E-BUSINESS AND SUPPLY CHAIN INTEGRATION IN ROMANIAN COMPANIES

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A huge Gross Domestic Product deficit between America and Third World countries has been evident since the early 1970's. As the result, many American companies have decided to either close their production lines in America or move their factories to lower cost countries or they have bought products from Asian manufactures. This enabled them to gain bigger marketing power by gaining access to a cheaper production price. The supply chain has lengthened from a few hundred miles to at least ten thousand miles but the product prices, in addition to shipping costs, are still cheaper than before they made this change. In the 1970s, finding a manufacturer, or starting a new company, in another country was not easy, especially when facing cultural differences and legal issues. Also, bringing the products across the Pacific Ocean back to the United States can be very difficult because more third parties are involved in the supply chain. Information from Asia is not easy to find and much of the secondary information could be deemed useless or incorrect. These difficulties had brought some new jobs into the business, such as brokers and agencies. In the first stage of business globalization, during 1970 to 1980, brokers and agencies had done a good job with helping companies on both sides of the Pacific Ocean. In 1990's the emergence of the Internet allowed American companies and Asian manufactures to easily to reach each other without the necessity to pay commissions to agencies and brokers.

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ELECTRONIC BUSINESS

Electronic business is an innovation that modern day organisations cannot do without. It is based on technology, evolves with technological developments, digitises and automates business processes, is global and leads to improved competitiveness, efficiencies, increased market share, and business expansion. Technological developments applied to e-business results in new issues in the organisation, in dealing with business partners and customers, requires new laws and regulations and automated business processes. Conducting business electronically is a change from traditional ways of doing things, leading to large scale transformation of existing business. To attain business efficiencies from e-business, it is imperative that organisations effectively manage the e-business environment, and all associated changes to digitize and maintain the environment.

E-Commerce helps a network of supply chain partners to identify and respond quickly to changing customer demand captured over the Internet. e-Procurement allows companies to use the Internet for procuring direct or indirect materials, as well as handling value-added services like transportation, warehousing, customs clearing, payment, quality validation, and documentation.

Electronic Business, commonly referred to as "eBusiness" or "e-Business", may be defined as the utilization of information and communication technologies (ICT) in support of all the activities of business. Commerce constitutes the exchange of products and services between businesses, groups and individuals and hence can be seen as one of the essential activities of any business. Hence, electronic commerce or eCommerce focuses on the use of ICT to enable the external activities and relationships of the business with individuals, groups and other businesses.
Electronic business methods enable companies to link their internal and external data processing systems more efficiently and flexibly, to work more closely with suppliers and partners, and to better satisfy the needs and expectations of their customers.

In practice, e-business is more than just e-commerce. While e-business refers to more strategic focus with an emphasis on the functions that occur using electronic capabilities, e-commerce is a subset of an overall e-business strategy. E-commerce seeks to add revenue streams using the World Wide Web or the Internet to build and enhance relationships with clients and partners and to improve efficiency using the Empty Vessel strategy. Often, e-commerce involves the application of knowledge management systems.

E-business involves business processes spanning the entire value chain: electronic purchasing and supply chain management, processing orders electronically, handling customer service, and cooperating with business partners. Special technical standards for e-business facilitate the exchange of data between companies. E-business software solutions allow the integration of intra and inter firm business processes. E-business can be conducted using the Web, the Internet, intranets, extranets, or some combination of these.

**Subsets of Electronic Business**

Electronic business applications can be divided into three categories:

1. Internal business systems:
   - Customer Relationship Management (CRM)
   - Enterprise Resource Planning (ERP)
   - Document Management Systems (DMS)
   - Human Resources Management (HRM)
2. Enterprise communication and collaboration:
   - VoIP
   - Content Management System (CMS)
   - e-Mail
   - Voice Mail
   - Web conferencing
   - Digital work flows (or business process management)
   - internet shop
   - supply chain management (SCM)
   - online marketing

Although there are a wide range of subsets of electronic business that could be used to boost the efficiency of the Romanian companies, only few of them are used. To be more precise I can say that DMS, HRM, CRM applications are barely used in Romanian companies. For example S&D Pharma, a Romanian company implemented only few of the above subsets of the electronic business like an internet shop and an Enterprise Resource Planning (ERP) - integrated computer-based system used to manage internal and external resources, including tangible assets, financial resources, materials, and human resources.
Electronic Business Models Adopted by Romanian Companies

Romanian companies when decide go online, they have to decide which e-business models best suit their goals.

A business model is defined as the organization of product, service and information flows, and the source of revenues and benefits for suppliers and customers. The concept of e-business model is the same but used in the online presence. The following is a list of the currently most adopted e-business models in Romanian companies:

- E-shops
- E-commerce
- E-procurement
- E-malls
- E-auctions
- Virtual communities
- Collaboration platforms
- Value-chain integrators
- Information brokerage
- Telecommunication

Nowadays, in Romania, there is a tremendous increase in the number of e-shops, virtual communities, e-malls that put Romanian businesses in a new perspective as never before.

To survive and thrive in the Digital Era, Romanian companies must have extensive knowledge of the processes of SCM as well as of the different types of e-business models and their implications. They don't have to ask themselves if it is proper to do a business online but how to do it. Furthermore, businesses must learn to identify the key success factors that contribute to a sound e-business model and make use of them accordingly.

E-Business Classification in Romania

Roughly dividing the world into providers/producers and consumers/clients, one can classify e-businesses into various categories (see Figure 1). Companies (business), public institutions (administration), as well as private persons (consumer) can be both service providers and service consumers. What is important is that the electronic business relationship generates added value, which may take the form of either a monetary or an intangible contribution. In Romania can be distinguished that electronic business relationship as B2B (Business to Business), B2C (Business to Consumer), B2A (Business to Administration) are very frequent.

Figure 1 shows the three most important groups of market participants, along with their possible business connections. Each of these participants can appear as a provider or consumer of services. Thus, nine basic business relationships develop in total.

A further subset of exchange relationships are termed electronic government (eGovernment), namely the options A2A, A2B, and A2C. Administration-to-administration means the use of information and communication technologies by local government to electronically organize internal administrative channels. This can take place within a single level of administration (see the virtual community in Fig. 1), or between different levels of administration. In addition, officials can make offers to citizens (option A2C, where C means “Citizen”) or to companies (A2B). Electronic votes and elections are examples of A2C.
Figure 1. Various electronic business relationships

The letter A stands for administration and concerns not only government but also nongovernmental organizations (NGOs), such as nonprofit organizations (NPOs). The letter C stands for consumer or citizen. It is important to note that people can also appear as providers in the service provider and service consumer matrix. For example, option C2C refers to an electronic business relationship between individuals. Moreover, consumers or citizens can provide services for companies (C2B) or for administrative units (C2A).

ELECTRONIC COMMERCE AND SUPPLY CHAIN

The Internet can help companies lower costs throughout their supply chain. It is also possible to use the Internet to improve customer service. Industry is just starting to use the Internet, but as industrial leaders begin to use it they will force others in their industry to do the same thing. Both large firms and small firms will embrace the Internet over the next few years. The computer industry has already done so. As the use of the Internet allows decreased costs and increased customer contact, these firms will become more competitive and put increasing pressure on their competition to take the same steps.

What firms who are leaders in the Internet applications are striving to achieve is the transfer of many of their core processes to the Web. This means that firms will need Websites that can support online transactions and can share data with their customers’ databases and their suppliers’ database. Past investments in information technology
have primarily been focused on improving the internal operations of the firm. The Internet allows increased communication and connection with the outside world. Electronic business allows the benefits of speed and automation of internal processes to be shared with customers and suppliers. The ability to collaborate with others is an additional competitive advantage.

Companies can use the Internet to facilitate communication internally on what is referred to as an intranet. The information that would sit in logistics, or manufacturing or finance, etc., can be shared quickly between functions. This increases the amount of internal collaboration that is possible.

Collaboration can also be increased with suppliers and customers by creating an extranet. In extranet, corporate information is shared with selected outsiders. This allows collaboration and cooperation with the firms outside. It is hoped that suppliers will match their production patterns to the demand patterns they can observe as the demand information is shared.

E-commerce induces a completely new context for transport business, revealing two main influences on the management of logistics:
1. It blurs traditional company boundaries;
2. It makes completely new functions and companies appear (and others disappear).

The effect is even greater on intermodal transport management whose need for significant information means that the influence goes to the very core of business. We may say, therefore, that e-commerce redefines intermodal freight business.

CASE STUDY – ELECTRONIC SUPPLY CHAIN MANAGEMENT IMPLEMENTATION IN ROMANIAN COMPANIES

In this case there has been examined the impact of changing supply chains to e-supply chains, by improving IT architectures in a Romanian company.

For this study there has been analyzed the Romanian company S&D Pharma SRL, which is member of S&D Pharma Ltd. U.K. S&D Pharma, and also is one of the important distributors of pharmaceutical products in Romania. The company has 3 branches in Bucharest, Brasov and Cluj.

In April 2005 the company decided to replace the old informatics system with an integrated ERP solution and also an Internet shop, the objective of this action was: an improved efficiency- import and distribution of pharmaceutical products- through improving internal flows and processes. The ERP system provides a common database and establishes uniform policies and practices across the entire enterprise.

The implementation of the ERP took 6 months. In the first stage, the professionals from S&D Pharma met the representatives of the software company for shaping a proper understanding of business processes in pharmaceutical field.

As a result, it can be concluded that IT solution (ERP) brought the following advantages for the Romanian company:

- A better control of the activity, facilitated by instantly access to information;
- The sales volume increased 3 times due to the fact that the management used the time for business development instead of solving problems generated by ERP;
- Increased quality of business;
- A better integration with customers, suppliers, and support partners.
S&D Pharma should be aware of the major shifts in business focus influenced by SCM and pay particular attention to the emphasis upon collaboration, customer focus.

S&D Pharma must know its IT architectures well and the opportunities that these provide for doing business. If a specific need is identified, the IT architecture of the must be transformed in order to better support the SCM function. In fact, S&D Pharma can also approach the opportunities for gradual improvement offered by BPR or business process redesign, rather than business process reengineering described. Once S&D Pharma has maximized its SCM function via the use of IT and the Internet, it can also seek to improve particular processes that seem to lag behind in speed or performance. Since BPR offers considerable options, organisations can aim at redesigning individual processes or groups of processes simultaneously. Also some businesses can even go a step further and explore the opportunities of DBD (digital business design). Digital business design is described as the art and science of using digital technologies to expand a company’s strategic options. DBD is not about technology for its own sake; it is about serving customers, creating unique value propositions, leveraging talent, improving productivity, and increasing profits.

It has been identified in the study that the major barrier to increased supply chain integration is the mind set of the managers of the different firms involved. With or without an Internet, most managers view their firm as being an independent system. They do not have a systematic view of the supply chain. Given this attitude, it is difficult for a firm to develop the openness necessary to share information freely over an extranet.

CONCLUSIONS

All in all the digital economy is transforming the Romanian business and also the lives of people beyond recognition. There is a revolution in the way that things are produced and traded before they reach the final consumer. Also there is a revolution of rising expectations as the Romania is getting transformed to a national village and the access to the good things in life will no more be in the domain of the rich and influential, whether in cities or in the countryside.

Commerce constitutes the exchange of products and services between businesses, groups and individuals and hence can be seen as one of the essential activities of any business. Electronic Business, commonly referred to as "eBusiness" or "e-Business", is the utilization of information and communication technologies (ICT) in support of all the activities of business.

In summary, in order to successfully transform their SCM, organisations must realize that by changing their supply chains to e-supply chains, by improving their IT architectures, and by collaborating with suppliers, customers, and even rival companies along the supply chain, they multiply their chances of success.

REFERENCES


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