

A Study of Applications of E-Commerce

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<<< Abstract

There are wide varieties of e-commerce application areas that have flourished over the last decade in more detail, it is worth looking at one which may not be familiar to a reader, but which saves companies huge amounts of resources. The application involves a supply chain. A supply chain is a set of relationships between a number of companies who have a symbiotic relationship with each other in that one company supplies commodities or services to other companies which, in turn, supply commodities or services to other companies, and so on. The example was originally described by Kalakota and Robinson (1999) in their excellent management introduction to e-commerce. It concerns the processes involved in getting a bottle of Listerine mouthwash to the shelves of a retail chemist.

1. INTRODUCTION

Connecting companies together using network technology is not new: companies such as Procter & Gamble (The mouthwash example is an e-business application) have been leaders in this for years. However, the internet provides an infrastructure which enables individuals and companies to connect using a technology whose details are open to all and which can be easily implemented on virtually every computer in existence. The internet also provides a common interface to computing resources via a browser: everyone from the farmer in Australia to the manager of a retail chemist will be familiar with such technology and use it well.

2. E-COMMERCE APPLICATIONS

The next example is probably the one that you expected me to introduce first: that of selling goods over the internet. However, I deliberately introduced supply chain management first since it is an area where companies are making huge savings in their investment in internet technology. The investments in retailing using the internet (e-tailing) are only gradually being realised.

The archetypal e-tailing application is that of a bookseller such as Amazon. This company is renowned for the fact that it only sells books over the internet and doesn't even take telephone orders. It has one of the best organised websites and is continually referred to by journalists as an e-commerce success story.

Customers of Amazon interact with its website and carry out a number of functions including:

- browsing readers' reviews of books;

- reading feature articles about books and authors similar to those found in magazines and newspapers;
- searching for details of a book based on information such as the author's name or the title of the book;
- browsing the books which are the Amazon bestsellers;
- ordering books using credit cards or some other similar payment method;
- Tracking the progress of an order.

Behind the scenes of the Amazon site are a number of conventional functions which are found in all retailing applications, these include:

1. **STOCK MANAGEMENT:** keeping track of what books are in stock and ordering titles when stocks become low;
2. **PAYMENT MANAGEMENT:** paying suppliers of books for those that have been delivered;
3. **CUSTOMER PAYMENT MANAGEMENT:** keeping track of payments made by customers and of payments made by credit card companies and banks which correspond to the customer payments;
4. **DELIVERY:** the process of sending books to customers;
5. **MARKET ANALYSIS:** the process of analysing sales in order to determine what books to order and which to discount in the future. This analysis occurs at both the customer level and at a temporal level in that customer preferences are processed and the times and dates when they express these preferences are analysed; for example, in order to answer questions such as what books sell well at Christmas or at Easter?

Most of these functions would be associated with any bookseller, irrespective of whether they use the internet or not.

3. PROCUREMENT

The term procurement is used to describe the purchase of goods and services which are not *directly* used in the main business of a company. For example, a car manufacturer will procure stationery for its employees or procure training courses for them to attend in order to improve their skills.

A typical conventional procurement process consists of a number of steps:

- the person making the procurement expresses their

need by typing in details of a requisition using either a computer-based or paper-based form;

- the form is then dispatched to a member of staff who checks that it has been filled in correctly, that the amount is no larger than the amount that they are able to authorise and that there are sufficient funds available for purchase;
- if the form is authorised then it is sent on to a member of staff who is concerned with the purchasing of the good or service that is required; they then fill in a purchase requisition and send it off to the company who supplies the item that is to be purchased. If the item is over the limit for authorisation, then it is sent to someone who can authorise greater amounts.

This is in contrast to an e-procurement system which would automatically take the form produced by the person making the procurement, check that it satisfies all the company rules for procuring the item that is required, carry out authorisation if it is below a certain limit or send the form to someone who can carry out authorisation and then log the purchaser into the site of the supplier. He or she is then able to use this site to make the purchase, quoting an automatically generated procurement requisition number.

Again this is not hugely different to a conventional automated procurement system; however, it does cut out a number of inefficiencies at the purchase requisition end by virtue of the fact that the purchaser of a good or service is able to interact directly via the internet with the supplier. With procurement consuming as much as 10 per cent of a company's resources some large savings can be made by such an utilisation of e-commerce-based technology. Another example of the myth detailed in the previous section.

4. AUCTION SITES

These are sites on the web which run conventional auctions. There are two types of auction: those that are carried out in real time, where participants log in to an auction site using a browser at a specified time and bid for an article until the highest price is reached and no other bids are forthcoming. The other type of site – and the most common – is where an item is offered for sale and a date advertised after which no more bids are accepted. Such sites make a profit from two sources:

first they usually charge a commission on the items that are sold and, second, they display adverts which are viewed by visitors to the site. The auction site will then receive some fee for displaying the advert, a further fee if a visitor clicks on an advert and it takes them to the advertiser's website and another fee if they purchase something from this site. Again, this is just an online analogue of a conventional business.

5. EMAIL

This is one of the most ubiquitous technologies on the internet and, along with the World Wide Web, is the most used. When you write an email you use a program known as a mailer. When the email is completed it is sent via a number of computers known as email servers and via a number of other intermediate computers before it reaches its destination where it is read. In e-commerce applications email is a subsidiary, but important technology. It is used as the transport medium for mailing lists, for enabling customers to communicate with a company, for sending documents and data to customers and for keeping customers up to date about current products and services. Mailers are sometimes known as mail user agents while mail servers are sometimes known as mail transfer agents.

6. CONCLUSION

The rapid growth of internet and e-commerce has strong implications on economic and social activities. It is quite possible that these new technologies might transfer the future of the economic and social landscape. On the basis of above studies it is revealed that e-commerce applications have strong economic implications. Generally there are two types of potential economic gains in e-commerce applications. First are gains in efficiency and the second type potential benefits come from cost reductions. As e-commerce transcends the barriers of geographical boundaries, concepts like the place of transaction and the place of consumption become immaterial. In applications e-mail has become an integral part of business and its crucial to include in business continuity planning. Few businesses could function without e-commerce applications, and e-commerce applications provides a critical coordination tool during an outage, yet due to the cost and complexity of providing true e-commerce applications continuity may businesses do not have business continuity plans that protect e-commerce applications adequately. This paper looks at the approaches available to ensure e-commerce applications continuity from a high level.

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