E-Business in Dyadic Perspective

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Abstract

E-business affects suppliers, buyers, and their relationships in B2B context. By analysing the effects as a dyadic confrontation, the applicability of e-business tools can be assessed. The interaction model is proposed and e-business tools are described from a buyer and supplier perspective in B2B environment.

1. Introduction & Context

E-business has passed trough its typical developmental economical stages. Presently it is becoming a normalised instrument in improving cost efficiency end effectiveness in (B2B) sales and procurement processes. For understanding E-Business as such please turn to well known literature. Different definitions were used based on certain characteristics, for example on the level of information exchange (Kalakota & Robinson 1999), the media or functional perspectives (Turban et al. 2000). Treese & Stewart (1998), adopt a broad definition of e-business ("doing business electronically"). Based on the discussion of the role and different forms of e-business marketing and e-business procurement, Lancioni et al. (2000) made a division of e-business in a marketing, internal, and procurement focus. Coppel (2000) divides e-business by exchange of information between government, business, and consumer in a 3*3 Matrix. Other authors are Kalakota and Whinston (1997), Choi et al (1997).

In order to address research issues, the Scenter for E-Marketing and Procurement (SEMP) has simplified the supply chain into a set of dyads. Reviewing the dyad, one will recognise both sides of the coin: the supplier wants to increase sales (or margin) according to his relationship management programmes and the buyer wants to buy according his present purchasing formulas.

As metaphor for the supplier perspective a common Customer Relationship Management (CRM) pyramid (Curry & Curry 2000) is used. As a metaphor for the purchasing perspective the widely adopted Kraljic matrix (1983) is used. The two metaphors can be matched in an Interaction Relationship Model, depicting twelve possible interactions between buyers and sellers. Every interaction results in different implications for relationship and the adoption of e-business.

E-business tools can also focus on the processes required for a certain purchased product (e.g. ordering processes for routine products). If processes can be simplified and/or reduced through e-business, cost control might lead to better profitability of a buyer. This could result in a more relation oriented approach from the perspective of the supplier, while reducing the total costs for the buyer. Obviously, achieving these results heavily depends on context specific situations (Sanchez 2002).

This paper addresses the following research question: how do e-business tools affect sellers, buyers, and their relationships? The purpose of the paper is to come up with ideas of the effects of E-Business (both sell side and buy side) on relationship. The input for this paper comes from literature, supported by preliminary case studies and focus group meetings. The methodology is not further expanded on, due to the strict length of the paper. The next step is to validate the research method and set a number of hypothesis.

First, the CRM and SCM perspective are dealt with. An interaction model is proposed and this paper ends with conclusions, limitations and points for future research.

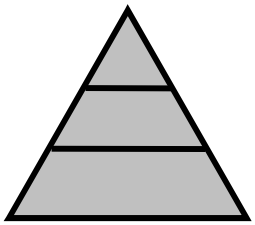
2. The CRM approach: Customer Pyramid

E-tools help firms to identify and exploit their position with their buyers. Araujo et al. (1999) conclude that, from the perspective of the buyer, interfaces with suppliers should be carefully differentiated. Sales organisations should, from their own perspective, manage different interfaces with different types of customers (or customer groups).

Many companies are still pursuing high sales volume, instead of high income. Managers pay little attention to account profitability, selection and management. Research into the manager's perception of relationship value, shows that intuition is more important than rational measures, like profitability (Blois 1999). E-tools could have a massive effect on the

balance between intuition and rational reasoning as the objective information increases. However, managers are still essential to interpret and use this information.

Turnbull et al. (1996) extend the concept of relationship value and state that too little attention is being paid to the value of relations in networks. In this paper the customer pyramid is used as a metaphor for the CRM approach. It helps suppliers to identify the relative importance of their customers and act accordingly. The customer pyramid (Curry & Curry 2000) indicates that there is a differentiation in importance of customers in terms of revue generation. The customer pyramid is shown in Figure 1.



Customers	Number	Revenue	Selling cost	Profitable
	20%	80%	20%	yes
	30%	15%	30%	?
	50%	5%	50%	no

Figure 1: the customer pyramid (without category prospects)

Based on the Pareto principle, the pyramid indicates that 20% of the customers represents 80% of the revenue and incurs only 20% of the selling cost. Therefore these customers are profitable. On the contrary, small customers (50% of the customer base) are attached to a large portion of the costs and therefore might not be valuable at all. Improvement schemes have the objective to move customers up the pyramid. If small customers have no growth potential, they should not be served any more. Efforts to try to change their purchasing pattern and have them buy somewhere else could be attempted. Prospects are dealt with separately as they do have growth potential. The rationalisation of the customers might make the sales force more effective. According to Hise & Reid (1994) studies on the sales force show that only

35% of the time of sales representatives is dedicated to face-to-face contacts. E-business could make the non face-to-face time of sales representatives more efficient.

On the other hand, e-business could reduce the costs of interaction, resulting in lower costs per customer contact. This makes serving small customers more feasible, bearing in mind that the differences in cost per interaction should compensate for the investments that have to be made in e-tools in terms of hard and software, and organisational transformation.

3. The SCM approach: Purchasing Portfolio

There are many purchasing models in literature (Campbell 1985; De Boer et al. 2001; Faris et al. 1967; Olsen & Ellram 1997; Spekman 1998; Virolainen 1998). Central in these purchasing models is a differentiation of suppliers. Organisations adapt their purchasing behaviour accordingly. The purchasing portfolio model introduced by Kraljic (1983) is used as a metaphor for purchasing behaviour. The model consists of two dimensions: the financial risk (or profit impact) and the complexity of supply (purchasing risk). Both can be either 'low' or 'high', thus creating a two-by-two model with the segments: routine, leverage, strategic, and bottleneck products. The purchasing portfolio is shown in Figure 2.

A low complexity of supply can be caused by a reasonable amount of alternative suppliers. This, by the way means a competitive situation for the suppliers. On the other hand, high product specificity or only a limit amount of suppliers could raise the supply risk. The profit impact of the same products can differ per organisation. In general, investment and production goods will have a higher profit impact than non-production relates products.

From a purchasing perspective, every segment has a different goal and application of e-tools. For the routine segment the goal for the use of e-tools is to reduce the cost of the purchasing processes. In the leverage segment, the reduction of product prices is the typical goal. Establishing or developing relationships with suppliers is often the objective for the strategic

segment. For bottleneck products the supply security is essential. Typical e-procurement goals and examples are shown in figure 3. E-procurement can influence the position on the complexity axis when a company uses e-tools to enlarge the scope of the supply market. The profit is influenced when the price of the goods or services is significantly reduced. This might be the case for leverage products.

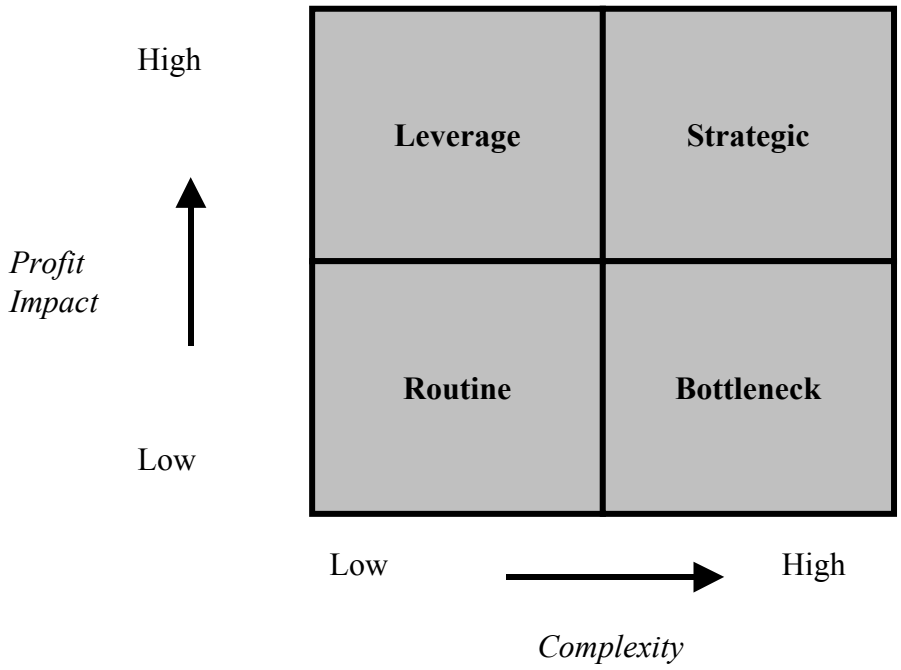


Figure 2: the purchasing portfolio (Kraljic, 1983)

The purchasing portfolio of Kraljic is originally not a dynamic model: products cannot "move" within the portfolio (Santema 2002). Moreover, the matrix does not take the purchasing process into account. If these are included, e-tools largely affect the routine segment, where the process costs are the highest in relation to the price of the product. If ordering processes are taken into account, products are then defined as "augmented products" (Kotler 2001).

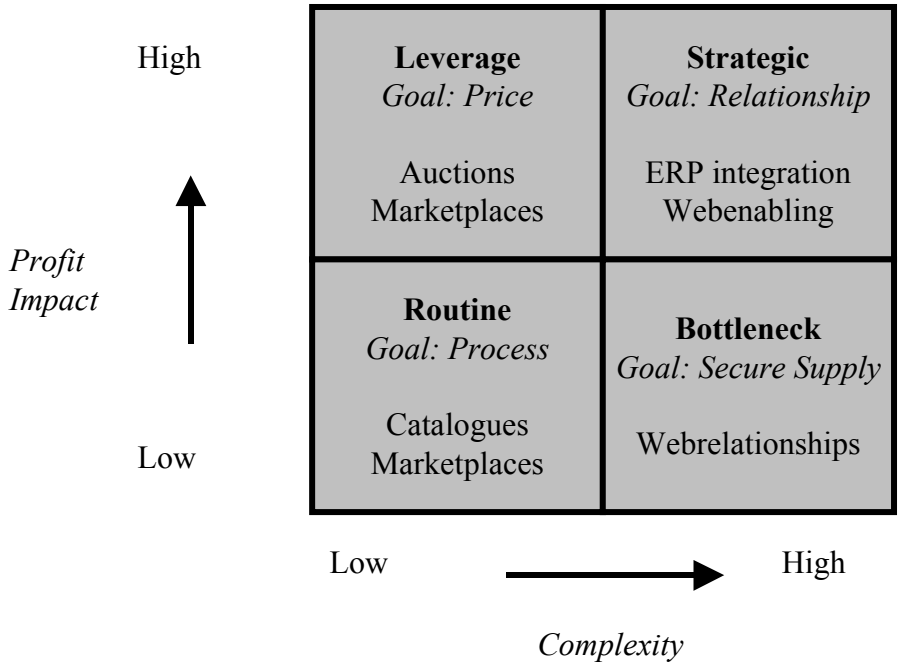


Figure 3: E-Procurement goals and examples

4. Combining CRM and SCM perspectives

Matching the supplier and buyer perspectives (dyadic situation) is important to determine the characteristics of the interaction and consequently the way a relationship could be established and in which way e-tools apply. In the dyadic situation the supplier classifies his customers and the customer classifies his suppliers. This results into the following conceptual model of interactions in dyadic relationships. The model is shown in Figure 4. Twelve possible interaction relations between suppliers and customers are identified. Each potential relationship is numbered (1 stands for a relation between a large customer who is buying leverage products from the supplier). For each relationship there is a corresponding strategy for the e-tools.

A detailed description of how e-procurement tools are valued by both seller and buyer in every relationship is given by Santema & Rijt (2003). E-procurement tools are valuable for large customers buying leverage products (price) and for small customers buying strategic

products (relationships). E-sales tools are valuable for sellers when it is a means to transfer (and transform) small customers (in general) to marketplaces and to shift towards process control for large customers buying routing and / or bottleneck products. E-business tools are valuable from both a sales and a purchasing perspective (duocentric) in a dyad between a large customer buying strategic products or services and in a dyad where the customer is small. For all other relations between SCM and CRM philosophies, the use of e-business is not directly assessable and not necessarily profitable for the buying or supplying organisation. The effect on the dyad will be negative.

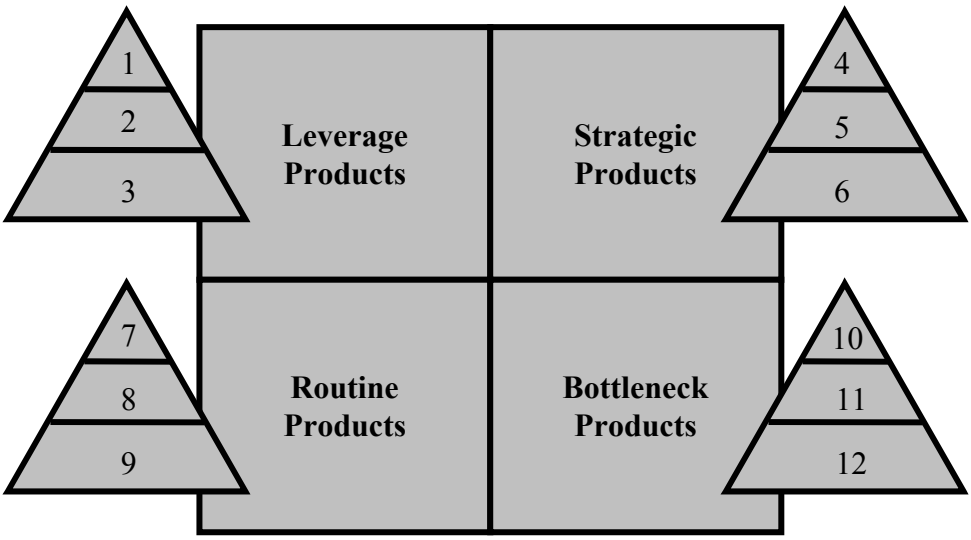


Figure 4: Interaction Model

4. Conclusions, Limitations and Future Research

Conclusions

In this paper a dyadic aspect is introduced to the traditional monocentric approach of the e-business tools. The valuation of e-business tools was assessed form both supplier and buyer perspectives. The introduction of e-business tools does not have generic effects (yet). It seems that the specific buyer or seller situation is responsible for the potentials of e-business tools. It

is also clear that the (internal) potential benefit does not necessarily compensate for the costs or turnover reduction of the other party. For dyadic (duocentric) effects of e-business tools the most apparent effects can be seen between large customers buying strategic products and small customers buying routine products. In the last case both seller and buyer would like to transfer the processes to a marketplace. Further research is needed to prove these conclusions.

Limitations

The limitations to the dyadic approach with the interaction model as presented in this article are that the twelve interactions that were found as a result from the confrontation from CRM and SRM perspective deal with B2B situations. In other situations, like B2C, other interaction characteristics might apply. As mentioned earlier, the Kraljic matrix (1983) is originally a static model. This also implies the dynamic limitation of the proposed interaction model. Several efforts have taken place to research dynamic aspects of the Kraljic model. This should also be considered for the interaction model. Some companies will only be active in one or several interactions. Further research might be needed to refine the e-tool strategy in these specific situations. Possibilities of syndicate efforts for e-tools are not explored. In addition, the role of third parties as intermediaries is only briefly explored. Besides the step from a mono to a duocentric approach, a multi-duocentric or polycentric approach could be identified. Several market, legislative or environmental constraints could limit the possible interactions.

Future research

This paper is mainly based on literature and some evidence from practice. The planning is to extensively interview Benelux companies in their reasons for investing in e-tools, both within buying and supplying organisations. Evidence for the above-mentioned typical SCM-CRM relations and the usage of e-tools is anticipated to be found. Several cases have been explored where transformational effects could be identified from a duocentric perspective. In addition,

two specific cases have been researched where the possible interaction relationships are limited by legislation or by the product offering of a firm. This article has opened the discussion about the applicability of e-business tools in certain interaction relationships from a dyadic perspective. Other researchers are welcomed to join into this discussion and build on this proposed conceptual basis or explore related research issues. The limitations mentioned above could be a good starting point.

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