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Integrating electronic commerce in SMEs

The pace of change associated with the 'new economy' has left many organisations wondering how to harness the benefits of the internet. A French study of small and medium-sized enterprises highlights the key points firms need to consider if they want to successfully combine e-commerce and their traditional business practices.

New internet and web-based applications – and more generally information and communication technologies (ICTs) – have grown exponentially over the last five years. But the speed of change has often confused companies, provoking widespread questioning and reassessment of the way markets are likely to be organised and marketing strategy developed in the future.

In this article we will describe a range of commercial and marketing issues that we have identified as being critical for managers seeking to re-orientate themselves to the so-called 'New Economy'. Our findings are based on two years of field research with small and medium-sized enterprises (SMEs) and provide a conceptual and action-oriented framework for firms still seeking to integrate electronic commerce effectively into their existing activities (see Figure 1). The issues, which cover both the external environment and the internal context of the firm, are mostly relevant for those aiming to develop online business in parallel with their 'traditional' activities.

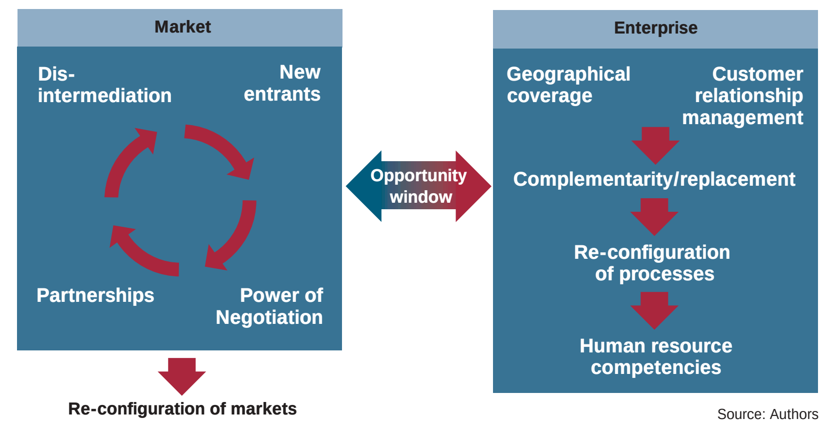
In our view, any company willing to integrate electronic commerce (EC) will have to go through the following process. Firstly, it needs to investigate the likely market transformation brought about by the introduction of the technology. For SMEs, technological changes are mostly initiated by partners, such as customers, suppliers and new or existing intermediaries – hence the focus on market re-configuration. Among important issues to be considered are possible changes in intermediation (will it lead to dis-intermediation and/or re-intermediation?), the threat posed by new entrants, shifts in negotiating power between the different players of the market, and possible opportunities to develop new forms of partnership for better exploiting value creation in the supply chain.

Secondly, the enterprise will have to evaluate the impact of this market transformation on its own position, defining its strategic response and planning related changes in its organisation and competences. Here, electronic commerce should be seen as a means of achieving the desired position. Key steps will include consideration of the firm's geographical

Key messages

- Electronic commerce (EC) can offer opportunities to every firm in every industrial sector.
- The aim of EC is not to sideline distributors, but to exploit the value chain through the redistribution of tasks among market players.
- This new network can result in existing markets being reconfigured: new markets can emerge whilst old ones disappear.
- A key condition to successfully integrated EC is the identification of new skills and competencies needed by employees.

Figure 1: Overview of the issues in integrating electronic commerce



Source: Authors

market coverage and ways in which the technology could be used to better manage customer relationships, EC's impact on marketing and sales (especially the complementary or replacement effect on existing distribution channels and communication media), and the implications for business processes and employee competencies.

The remaining discussion is divided into three parts. In the first part we look at the scope of electronic commerce, the domains of its applications and its targets. In the second part we analyse the market re-configuration issues and in the third part the different steps involved in transforming the enterprise.

The scope of electronic commerce

We view electronic commerce for the purposes of this article as "...any electronic exchange which contributes to the commercial and marketing activities of the firm and which facilitates relationships between customers, suppliers and/or any other partners." Too often EC is merely perceived as a narrow selling instrument deployed through a website – little more than a banner presenting the company and a catalogue of products from which customers can order directly online. The reality is that very few firms (particularly SMEs) have so far been able to sell to their end-customers through the web. By contrast, however, many have adopted Electronic Data Interchange (EDI) systems which hook together computers of commercial partners via telephone lines. Once established, this connection facilitates and accelerates communication within the supply chain for ordering between suppliers, distributors and customers, for disseminating information and thereby generating substantial cost savings.

Keeping in mind the broad definition of EC given above – "any electronic interchange participating in the firm's commercial and marketing activities" – EC is an opportunity for every firm in every industrial sector, albeit the extent and application of the opportunity will depend on the nature of the business and its products. Different typologies concerning the potential of EC by sector published in the academic and professional literature have shown that the firms the most likely to gain are:

- those whose core benefit is intangible or informational and therefore digital, such as banks, insurance companies, training and education centres, consulting and tourism agencies;
- those which are naturally linked to the information technology sector, such as telecommunication, software and hardware, computer services businesses.

The potential also exists, however, for firms from other sectors where analysis of additional and complementary services beyond their core offering and exchanges with partners may identify opportunities. For example, one of the SMEs in our study – a business selling low value, commodity type office equipment – was able to develop a large number of EC applications around services such as ordering, delivery, promotion and online monitoring of customer's expenditures.

The broad definition of the EC 'domain' demonstrates that applications are not just relevant for customers but for distributors, the company-owned sales force, suppliers and other existing or potential partners too. The question therefore is not whether sales can be increased by going online. It is to reflect on how to position the firm in future within a network of market players whose ultimate mission is to create more value for the end-customer. For example, an SME from our study which was manufacturing sporting goods was confronted with the growing power of mass distributors in a market where direct sales to end customers was neither desirable nor feasible. In response the firm developed an extranet to reinforce its links with traditional commercial partners (wholesalers, importers, retailers) with the aim of improving performance, increasing sales and reducing distribution costs.

Market reconfiguration issues

Market disintermediation

A commonly held view is that EC will enable companies to deal directly with the end-customer, leapfrogging an existing distribution network and thereby reducing transaction costs. Why remunerate middlemen, the thinking goes, if one can communicate directly with the customer through an electronic link, giving her or him the possibility to place an order directly at lower cost? In reality, the challenge is far greater. Taken separately, the cost of the direct contact is indeed lower, but managers need to view the total cost of the transaction. In many situations, the reduced cost of the person-to-person relationship can be offset by substantially increased logistics costs. The issue is not one of sidelining distributors, rather of redistributing the tasks and functions among the existing actors in the chain. This redistribution (or re-allocation) of tasks is particularly relevant for product information, advice to customers, after-sales services, physical delivery, product and service bundling and product demonstrations or trials. It would be possible therefore for a firm to deal directly with the end-customer where the provision of up-to-date information is at stake, while leaving to intermediaries those tasks requiring physical proximity.

Threats of new entrants

Added-value analysis opens the market door to new entrants, namely firms basing their entry strategy on the web on a more global offering or on a new combination of traditional offerings. The threat of new entrants – which can come via fresh strategies from established players or new start-ups – provides a key engine for change at existing firms.

In the case of the manufacturer of mountain sporting goods, a new entrant might be a virtual sales store offering complementary and competitive products sourced from several rival suppliers. Its competitive advantage over traditional organisations would be its broader assortment of products and services readily accessible to the customer without having to physically visit different points of sales. It might also offer information about itineraries, weather conditions, climbing safety rules, reference guides, destinations, and insurance packages, all the elements (activities and services) which comprise what is called the 'meta-market', in this case the market defined by reference to the cognitive space of a mountaineering enthusiast. In this way the new entrant can position itself and its network as a new intermediary between the customer and market actors (climbing equipment suppliers, insurance brokers, travel agencies), thereby upsetting traditional sectors and creating competition stretching across conventional market boundaries.

Changes in negotiating power

By facilitating direct contacts, EC can modify the established power structure in the market. Customers in their role as buyer can substantially increase their bargaining power, the key change being the information asymmetry created by EC. In traditional markets, and in particular in business-to-consumer (B2C) markets, the seller has more information than the buyer: information on costs, levels of quality, product availability, and prices of competing or substitute products. In markets driven by EC, market transparency increases and negotiation advantage switches to the buyer. Web sites regrouping buyers and organising auctions are a case in point. They play the role of a broker representing customers and provide the opportunity to compare different offers. By contrast with traditional intermediaries who typically relay the manufacturer's message and share its profit margin, these new networks of middlemen reverse the communication flow through systematic use of tenders. In such situations of increased market transparency, the firm has to redefine its competitive advantage and adapt its commercial communication.

EC can also alter the balance of power between small and large companies. Given the relatively low cost of a commercial presence on the web and the direct relationship which can be established with customers, entry barriers are reduced and opportunities previously reserved for large established players are opened up to SMEs.

Development of new partnerships

A redefinition of the roles of market players induced by EC increases the complexity of relationships between them, tends to reduce the intensity of head-on competition (both vertical and horizontal) and can lead to the development of new forms of partnership between participants. Such partnerships imply stronger co-operation in, among other areas, logistics, distribution, information systems and promotional activities. When a garment manufacturer installs multimedia kiosks at its points of sale, for example, it encourages distributors and customers to participate in the design of new collections, with the aim not only of better satisfying the end user but better calibrating its own production schedule. In so doing the firm creates a form of partnership with its external partners through information exchange greatly facilitated by EC. Those electronic market places which are jointly initiated by traditional competitors – in an attempt to limit the transformation of their markets by new entrants – can be seen as examples of a horizontal partnership.

Re-configuration of markets

The arrival of new actors combined with the redefinition of offerings with new value propositions upsets existing markets and can lead to market reconfigurations – the emergence of new markets or the decline/disappearance of existing ones. The daily press is a good example. Newspapers present through a single vehicle a large variety of news and information, ranging from politics, economics and sport to classified advertisements, leisure features and movie guides. On the web, by contrast, several sites have appropriated part of the information which can be found in the press whilst adding value through services in a meta market perspective. For example, a site presenting movie programmes can also make bookings; a property site can provide information not only on available apartments or houses, but also on house renovation, home insurance, house equipment or removal services. Taken individually, the different components of a newspaper are being challenged by new market operators providing extra value to customers.

Company transformation issues

Geographic coverage

Adopting EC technology does not necessarily imply that companies should suddenly start operating on a global stage. If EC facilitates communication, international physical delivery and logistics still require specific competences and significant financial resources. Thus, decisions concerning market coverage should be taken only after considering the physical (delivery) and psychological (communication) implications. The spectacular development of ICT and the resulting globalisation of the world market can give the illusion that distance does not matter anymore. In reality, distance is a multi-dimensional concept and a distinction must be made between the four dimensions of distance: geographic (physical remoteness), administrative (preferential trading agreements), economic (wealth differences) and cultural (linguistic ties). ICTs have eliminated only one component of geographic distance: the communication link.

Customer Relationship Management (CRM)

Information technology greatly facilitates relationship selling. The development of a one-to-one relationship with customers has become a key success factor in an increasingly competitive environment while at the same time being accessible to any firm, including SMEs. The objective of CRM is to create and maintain customer loyalty through a personalised and interactive communication, by providing clients (through services, advice, information etc) with customised solutions. Placing the customer at the centre of the firm is not an easy task, however, and is not yet a dominant business philosophy in many sectors, not least among SMEs. In the re-allocation of tasks among market actors discussed earlier, one of the major challenges is to establish who in the supply chain will control the customer relationship.

Complementary versus replacement effect?

Once the potential EC applications are identified, it is useful to verify whether each online application 'complements' or 'replaces' off-line operations. Online applications do not systematically replace traditional activities. In many cases, the best solution is a combination of the two, thereby promoting complementarity. A classic mistake is to do online only what is done manually off-line, simply to generate costs reductions. The firm's marketing strategy should dictate policy in this case.

A classic example in business-to-business (B2B) is the co-existence of key accounts and small customers. Typically key accounts are managed directly, while distributors monitor small clients. For key accounts EDI can be used for ordering, for inventory management and for delivering personalised electronic messages. For small accounts more traditional communication modes can be maintained first and later improved by creating an extranet system linking dealers to the firm, in order to say distribute catalogues, facilitate ordering or give information on delivery terms. Two systems can therefore co-exist implying different types of EC applications.

Re-engineering the processes.

EC integration modifies the sales and marketing processes. Three major processes interlink the firm and its partners, namely supply chain management, customer relationship and product development processes. Introducing vendor solutions requires a change in the task to be performed at company as well as at sales partner level. In the example just quoted, the introduction of EDI for large customers and an extranet for small ones drastically alters the way the procurement services of the customer and the sales administration services of the supplier are organised.

New human resources competences.

EC integration involves every function within the firm and requires specific competences. It is a new work style that must be disseminated at all levels in the organisation. This is a key condition for success. The main causes of failure of EC integration programmes are to be found either in the marketing department when the strategic implications of EC have been under estimated, or among the internal staff when the programme has been rejected or has not received enough support by those who should have been the strongest promoters. It is therefore necessary to identify the new skills and competences required for each activity affected by EC. This is a preliminary step ahead of formal training and the redefinition of profiles required for each function. A mistake to be avoided is sub-contracting the implementation of the integration programme to an outside expert. The active support of the CEO and of the entire organisation is crucial to success.

About the research

The article is derived from a research study conducted by the Centre TIME of the Group ESC Grenoble within the framework of the European program ADAPT over the period 1997-2000. The French research team has conducted:

- Six longitudinal studies of French SMEs at different stages of adoption of electronic commerce. Each enterprise was followed for 18 months. The sample covered SMEs in industry, the service sector, distribution, B2B and B2C. Interviews were conducted at different hierarchical levels and involved different functions including sales, marketing, information systems, and logistics;
- About 30 additional SMEs were analysed in the Rhône-Alps region. Interviews were conducted with the general manager and through a questionnaire;
- Six joint seminars to exchange the results of the work were held with the European partners of the ADAPT Project;
- A methodology of self-assessment has then been designed and tested with 15 SMEs. For the methodology, see www.centre-time.com

Conclusions

Is it better to be the 'first mover' – or is it wiser to wait, observe and then act, learning from the experience of others while accepting the risk of being overtaken? It is a classic dilemma. A step-by-step approach combined with close market monitoring and strong responsiveness appears to be the best way to reduce risks while at the same time improving the firm's position. Pressure for change, however, can come from customers themselves, particularly in B2B markets or from other partners, suppliers and distributors.

This article has summarised the key points which an enterprise needs to consider if it wishes to take full advantage of electronic commerce. The new market structures, the adoption process of the enterprise and its role as a learning organisation, the reengineering of the marketing and sales processes, the business evolution and the identification of the key competences are all issues which will evolve over time. What is certain is that the new and complex challenges induced by electronic commerce demand a change in corporate culture, as well as a fresh approach to strategy, organisation and the sales and marketing competences.

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