
Editorial

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This special issue of the *International Journal of Business Performance Management* is dedicated to strategic planning and development in e-business. E-business has changed competition between firms and our way of consuming. Considering the growing importance of this new competitive arena, the technology will probably become less crucial, being a common feature of most firms. E-business *management* will be the weapon that wins success.

Traditional strategic schemes can no longer cope with these changes so adjustments are imperative. In e-business models, customers and channels must precede the definition of the internal processes; also the configuration of the assets is more oriented towards competencies and 'virtual resources'.

The strategic contents in terms of objectives and levers are revolutionised. Performance measurement and value analysis for 'click' companies is very different from that for 'brick' companies. Moreover, managerial practices differ, giving much more opportunities but also determining problems, often ascribable to 'infancy' and unknown dynamics.

This special issue seeks to draw together research and experiences in many aspects of e-business Strategic Planning & Development (eBSP&D), and consequently identify the areas where further research is needed.

E-business is based on internet technology (TCP/IP protocol) and regards both dotcoms and established companies, but in very different ways. For the dotcoms the internet is the essence of their strategies (selling products/services and offering advertising space), whilst for established firms the internet is an opportunity to create synergism with its off-line activities (this can be order-winning in the short and medium term, because in the long term if the majority of firms exploit internet facilities the advantage will be reduced) [1].

E-business means many things: e-commerce (Business-to-Business and Business-to-Consumer), e-banking, e-recruiting, e-information sharing and data warehousing, e-operational resource management, Network Enterprise Resource Planning and Control (NERP), collaborative tools for co-design, e-learning, e-government for institutions, etc. The concept of e-business, in fact, includes all the relationships, information and operational processes organised and managed in an electronic way. It not only regards commercial transactions, but also information exchange and knowledge management for an enterprise and its networks of competence centres, sellers, customers, suppliers and institutions [2]. Therefore, one can speak of a 'knowledge-based extended enterprise'.

E-businesses have one trait in common – the utilisation of web technology instead of proprietary EDI technologies (Electronic Data Interchange). The basic competitive advantage of e-business is that different hardware and software operating systems can be integrated to facilitate communication between the points of a network. This is realised through hypertext interfaces (especially XML – eXtensive Mark-up Language) and private extranet (in this latter, a firewall separates internet from intranet – also known as Business-to-Employee – and then several intranets are connected to each other by extranet), creating real e-business communities [3]. Internet, intranet and extranet are the typologies for e-business implementation.

For the most part nowadays, e-business concerns e-commerce, and can involve two or more firms 'Business-to-Business' (B2B) or one firm and its final customers 'Business-to-Consumer' (B2C). B2B is actually the more important, and in the USA, accounts for about 80% of the revenues; it is estimated that in 2004 it will make up 90% of the online transactions, half of them in the USA, one quarter in Europe and the rest in the Far East [4].

Whichever it is (B2B or B2C), the traditional value chain disintegrates. The most important visible aspect is the reduced role of intermediaries. However, a value network reconstruction can take place, with new actors, such as 'cybermediaries' of the new electronic markets [5], and 'virtualised enterprises' [6].

In the first case, the electronic markets realise 'cybermalls' (or e-marketplaces), which may be 'horizontal' (for general spending good and services) or, more usually, 'vertical' (specific to one sector). The associate web portal has a primary role: it includes a search engine and acts as a broker.

In the second case, no new actors appear, but the main firm of a physical network evolves into a 'virtualised enterprise', and assumes the role of network coordinator, carrying out this role through the internet. This virtual enterprise focuses on the product and not on the process of activities. It is a temporary organisation whose aim is to serve products and services to numerous customers, crossing borders and utilising e-business technologies. Consequently, the virtual enterprise practices e-commerce and acts as a 'product integrator', joining random/diversified demands and scattered production competencies with distributed [7] or aligned points, in the latter reconstructing the value chain [8].

One major advantage is e-procurement, which has a strong effect on supply chain management because it is a paper-less, real-time, operationally efficient, fast, information-based channel (an example is the ANX – Automotive Network eXchange, organised by Chrysler, Ford and General Motors).

If the role of the virtual enterprise is less marked, the result is simply an open network, where market logic prevails in relations with members of the network (competition/cooperation: ‘coopetition’). Such a network is lean, flexible and decentralised, made up of specialised units, and resembling a multi-centred nervous system (‘heterarchy’ [9] or ‘virtual cluster’ [10]).

In both cases (cybermall and virtualised enterprises) there are other actors, playing supporting roles, that facilitate internetworking i.e. infrastructure and service providers, e-content consultants for information and operations, etc.

The main theories that help the study of these processes of change are: the *transaction cost theory* and the *principal-agent theory*. The former determines whether the transactions are economically more advantageous when carried out through the market rather than an internal hierarchy (costs are lowered because the new technologies reduce decisional uncertainty). The latter analyses the role of the broker and the effect of brokering being performed by the electronic markets: the ‘principal’, the proprietor of the transaction, employs ‘agents’ for specific operations (e.g., sales) securing their loyalty with incentives and reciprocal investments (agents will tend to disappear, with the consequent reduction in expenditure, if the same benefits guaranteed by brokering can be attained i.e. information, warehousing and logistics, security and insurance, and liquidity).

According to Boisot [11], the neoclassical ‘production function’ capital *versus* labour could be replaced – in the Net Economy – by an evolutionary ‘production function’ in the plane information inputs *versus* material inputs. Learning and experience afford the opportunity to first move backwards along the curve (with less material and more information) and then reduce information keeping the same amount of material, thanks to the ‘insight’ process, i.e. an optimisation of data management and the creation of new knowledge. It is a breakthrough similar to technological innovation in the traditional economy, so the evolutionary production function can be lowered on the plane information inputs *versus* material inputs, operating with less information and less material.

New competitive models have emerged in the Net Economy era. These can be analysed focusing attention on either knowledge management within the e-business community, or the role of Information and Communication Technologies (ICT) in a firm’s strategy. In the former, according to Venkatraman and Henderson [12], the business model is based on virtual knowledge networks, made up of ‘virtual encounters’ (new electronic clients), ‘virtual sourcing’ (which distinguishes between core activities inside and electronic outsourcing of all the other activities), and ‘virtual expertise’ (with a learning network). In the latter, according to Kalakota and Robinson [13], strategic planning and development are reversed. In fact, if the traditional model uses internal competencies and assets to define products and services, and deliver them to clients through selling channels, the e-business models start directly from customers’ requirements, integrate product and service channels, and manage internal assets and competencies efficiently. Consequently, learning processes for customer satisfaction are deployed, coordination is centralised whilst management is decentralised, and one should

not think only about adding value to ones own activity, but concentrate on 'inventing' value [14].

The primary engine of all these changes generated by e-business is agency/transaction costs reduction [15] and new market opportunities [16], especially for small and medium enterprises (SMEs) which can have easier access to a wider range of markets. In particular it is possible to create 'Integrated Internet Marketing' thus reuniting the concepts of institutional and commercial communication, and the sales/product support services [17].

The other effects of e-business include lower supplier research costs and greater availability of information, and a certain standardisation of products linked to a levelling of prices, which undergo more frequent adjustments. E-business technologies can also lead to closer ties between an enterprise and its clients, activate the CRM principles (Customer Relationship Management), provide a wide choice of customised products and services and a share in their design as 'prosumer' [18]. In other words, starting from e-catalogues, it is possible for a customer to configure and manage an order.

According to many authors, the quality of the firm and its proposals will be the winning factor. Thus price (it can be reduced in respect to traditional sales but not too far) and reputation (guaranteed by third parties known as 'info-mediaries' [19] and the reputation of the cybermall itself, which can also offer competing products and services) become fundamental.

Furthermore, as reported by Unctad (United Nations Conference on Trade And Development [20]), the collapse of dotcom firms and the implosion of the speculative bubble do not diminish the impact that the internet and the new ICTs had, and will again have, on world economy and its prospects for development. In fact, such technologies are known as 'disruptive technologies', identical to other revolutionary technologies that have changed history (steam, electricity, telephone, cars), and the recent fall in the stock market should be interpreted as a short to medium term phenomena. However, according to Porter [21], for most existing industries and established companies, internet technology complements rather than cannibalises existing ways of doing business: robust competitive advantages still arise from traditional strengths such as unique products, proprietary content, and distinctive physical activities.

There are limits to the diffusion of e-commerce, related to security, commercial law, taxation, and goods distribution. To rectify the security problem, certification authorities have been appointed that can grant digital signs and control identities, while new cybermediation services can help payment systems (e-cash, smart cards, etc.) and offer different types of insurance. To manage the legal aspects of commerce a common language and laws are required for internet transactions. The logistical distribution and delivery of goods can be handled by instruments furnished by new technologies, such as scan-based tracking, cross-docking, point-of-sales data capture, advanced shipment notification, and vendor managed inventories. Most probably the traditional couriers (DHL, FedEx, UPS, etc.) will greatly expand their e-logistics services.

In contrast to the general belief, there are often considerable barriers to entry, such as the presence on the market of well-known traders and the specialised knowledge needed to transact the new business. In fact some people maintain that e-business, at least in this early phase, can help more in the selling of information-intensive services rather than other items.

E-business technologies are considered to be still actively evolving in regard to both the speed of surfing on the internet and particularly the mobile internet (with WAP mobile terminals on GPRS networks, whilst awaiting the arrival of the standard UMTS).

In short, with its connective characteristics (speed and reducing distances), and concept of 'open system', e-business will have a huge impact on enterprises for the next decade or so.

The paper by Feng Li considers strategic scenarios and business models in the banking industry, a sector where e-business, and the internet in particular, are rapidly changing the way and rules of business. Simply deploying the internet as a more efficient operative channel does not bring sustainable strategic advantages. To compete effectively, banks need to embrace a new set of strategic thinking. For example, instead of providing a full range of services through an integrated process, some banks could choose to specialise in one section of the process (unbundling of integrated services), and constitute alliances with web operators. Based on 11 intensive case studies conducted in the UK and internet-based studies on another 29 banks, Feng Li highlights eight emerging business models to be applied to internet banking. These models can be very helpful when developing a bank's strategy in an e-business environment.

The paper by Beirne and Stewart examines the key strategic issue of financing e-business, and in particular e-business firms. Under these circumstances, physical assets are far less important than human capital. External financing is difficult (many of these firms are not yet making a profit) but stock options could be a way to remunerate employees (not only managers), besides creating 'sticky assets'. An interesting 'burn rate' index is proposed for measuring the length of time a firm with negative net income can survive before needing additional funding or, alternatively, how quickly such a company is spending its cash on hand.

The paper by Bertelè, Balocco, Gandini and Rangone describes the evolution of e-commerce B2C in Italy and analyses the main business models. These latter are characterised by their innovative contents and integration with off-line channels. Based on significant cases, the proposed scheme could be very useful, not only for interpreting strategic planning, but also for developing business moves. In particular three moves regarding multi-channel strategies are singled out. However, most of these e-commerce initiatives exploit the synergy between online and off-line channels to a limited extent, often repeating the same business model online and off-line. In the future a more innovative characterisation of online offer, and true integration with off-line operations, could lead to greater profitability and results.

The paper by Fitzsimmons and Okada continues with the theme of e-commerce strategies, but from the Japanese point of view, which is often quite different from that in Europe and the USA. This paper is interesting because e-commerce will spread throughout many countries in the near future, but will vary depending on the conditions in each individual nation. Besides differences in price and language, strategic planning and development must consider where the customers and retailers of that country are located, the shopping patterns, payment methods, customer service expectation, diffusion of internet and its usage, etc.

The paper by Sohal, Power and Terziovski focuses on B2B e-commerce from the prospect of the retail supply chain. Adoption of the European Article Numbering system ('barcode') means that instruments such as cross-docking, point-of-sales, advanced shipment notification and vendor managed inventories can be used. Based on the

Australian experience, this paper explores the major issues encountered by suppliers and retail groups, and the outcome. The efficient management of the supply chain is, in fact, of vital importance for retailers, who are driven by the need to be responsive and cost effective in the context of changing business rules, facilitated by a dynamic technological environment.

The paper by Giustiniano and Fratocchi focuses on how the internet can support the virtualisation of small and medium enterprises (SMEs), and expand their markets. The authors have collected data which allows them to explore the relationships between the internationalisation process and e-commerce. To assimilate all the potentialities of the internet and the new technologies a radical change in business logic is required and also new suitable organisational competencies. They suggest solutions such as consortia of producers, marketplaces, customer relationship management tools adapted to the web, etc.

The paper by Rangone, Balocco, Bassani and Conforti Andreoni presents a framework to support the formulation of internet strategy in traditional enterprises ('incumbents'). The framework develops an external analysis (facing environmental plus competitive variables), an internal analysis (based upon a firm's infrastructures, resources and skills, and operational processes), the definition of e-strategy intent (business model improvement or re-thinking) and, finally, the e-business project selection (projects are classified according to types of functionalities and users).

The paper by Marr, Schiuma and Neely assesses the assets of strategic knowledge in e-business. Using important cases they attempt to rationalise the concept of knowledge/intangible assets in terms of 'intellectual capital' (IC). A Knowledge Assets Map is proposed for the identification and management of the key capabilities which constitute a firm's IC – relations with stakeholders, human resources (their competencies, motivation and loyalty), the physical infrastructure for knowledge management (Information Technology), culture (the organisation's value and style of management), practices and routines and intellectual property. The authors furnish useful metrics to be used in order to measure and manage these key capabilities, which are a critical shortcoming in e-business, where intangible assets are often the real value of the firm and its competitive weapon.

The paper by Alfaro Saiz, Ortiz Bas, Poler Escoto and Franco deals with Performance Measurement Systems (PMS) suited to e-business Enterprises. While PMSs are being widely proposed in literature, few specifically address e-business requirements. The authors propose a PMS based on a business process management methodology, strongly integrated with suppliers and customers at the operational level and with stakeholders at the strategic level, and with widespread IT to track performances.

Finally the paper by Roberto Gilli, Massimo Pulcini, Martina Zavagno and myself considers the strategic role of e-learning in supporting the development of enterprises. Nowadays it is universally agreed that human resources are at the centre of an enterprise and the real source of its competitive advantage. As a consequence, education and training are vitally important. They must be continuous, effective and with limited impact on labour time. Today internet-based technologies can support and revolutionise the method of learning. The paper focuses on the competitive advantages of e-learning, and presents the principal ambits of application and critical factors for implementation, such as motivation and learning-by-experience.

I hope this issue will contribute to better exploit e-business innovation, and help researchers and managers to develop and test new methodologies and practices.

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