is less price competition, and prices are also higher.

2.3. Managerial Pricing Strategy: Outcome and Process

The three main price outcome possibilities are competitive price, customer-value / demand price, and cost-plus price. Akintoye and Skitmore (1992) to the former two as market-based approaches, and cost-plus pricing as an internal approach.

For industrial goods, the most common price setting, negotiating, and bidding approach is cost-plus pricing (e.g. Noble and Gruca (1999)). In other words, a unit cost that includes direct and indirect costs, plus a percentage mark-up. Morris and Fuller (1989) remind us that clear forecasts of sales volume are required for this

approach to be meaningful. Other cost-based pricing approaches are break-even and target rate of return. This is an internal-focused approach for pricing a product for the 'market' (Dolan (1995); Cressman (1999)). Lancioni (1988) discusses the "competitive price" as a popular pricing strategy. Competition-based pricing is centred upon competitor prices and competitor reaction to price changes (Akintoye and Skitmore (1992)).

Research simultaneously reports the prevalence of cost-plus pricing yet argues for value-based, customised or demand-based pricing (Shipley and Jobber (2001); Morris and Fuller (1989); Dolan (1995). In other words, a supplier assesses the value of a product for each customer, and "charges a price based upon the customer's perceived value of the attributes of the product offering that each receives" (Kortge and Okonkwo (1993)). A small number of articles report methodologies for modelling this price-customer value relationship (Kortge and Okonkwo (1993); Kortge, Okonkwo, Burley, and Kortge (1994)). It is fair to say that even these approaches are primarily internally focused. Stern (1989) argues that price structures should be differentiated across segments to reflect differences in price sensitivity, customer importance, etc.

An increasing number of articles report impacts upon costs and prices from the use of the Internet (e.g. Kinney (2000)). One of the reported trends is related to customised pricing and indeed customised costing. A more micro approach buying and selling using an electronic marketplace may eliminate fixed pricing. Many of the articles in this area relate to commodities, and one-off transactions rather than relationships.

Pricing strategies for industrial services are considered to be similar as for industrial products. In other words, the most common approach is price setting using the cost-plus strategy discussed above (Morris and Fuller (1989)). In terms of the pricing of capacity constrained services, pricing strategies based upon yield management systems (YMS) such as early discounting, overbooking, and limiting early sales. The strategic element comes into play because YMS is a way to manage multi-period pricing for both price insensitive and price sensitive customers of any given service (Desiraju and Shugan (1999); Harris and Peacock (1995)).

What is the process by which industrial prices are set? A comprehensive process for strategic price setting is discussed in Shipley and Jobber (2001). Their six-stage 'Pricing Wheel' process incorporates cost, demand, and competitor prices. The first of these is deciding the strategic role of price. In other words, how important is price

in the market offering. The second stage involves the prioritising of price objectives. Four general pricing objectives are those of return on revenue, price stability, market prestige and image, and meeting competition (Lancioni (1988)).

Assessing all price determinants is the function of the third stage. Price determinants are demand, competitor, and cost based in this model. Demand determinants of price incorporate volume, competition, and price sensitivity. In terms of cost, "for many companies, average cost is the initial, paramount, or only determinant in price setting" (p. 307). Average costs are made up of a proportion of fixed costs, plus the unit direct cost of transport, marketing and production. Price determinants can also be grouped into two more general categories; environmental or external (competitive price levels, customer price sensitivity) and internal (cost reduction goals, sales volume level requirements, profitability, production volume) (Lancioni (1988)); Akintoye and Skitmore (1992)).

Stage four is to decide upon the price strategy (position based on an assessment of customer value). Noble and Gruca (1999) discuss a two-level framework to categorise the pricing of industrial goods into ten pricing strategies based on four pricing situations. These are new product (price skimming, penetration pricing, experience curve pricing), competitive (leader pricing, parity pricing, low-price supplier), product line (complementary product pricing, price bundling, customer value pricing), and cost-based (cost-plus pricing). Each of the strategies is related to a product per se. The fifth stage of Jobber and Shipley's model is to select the price method (some combination of cost-based, competitor-based, and demand based). The final part of the model is to implement and control the price set.

2.4. Price and Partnerships

Much of the above literature assumes in one way or another an arms' length relationship between buyer and supplier. The discussion regarding price-setting strategies is from an internal company perspective, for example. Price is the only variable transacted between two organisations. Price can also be a key part of a contract between two parties.

Several studies have suggested that price is not the most important variable in organisational relationships. Liukko, Vuori, and Woodside (1997) discussed the relative importance to large and small customers of subcontractor deviations from agreed standards of price, quality and service levels. Delivery was the most important

variable for customers. Another issue is that of whether buyer and seller organisations place differential importance upon variables in industrial purchasing. Avila, Dodds, Chapman, Mann, and Wahlers (1993) reported that buyers consider price as less important than sellers. A limitation of this study is that the survey used was sent to members of the purchasing department and sales department in the same organisation.

Within the purchasing and supply chains literature both price and cost have been considered in a variety of themes. The outsourcing of activities / products within manufacturer to sub-contractor relationships is one vehicle by which to reduce costs through specialisation. The multiple sourcing of commodity goods should result in low prices. Multiple arms' length supplier "relationships" are also assumed to result in lower prices. Partnerships between buyers and suppliers should result in price and cost reductions through co-ordination.

Studies in the channel management literature have investigated the role of a price change by one actor upon other channel members given fixed demand conditions. Lee and Staelin (1997) used a game theory methodology to investigate the impact of two types of strategic pricing decisions, price leadership and product line pricing. There are three possible price responses. The first is vertical strategic substitutability, whereby when a channel member reduces their margin when its channel partner increases their margin. The second is vertical strategic complementarity, when the channel member increases their margin in response to the channel partner. The third is vertical strategic independence whereby no margin change takes place in response to the channel partner.

A more relational perspective considers that price should represent more of the relationship; the investments and adaptations made by the actors (Ford et al (1998)). Features such as the product and the nature of the relationship can impact upon the final price outcome. For instance a supplier may have more knowledge concerning a new technology than a buyer, and price the product to take this into account (Ford et al (1998)). Price setting requires negotiation between buyer and seller, as many studies in the purchasing literature have discussed.

Some studies have reported that price is lower in longer-term relationships when compared to arms' length partnerships. Customers bargain and negotiate with their suppliers within a partnership and prices can be lower than in more arms' length purchasing (Kalwani and Narayandas (1995)). Cannon and Homburg (2001)

discussed the potential value for a customer to be created by managing suppliers. The management of suppliers can impact on customer costs such as direct product costs (the actual price charged), acquisition costs (storage, ordering, and delivery), and operations costs (production, research and development). In other words, value is synonymous with cost reduction within a dyadic relationship. These findings relate to work by Gadde and Håkansson (2001). Customer-supplier relationships are a mechanism by which to reduce costs, and by implication, impact upon pricing. In other words, collaboration with suppliers is a mechanism for cost reduction for the customer firm. There is a dichotomy made which relates adversarial business practices with price reduction pressures, and partnerships with the opportunity for cost reduction. It has been argued that direct product costs are the easiest to measure, and hence receive the most attention in the literature as a result (Cannon and Homburg (2001))

Long-term relationships can result in fewer price changes. This phenomenon is what Chappell, Mayer, and Shughart (1993) term 'price stickiness'. In other words prices are changed infrequently because this is considered by actors to be disruptive to long-term relationships. Hence, prices change little as demand changes (Naish (1994)).

3. Price as an empirical phenomenon

In the literature review we have illustrated how prices have been looked upon from different managerial perspectives and theoretical assumptions. But prices existed before we had any economic theory. Nor did they spring from managerial decision-making processes. Therefore, prices do not have to be seen in accordance with micro economic theory or as outcome of pricing strategies applied by sellers. It is possible to frame prices and pricing in other ways. The way a research problem is formulated is always dependent on the frame of reference applied. If the frame is changed the problem will be formulated in a new way as has been demonstrated in various research disciplines. The same is true for economic problems and phenomena. The objective of this paper is to explore prices and pricing from another point of departure than what is provided by economic theory – but still it will be a closely complementary approach.

The main starting point for our discussion is that companies do not exist for the sake of themselves. They are economic units with the mission to serve others – companies, organisations or individuals. Given this point of departure the focal dimension of all

business behaviour is exchange. Therefore, business economics is primarily related to revenues and costs of exchange, whether the exchanged items consist of hardware such as goods or of software such as services or knowledge. We use this starting point in order to develop a specific perspective of price and pricing; their roles and functions. In the section below we analyse the economic characteristics inherent in a transaction between a buyer and a seller. We continue by discussing how price relates to the cost and revenue structures of the transacting partners. Building on this foundation we explore how buyer and seller through exchange over time can affect the cost and revenue structures and even how these structures are perceived. Finally we present some main features of a research program that is about to start.

3.1 Costs and revenues in transactions

We depart from a specific buyer-seller transaction characterised by a certain price - i.e. what the buyer pays. Analysing the roles and functions of price and pricing will require an exploration of the economic conditions of this transaction. What is paid by the buyer and received by the supplier represents only one dimension of the economic conditions and effects of a single transaction.

For the buyer the price paid is one of the 'primary' costs that are directly associated with the transaction. There are other primary costs as well, for example costs of transportation, insurance and other expenses, and costs of handling the relationship with the supplier. However, the total economic effects of a single transaction have much wider scoop. For the buyer there are also 'secondary' costs to take into consideration. The transactions with one supplier impact on, and are affected by, the transactions with other suppliers, with customers, and the buyer's internal operations. Furthermore, the main reason for the buyer to be involved in the transaction is that it is a prerequisite for coming revenues, when what is delivered by the supplier is used in one way or another. This means that the analysis of the economic effects of a transaction must include the revenues on the buying side. Also when it comes to revenues it is necessary to make a distinction between primary and secondary effects. The primary revenues are directly associated with the value of the product or service delivered by the supplier, while the secondary revenues stem from increased revenues or decreased costs in other relationships.

The economic effects and conditions follow similar logic for the selling firm. The primary revenues relate to the price paid by the buyer, while secondary revenues

appear in other relationships in the form of increased revenues or decreased costs. The seller stands certain primary costs such as production and distribution costs and the costs for handling the relationship with the customer. The secondary costs consist of increased costs in other relationships or in internal operations. The discussion is summarized in figure X.

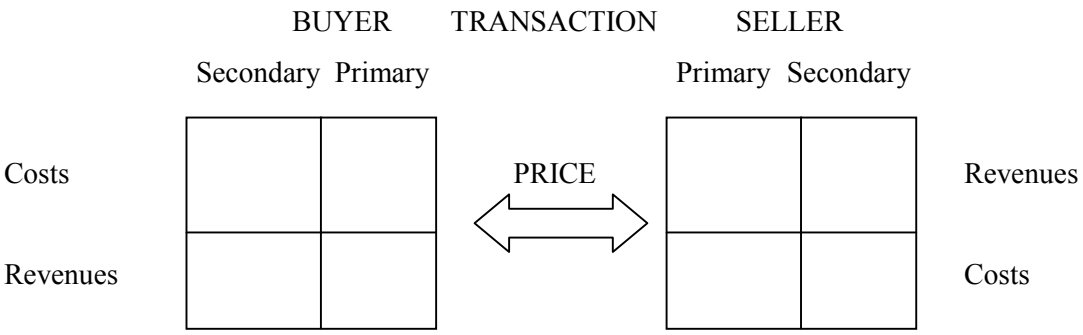


Figure X:

Price is a crucial dimension of economic exchange because it is one of the conditions that buyer and seller must agree upon before transactions take place. It is important also because in most cases it represents a substantial part of the primary revenues of the seller and the primary costs of the buyer. But price is of much greater significance than that. The seller must charge prices that make the total payments from customers exceed what is paid to the suppliers. For the buyer it is important that the overall payments to suppliers do not exceed what is paid by its own customers. However, the price in single transactions can never reflect the total economic conditions and effects of buyer and seller as depicted in figure X. The reason is the difficulties associated with estimating some of these costs and revenues.

The most evident economic effects of a transaction are the primary costs of the buyer and the primary revenues of the seller. The primary revenues on the selling side are normally quite easy to estimate. They consist mainly of the price paid by the buyer. The price can be constructed in different ways but its economic consequences are fairly easy to estimate. The higher the prices are - the better from the seller's point of view. Sellers, thus, will always favour as high prices as possible (all other conditions equal). For the buyer the price paid normally is the dominating portion of primary costs. As argued above there are other direct expenses associated with the transaction, which are also possible to identify without major problems. It is more difficult to estimate the costs of handling the relationship with the supplier. Similarly, the seller

must take its relationship costs with the buyer into consideration that imposes the same problems as for the buyer. The relationship costs (also termed transaction costs) include all the costs the two parties have in forming the relationship, for example contact costs and the costs of technical and administrative adaptations.

The main difficulties for both buyer and supplier reside in analysing the secondary effects in terms of costs and revenues. However, also the primary revenues for the buyer and the primary costs for the supplier create problems in this respect. In each transaction the buyer is provided with a product and/or service, the value of which is quite easy to estimate when it is sold again to someone else without much refinement. In other situations the economic impact might be very difficult to value - for example when the object of the exchange is used as a part or a component in a complex offering. In this case the exchange object may be an important determinant of the revenues in terms of received prices for the actual product. Owing to the fact that its function is embedded into an aggregated product/system the function (as well as the value of the exchange object) is unclear which makes the direct revenues difficult to evaluate.

In the same vein, the primary costs of the seller are hard to estimate. As argued above they consist of the total costs of the offering plus the costs of developing the relationship. Primary costs thus include costs of raw materials and other input, costs of production and distribution, as well as costs of design and product development. Primary costs are to a large extent fixed costs, which makes it quite problematic to identify the 'true' costs because they have to be allocated in an indirect way.

Secondary revenues are always difficult to trace. For the seller these revenues might concern positive effects in other customer relationships or positive effects in supplier or third party relationship. Secondary revenues from the exchange with a specific customer may also be attained in internal operations that are related to several counterparts. For the buyer the same types of secondary revenues from a transaction with a supplier may occur. The revenues can regard positive effects in customer relationships, in other supplier relationships or in internal operations. In all these cases the benefits can occur through increased revenues or decreased costs.

The secondary costs are similar to the secondary revenues and are problematic to evaluate both for the buyer and the seller. For the seller these costs include, for example, the effects on the costs in production and distribution of the same or similar

products in other relationships. These adaptations a seller makes in the exchange with one buyer reduces the scale of the operations which, in turn, affects the economic conditions for exchange with other customers. The secondary costs on the buyer side arise for similar reasons. A buyer adapting its internal operations significantly to a main supplier may find it necessary to change its relationships with other suppliers. The costs of conducting these changes may exceed the benefits from the adaptations to the main supplier.

3.2 Price and pricing in transactions

Price is obviously a crucial exchange dimension, because the two parties must agree on the price level in the transaction. Prices and pricing must to some extent reflect the pattern of costs and revenues of a transaction. However, as shown above, the actual price paid represents only part of the primary costs of the buyer and part of the primary revenues of the seller. For both parties in a specific transaction several other costs and revenues are affected depending on the way the transaction is conducted with regard to other relationships. Owing to this complexity it is neither possible nor desirable to try to take all the economic effects into consideration in every transaction. Buyer and seller will agree on a transaction at a price level where the costs the buyer takes into consideration are lower than the perceived revenues and where the revenues considered by the seller are higher than the perceived costs. Therefore, in some cases the buyer's main concern may be to be offered a price that reflects the primary revenues that can be expected from the use of the product/service that is subject to the transaction. Similarly, a seller sometimes accepts a price covering only the primary costs. However, in other situations the buyer may be keen on paying a substantially higher price. This will occur if this price level is associated with positive effects in terms of secondary revenues and primary and secondary costs that together outweigh the increase in price.

Figure X illustrates that the relationships between prices, costs and revenues are fairly complex. It is impossible for a supplier and a customer to evaluate all the potential cost and revenue effects of a specific transaction. Which effects that are taken into consideration is dependent on the subjective interpretations of the actors. Buyer and seller frame the situation at hand and evaluate some of the consequences of various alternative actions. The outcome of this evaluation depends on the logic applied. The framing of the situation affects what is seen and what will be done. For example,

efficient purchasing was for long time considered to be equal with finding the supplier offering the lowest price. As shown above this approach - at best - minimises the primary cost of the customer. To be a relevant criterion for supplier selection this approach rests on the assumption that the primary revenues of what suppliers offer are exactly the same. Furthermore, secondary revenues and the secondary costs associated with using different suppliers have to be assumed the same. The final assumption is that the relationship costs are the same irrespective of which supplier is used. If all these conditions are at hand at the same time - then it is relevant to use price as the single decision criterion.

This discussion gives an indication of the limitations of a market solution and how seldom this approach is relevant for exchange of industrial products. As soon as there is a main influence from secondary costs and revenues or from relationship costs, or when the direct revenues for the buyer are not predetermined, we have to extend the analysis from an economic point of view. Price will then only be one aspect of the economic outcome and the key issue is how price is related to other revenue and cost components. Price will still be an important issue but it has to be seen in relation to the other economic parameters. The actors involved systematically combine price with these other cost and revenue parameters depending on the logic of their inherent economic models. Therefore buyers and seller must also try to understand the logic of the economic models applied by the other actors that are involved. In this vein price becomes part of the exchange processes among buyers and seller that is discussed in the section below.

3.3 Price and pricing as part of the exchange process

Thus far we have dealt mainly with the characteristics of single transactions and how buyer and seller may perceive them. However, in general, each transaction is part of series of transactions between buyer and seller. Industrial markets are characterised by frequent buyer-seller interaction in long-term relationships, implying that single transactions can be regarded as the basis for the exchange process between a customer and a supplier. As argued above prices and pricing are important dimensions of these processes.

A main feature of long-term buyer-seller relationships is that the interaction among the two parties over time affects not only the conditions of exchange, but also what is actually the subject of exchange. All the time buyers and sellers strive to improve the

performance of their operations. A buyer may improve its performance through interaction with suppliers in at least two ways. First, adaptation to a standardised solution of a supplier may enhance the performance of the buyer's operations. Because other customers use this solution the supplier gains from economies of scale, which in turn might benefit the buyer in terms of low prices. Second, the buyer may affect the supplier to modify the product/service that is subject to exchange in a way that reduces the internal costs or improves the performance of the offering of the buyer. Similarly, the seller may affect the buyer to change its needs in a way that makes it possible to reduce costs in production and distribution. In these interactive processes price and pricing has an important role to play. The modification of what is exchanged will impact on the overall cost and revenue structures of the transactions, which changes the relations between primary and secondary costs and revenues - and thus price. In this way pricing becomes an interactive matter. Changes of the type described require that buyer and seller jointly evaluate the costs and revenues of different alternatives. For both parties the role of price is changed as the exchange process evolves. In this way price and pricing are inherent dimensions of exchange rather than something decided by the seller.

Price is determining the exchange process as well. Pricing can be used to stimulate a desirable development, for example in terms of improved functionality or reduced costs. In these situations price may be used to direct the development of the counterpart in specific ways. Both buyer and seller can use prices to signal what future directions are desired or required. The way a selling firm prices different offerings obviously may affect a buyer to change its specifications. On the buyer side target pricing and target costing has received increasing attention in product development projects. In these cases a specific price is set as the target for the development of a component, a system, or even a certain function. Price then becomes a fixed condition for both buyer and seller and everything must be done in order to reach the target price. Given this fixed condition materials, technologies, and other arrangements are adapted accordingly. The whole structure is designed in a specific way in order to reach a certain price. In this way price becomes embedded in activities and resources and will impact on the cost and revenue patterns for future transactions.

3.4 Extending the perspective

Our analysis has focused on exchange in transactions and relationships. The analysis

of cost and revenues in transactions revealed that the economic effects to a large extent are determined by the way the single transaction can be related to other transactions – both in the same relationship and in other relationships. It is by connecting the exchange in one relationship to other exchanges buyer and seller can benefit from substantial secondary effects and also affect primary revenues and costs. The main effects in this respect stem from resource sharing and joint co-ordination in design, product development, production, distribution and other handling activities.

The most simple extension of the perspective is to include one more relationship in the analysis (see figure Y). Systematic efforts to connect the two actors in the focal relationship with the third party will impact on prices and other costs and revenues, both primary and secondary.

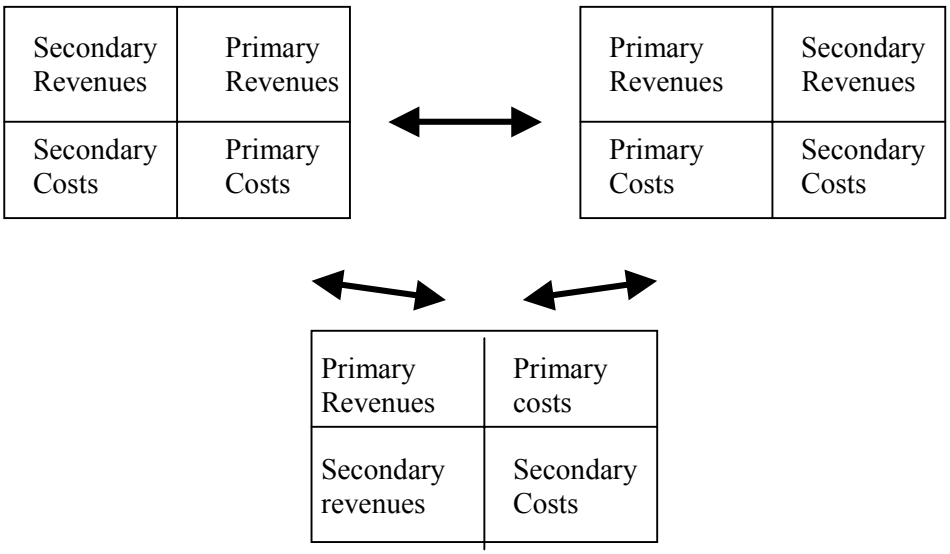


Figure Z:

Incorporating further actors in the analysis will add to complexity, but also enhance the opportunities for performance improvements. Obtaining these effects from connected exchanges require a network perspective and the ability to systematically connect relationships to each other is a crucial factor in all networks. It is important to arrive at an appropriate level of the extent of connecting. If the exchange with one counterpart is treated as totally unique this relationship has all the features of a 'hierarchy', which is obviously not a satisfactory solution with regard to interactive benefits. When a relationship from a resource point of view is handled as independent of all other relationships the cost and revenue patterns will equal those of an internal

solution. On the other hand, if all relationships are handled in exactly the same way we will get an economic outcome similar to market conditions. Thus, the most significant network effects appear when the actors manage to develop unique features in one relationship and combining this with resource sharing among different relationships. When the actors manage to do this we will always get these effects where the development in one relationship affects the costs and the revenues in other relationships. In these situations price is not just to be seen as a result of the existing structure. Neither, is it just a condition for the structure; it is an embedded character of it.

This discussion has put the emphasis on the relationship between price and exchange: how price impacts on the exchange process and how it is affected by it. There are other determinants of price as well. In some cases world market prices set the conditions, while in others the exchange between one supplier and one buyer might be considerably impacted by price quotations of alternative suppliers.

4. Price from the buying side - some features of a research program

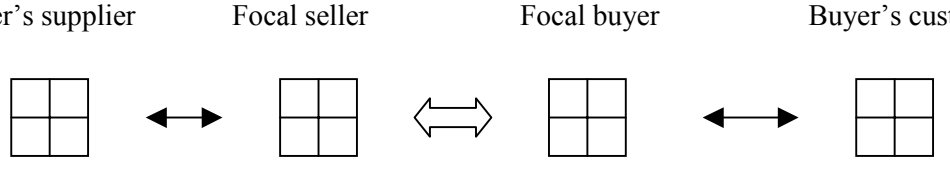
Throughout this paper our argument is that price is a key factor in all exchange processes. However, the perspective applied makes the significance of price quite different from what is assumed in contemporary economic theory. Our analysis revealed that price is only one aspect of a complex pattern of primary and secondary cost and revenue patterns in the exchange processes among buyers and sellers in industrial markets. We also showed the important role of price in the exchange processes where buyer and seller systematically relate their operations to one another and to what is going on in other relationships.

A particularly interesting situation occurs when the buyer perceives its primary revenues in new ways. By reconsidering the value of what suppliers can offer the buyer changes the perceptions and evaluations also of primary costs and of the secondary effects. When the buying side changes its interpretation of costs and revenues of exchange the seller has to do the same. Once this happens the previous simplifications that sellers always prefer high prices and buyers prefer low prices become blurred. The role of the price is much more related to how production and distribution are organised and handled and the two parties can normally find new solutions that might be beneficial to both. This change is clearly illustrated by the modified perceptions of what constitutes efficient purchasing. The recent attention in

single sourcing, the emphasis on supply chain management and the use of key account managers are all examples indicating that companies are changing the interpretations of the cost and revenue effects. It is the changes in these patterns and the subsequent importance for both buying and selling companies that is the basic foundation of an international research program that we are planning.

In this research program the point of departure for our studies is the perspective of the buying company. Prices have in general been studied from the selling company's point of view and there has, for example, been a lot of interest in the effects of different pricing strategies, such as skimming pricing versus penetration pricing, and cost based pricing versus value-based pricing. However, in industrial markets where the buyer often is more powerful than the seller, there are all reasons to approach pricing also from the buying side. Price has not to be seen as something given for the buying side - something the buyer either can accept or not. In contemporary models the buyer's option to influence price was only indirect - by playing the market the buyer could be able to get price down. According to the analysis in this paper there are a number of ways that the buyer can act with regard to price in order to influence its own costs and revenues, but also in order to influence the counterpart. Target pricing is just an example how pricing issues can be formulated in new ways. Price has in these cases to be regarded as an embedded variable having both important structural and processual dimensions as it is closely related to other variables in the network structure as well as in several exchange processes.

The design of our study is illustrated in figure Z. The point of departure is a focal buying company and its relationship with a particular seller. The role and function of price in terms of the cost and revenues in the exchange between these two parties has to be analysed in its network context. Owing to the inherent complexity of these economic patterns the number of other actors to involve in this analysis must necessarily be limited. Preliminary, our aim is to include four other exchange processes: two of the supplier and two of the buyer. On the seller's side we will analyse the exchange with one supplier and another customer, while on the buyer's side the exchanges with one customer and another supplier will be scrutinized.



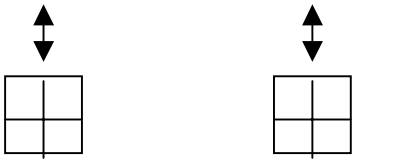


Figure Z

Bibliography

Adrangi, B. and Raffiee, K. (1999), On Total Price Uncertainty and the Behaviour of a Competitive Firm, *American Economist*, Vol. 43(2), 59-

Akintoye, A. and Skitmore, M. (1992), Pricing Approaches in the Construction Industry, *Industrial Marketing Management*, Vol. 21: 311-318.

Avila, R.A., Dodds, W. B., Chapman, J.D., Mann, O. K., and Wahlers, R.G. (1993), Importance of Price in industrial buying: sales versus purchasing perspectives, *Review of Business*, Vol. 15 (2:Winter): 34-39.

Back, W. E. and Sanders, S. R. (1996), Partnering in a unit price environment, *Project Management Journal*, Vol. 27 (1): 18-26.

Bhardwaj, P. (2001), Delegating pricing decisions, *Marketing Science*, Vol. 20(2): 143-169.

Bradach, J. L. and Eccles, R. G. (1989), Price, Authority, and Trust: From Ideal Types to Plural Forms, *Annual Review of Sociology*, Vol. 15: 97-118.

Cannon, J.P. and Homburg, C. (2001), Buyer-Supplier Relationships and Customer Firm Costs, *Journal of Marketing*, Vol. 65 (January): 29-43.

Chappell, W. F., Mayer, W. J. and Shughart, W. F. (1993), Firm heterogeneity and production flexibility: evidence from price-cost margins of large and small firms, *Bulletin of Economic Research*, Vol. 45 (3): 229-245.

Cressman, G. E. (1999), Commentary on "Industrial Pricing: Theory and Managerial Practice", *Marketing Science*, Vol. 18 (3): 455-457.

Desai, P.S. and Srinivasan, K. (1996), Aggregate versus product-specific pricing: Implications for franchise and traditional channels, *Journal of Retailing*, Vol. 72(4): 357-382.

Dahlstrom, R. and Nygaard, A. (1999), An Empirical Investigation of Ex Post Transaction Costs in Franchised Distribution Channels, *Journal of Marketing Research*, Vol. 36 (May 1999): 160-170.

Dolan, R. J. (1995), How do you know when the price is right?, *Harvard Business Review*, Vol. 73 (5): 174-182.

Fleming, G. (2000), Collusion and Price Wars in the Australian Coal Industry during the Late Nineteenth Century, *Business History*, Vol. 42 (3): 47-

Fluet, C. and Garella, P.G. (2002), Advertising and prices as signals of quality in a regime of price rivalry, *International Journal of Industrial Organisation*, Vol. 20: 907-930.

Gadde, L-E., Håkansson. H., 2001, Supply Network Strategies, London: Wiley.
Gilbert, S. M. (2000), Coordination of Pricing and Multiple-Period Production Across Multiple Constant Priced Goods, *Management Science*, Vol. 46 (12): 1602-1616.
Ghosh, D. (2000), Complementary arrangements of organizational factors and outcomes of negotiated transfer price, *Accounting, Organisations and Society*, Vol. 25(7): 662-684.
Håkansson, H., Snehota, I., 1990-1? The Italian article
Håkansson, H., Snehota, I., 1995, Developing Relationships in Business Networks, London: Thompson.
Håkansson, H., Waluszewski, A., 2002, Development in Interaction, London: Routledge.
Hammons, C. (1992), The copying machine paper caper: where lowest price did not work, *Business and the Environment*, Vol, 35 (2): 68-71.
Harris, F. H. and Peacock, P. (1995), "Hold My Place, Please", *Marketing Management*, Vol. 4(Fall): 34-46.
Kalwani, M.U. and Narayandas, N. (1995), Long-Term Manufacturer-Supplier Relationships: Do They Pay Off for Supplier Firms?, *Journal of Marketing*, Vol. 59 (January): 1-16.
Kinney, S. (2000), RiP Fixed Pricing: The Internet Is on Its Way to "Marketizing" Everything (price transparency online), *Business Economics*, Vol. 35(2): 39-
Kortge, G. D. and Okonkwo, P. A. (1993), Perceived Value Approach to Pricing, *Industrial Marketing Management*, Vol. 22 (3): 133-141.
Kortge, G. D., Okonkwo, P. A., Burley, J. R., and Kortge, J. D. (1994), Linking experience, product life cycle, and learning curves: calculating the perceived value price range, *Industrial Marketing Management*, Vol. 23 (3): 221-229.
Lancioni, R. A. (1991), Pricing for international business development, *Management Decision*, Vol. 29(1): 39-42.
Lee, E. and Staelin, R. (1997), Vertical Strategic Interaction: Implications for Channel Pricing Strategy, *Marketing Science,* Vol. 16 (3): 185-207.
Levy, D.T. (1994), Guaranteed Pricing in Industrial Purchases – Making Use of Markets in Contractual Relations, *Industrial Marketing Management*, Vol. 23 (4): 307-313.
Li, Chung-Lun, and Kouvelis, P. (1999), Flexible and Risk-Sharing Supply Contracts Under Price Uncertainty, *Management Science*, Vol. 45 (10): 1378-1398.
Liukko, T., Vuori, R. and Woodside, A. G. (1997), Testing manufacturers' acceptance of competing subcontractor price-quality-service designs, *Industrial Marketing Management*, Vol. 26 (4): 315-330.
Lodish, L. M. (1980), Applied Dynamic Pricing and Production Models with Specific Application to Broadcast Spot Pricing, *Journal of Marketing Research*, Vol. 17 (May): 203-211.
Madhok, A. (2002), Reassessing the Fundamentals and Beyond: Ronald Coase, The Transaction Cost and Resource-Based Theories of the Firm and The Institutional Structure of Production, *Strategic Management Journal*, Vol. 23: 535-550.
Morelli, C. (1998), Constructing a balance between price and non-price competition in British multiple food retailing 1954-64, *Business History*, Vol. 40 (2): 45-62.
Morris, M.H. and Fuller, D.A. (1989), Pricing an industrial service, *Industrial Marketing Management*, Vol. 18 (2): 139-147.
Mulhern, F. J. and Leone, R. P. (1995), Measuring market response to price changes: a classification approach, *Journal of Business Research – Special Issue: Pricing Strategy and the Marketing Mix*, Vol. 33 (3): 197-206.

Naish, H. F. (1994), On the infrequent adjustment of price by firms, *Economic Inquiry*, Vol. 32 (4): 642-655.
Noble, P. M. and Gruca, T. S. (1999), Industrial Pricing: Theory and Managerial Practice, *Marketing Science*, Vol. 18 (3): 435-454.
Noble, P. M. and Gruca, T. S. (1999), Response to the Comments on "Industrial Pricing: Theory and Managerial Practice", *Marketing Science*, Vol. 18 (3): 458-459.
Noordewier, T.G. and Johnson, G. (1990), Performance Outcomes of Purchasing Arrangements in Industrial Buyer-Vendor Relationships, *Journal of Marketing*, Vol. 54 (4): 80-94.
Olshavsky, R. W., Aylesworth, A. B., and Kempf, D. S. (1995), The price-choice relationship: a contingent processing approach, *Journal of Business Research – Special Issue: Pricing Strategy and the Marketing Mix*, Vol. 33 (3): 207-219.
Richardson, G. B. (1998), Production, Planning, and Prices, *DRUID Working Paper*, Number 98-27.
Roy, A. (2000), Market information and channel price structure, *International Journal of Research in Marketing*, Vol. 17: 331-351.
Shipley, D., and Jobber, D. (2001), Integrative pricing via the pricing wheel, *Industrial Marketing Management*, Vol. 30 (3): 301-315.
Smolny, W. (1998), Innovations, Prices and Employment: A Theoretical Model and an Empirical Application for West German Manufacturing Firms, *The Journal of Industrial Economics*, Vol. 156 (3): 359-381.
Snehota, I., 1990, Notes on a Theory of a Business Enterprise, Doctoral dissertation 42, Department of Business Studies, Uppsala University .
Srinivasan, S., Popkowski Leszczyc, P. T. L. and Bass, F. M. (2000), Market share response and competitive interaction: The impact of temporary, evolving and structural changes in price, *International Journal of Research in Marketing*, Vol. 17: 281-305.
Stern, A. A. (1989), Pricing and differentiation strategies, *Planning Review*, Vol. 17(5): 30-35.
Symeonidis, G. (2000), Price Competition and Market Structure: The Impact of Cartel Policy On Concentration in the UK, *Journal of Industrial Economics*, Vol. 48 (1): 1-30.
Uzzi, .B. and Lancaster, R. (2002), Social Embeddedness and Price Formation in the Large Law Firm Market
Van Mieghem, J. A. (1999), Coordinating investment, production, and subcontracting, *Management Science*, Vol. 45 (7): 954.
Walsh, P. P. and Whelan, C. (1999), Modelling Price Dispersion as an Outcome of Competition in the Irish Grocery Market, *Journal of Industrial Economics,* Vol. 47 (3): 325-347.
Williamson, O. .E. (1979). 'Transaction-Cost Economics: The Governance of Contractual Relations'. *The Journal of Law and Economics ,* 22, 233-261.
Williamson, O. E. (1983). 'Credible Commitments: Using hostages to support exchange'. *American Economic Review* , 36, 519-540.
Williamson, O. E. (1985). *The Economic Institutions of Capitalism.* New York: The Free Press.
Williamson, O. E. (1990). 'A Comparison of Alternative Approaches to Economic Organisation'. *Journal of Institutional and Theoretical Economics* , 146, 61-71.
Williamson, O. E. (1991a). 'Comparative economic organisation: The Analysis of Discrete Structural Alternatives'. *Administrative Science Quarterly* , 36, 269-296.

Williamson, O. E. (1996). *The Mechanisms of Governance* . New York: Oxford University Press.
Zhang, Z. J. (1995), Price-Matching Policy and the Principle of Minimum Differentiation, *The Journal of Industrial Economics,* Vol. 153 (3): 287-299.