

Introduction to E-Commerce

Commerce

Before we get into a complete discussion of **e-commerce**, it is helpful to have a good mental image of plain old commerce first. If you understand commerce, then e-commerce is an easy extension.

Merriam-Webster's Collegiate Dictionary gives a few definitions of commerce:

1: the exchange or buying and selling of commodities on a large scale involving transportation from place to place

So commerce is, quite simply, the exchange of goods and services, usually for money. We see commerce all around us in millions of different forms. When you buy something at a grocery store you are participating in commerce. In the same way, if you cart half of your possessions onto your front lawn for a yard sale, you are participating in commerce from a different angle. If you go to work each day for a company that produces a product, that is yet another link in the chain of commerce. When you think about commerce in these different ways, you instinctively recognize several different roles:

- **Buyers** - these are people with money who want to purchase a good or service.
- **Sellers** - these are the people who offer goods and services to buyers. Sellers are generally recognized in two different forms: **retailers** who sell directly to consumers and **wholesalers** or **distributors** who sell to retailers and other businesses.
- **Producers** - these are the people who create the products and services that sellers offer to buyers. A producer is always, by necessity, a seller as well. The producer sells the products produced to wholesalers, retailers or directly to the consumer.

You can see that at this high level, commerce is a fairly simple concept. Whether it is something as simple as a person making and selling popcorn on a street corner or as complex as a contractor delivering a space shuttle to NASA, all of commerce at its simplest level relies on buyers, sellers and producers.

The Elements of Commerce

When you get down to the actual elements of commerce and commercial transactions, things get slightly more complicated because you have to deal with the details. However, these details boil down to a finite number of steps. The following list highlights all of the elements of a typical commerce activity. In this case, the activity is the sale of some product by a retailer to a customer:

- If you would like to sell something to a customer, at the very core of the matter is the something itself. You must have a **product or service** to offer. The product can be anything from ball bearings to back rubs. You may get your products directly from a

producer, or you might go through a distributor to get them, or you may produce the products yourself.

- You must also have a **place** from which to sell your products. Place can sometimes be very ephemeral -- for example a phone number might be the place. If you are a customer in need of a massage, if you call "Judy's Massages, Inc." on the telephone to order a massage, and if Judy shows up at your office to give you a massage, then the phone number is the place where you purchased this service. For most physical products we tend to think of the place as a store or shop of some sort. But if you think about it a bit more you realize that the place for any traditional mail order company is the combination of an ad or a catalog and a phone number or a mail box.
- You need to figure out a way to get people to come to your place. This process is known as **marketing**. If no one knows that your place exists, you will never sell anything. Locating your place in a busy shopping center is one way to get traffic. Sending out a mail order catalog is another. There is also advertising, word of mouth and even the guy in a chicken suit who stands by the road waving at passing cars.
- You need a way to accept **orders**. At Wal-Mart this is handled by the check out line. In a mail order company the orders come in by mail or phone and are processed by employees of the company.
- You also need a way to accept **money**. If you are at Wal-Mart you know that you can use cash, check or credit cards to pay for products. Business-to-business transactions often use purchase orders. Many businesses do not require you to pay for the product or service at the time of delivery, and some products and services are delivered continuously (water, power, phone and pagers are like this). That gets into the whole area of **billing** and **collections**.
- You need a way to deliver the product or service, often known as **fulfillment**. At a store like Wal-mart fulfillment is automatic. The customer picks up the item of desire, pays for it and walks out the door. In mail-order businesses the item is packaged and mailed. Large items must be loaded onto trucks or trains and shipped.
- Sometimes customers do not like what they buy, so you need a way to accept **returns**. You may or may not charge certain fees for returns, and you may or may not require the customer to get authorization before returning anything.
- Sometimes a product breaks, so you need a way to honor warranty claims. For retailers this part of the transaction is often handled by the producer.
- Many products today are so complicated that they require **customer service** and **technical support** departments to help customers use them. Computers are a good example of this sort of product. On-going products like cell phone service may also require on-going customer service because customers want to change the service they receive over time. Traditional items (for example, a head of lettuce), generally require less support than modern electronic items.

You find all of these elements in any traditional mail order company. Whether the company is selling books, consumer products, information in the form of reports and papers, or services, all of these elements come into play.

In an e-commerce sales channel you find all of these elements as well, but they change slightly. You must have the following elements to conduct e-commerce:

- A product
- A place to sell the product - in e-commerce, a Web site displays the products in some way and acts as the place
- A way to get people to come to your Web site
- A way to accept orders - normally an on-line form of some sort
- A way to accept money - normally a merchant account handling [credit card](#) payments. This piece requires a secure ordering page and a connection to a bank. Or you may use more traditional billing techniques either online or through the mail.
- A fulfillment facility to ship products to customers (often outsource-able). In the case of software and information, however, fulfillment can occur over the Web through a file download mechanism.
- A way to accept returns
- A way to handle warranty claims if necessary
- A way to provide customer service (often through email, on-line forms, on-line knowledge bases and FAQs, et cetera)

In addition, there is often a strong desire to integrate other business functions or practices into the e-commerce offering. An extremely simple example -- you might want to be able to show the customer the exact status of an order.

Why the Hype?

There is a huge amount of hype that surrounds e-commerce. Given the similarities with mail order commerce, you may be wondering why the hype is so common. Take, for example, the following quotes:

- "...the estimate of U.S. retail e-commerce sales for the third quarter of 2005, adjusted for seasonal variation and holiday and trading-day differences, but not for price changes, was \$22.3 billion, an increase of 5.7 percent ($\pm 1.7\%$) from the second quarter of 2005." -- [U.S. Census Bureau](#)
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- "2004 online retail sales rose 23.8 percent to \$89 billion, representing 4.6 percent of total retail sales. Including travel, online sales also rose 23.8 percent to \$141.4 billion. Online retail sales will reach \$109.6 billion [in 2005]. Online sales including travel will rise to \$172.4 billion this year." -- [Forrester](#)
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- "Online ad growth of 33.7 percent is expected in 2005 to \$12.7 billion, raising a previous estimate of \$11.5 billion for the year. eMarketer had estimated 2004 ad revenue at \$9.5 billion." -- [eMarketer](#)

This sort of hype applies to a wide range of products. According to [eMarketer](#) the biggest product categories include:

- Computer products (hardware, software, accessories)
- Books
- Music
- Financial Services
- Entertainment
- Home Electronics
- Apparel
- Gifts and flowers
- Travel services
- Toys
- Tickets
- Information

The Dell Example

The hype doesn't explain the frantic rush by companies, both large and small, to get to the Web. Nor does it justify a small business making a big expenditure on an e-commerce facility. What is driving this sort of frenzy? To understand it a bit, let's take a look at one of the most successful e-commerce companies: [Dell](#).

Dell is a straightforward company that, like a host of others, sells custom-configured PCs to consumers and businesses. Dell started as a mail-order company that advertised in the back of magazines and sold their computers over the phone. Dell's e-commerce presence is widely publicized these days because Dell is able to sell so much merchandise over the Web. According to [IDG](#), Dell sold something like \$14,000,000 in equipment every day in 2000, and 25 percent of Dell's sales were over the Web.

Does this matter? Dell has been selling computers by mail over the phone for more than a decade. Mail order sales is a standard way of doing things that has been around for over a century (Sears, after all, was a mail order company originally). So if 25 percent of Dell's sales move over to the Web instead of using the telephone, is that a big deal? The answer could be **yes** for three reasons:

- If Dell were to lose 25 percent of its phone sales to achieve its 25 percent of sales over the web, then it is not clear that e-commerce has any advantage. Dell would be selling no more computers. But what if the sales conducted over the web cost the company less (for example, because the company does not have to hire someone to answer the phone)? Or what if people purchasing over the web tend to purchase more accessories? If the transaction cost on the web is lower, or if the presentation of merchandise on the web is more inviting and encourages larger transactions, then moving to the web is productive for Dell.
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- What if, in the process of selling merchandise over the Web, Dell lost no sales through its traditional phone channel? That is, what if there just happens to be a percentage of the population that prefers to buy things over the Web (perhaps because there is more time to think, or because you can try lots of different options to see what

happens to the final price, or because you can compare multiple vendors easily, or whatever). In building its web site to attract these buyers, Dell may be able to lure away customers from other vendors who do not offer such a service. This gives Dell a competitive advantage that lets it increase its market share.

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- There is also a widely held belief that once a customer starts working with a vendor, it is much easier to keep that customer than it is to bring in new customers. So if you can build brand loyalty for a web site early, it gives you an advantage over other vendors who try to enter the market later. Dell implemented its Web site very early, and that presumably gives it an advantage over the competition.

These three trends are the main drivers behind the e-commerce buzz. There are other factors as well.

The Lure of E-commerce

The following list summarizes what might be called the "lure of e-commerce":

- Lower transaction costs - if an e-commerce site is implemented well, the web can significantly lower both order-taking costs up front and customer service costs after the sale by automating processes.
- Larger purchases per transaction - [Amazon](#) offers a feature that no normal store offers. When you read the description of a book, you also can see "what other people who ordered this book also purchased." That is, you can see the related books that people are actually buying. Because of features like these it is common for people to buy more books that they might buy at a normal bookstore.
- Integration into the business cycle - A Web site that is well-integrated into the business cycle can offer customers more information than previously available. For example, if Dell tracks each computer through the manufacturing and shipping process, customers can see exactly where their order is at any time. This is what FedEx did when they introduced on-line package tracking - FedEx made far more information available to the customer.
- People can shop in different ways. Traditional mail order companies introduced the concept of shopping from home in your pajamas, and e-commerce offers this same luxury. New features that web sites offer include:
 - The ability to build an order over several days
 - The ability to configure products and see actual prices
 - The ability to easily build complicated custom orders
 - The ability to compare prices between multiple vendors easily
 - The ability to search large catalogs easily
- Larger catalogs - A company can build a catalog on the web that would never fit in an ordinary mailbox. For example, [Amazon](#) sells millions of books. Imagine trying to fit all of the information available in Amazon's database into a paper catalog!
- Improved customer interactions - With automated tools it is possible to interact with a customer in richer ways at virtually no cost. For example, the customer might get an email when the order is confirmed, when the order is shipped and after the order arrives. A happy customer is more likely to purchase something else from the company.

It is these sorts of advantages that create the buzz that surrounds e-commerce right now.

There is one final point for e-commerce that needs to be made. E-commerce allows people to create completely new business models. In a mail order company there is a high cost to printing and mailing catalogs that often end up in the trash. There is also a high cost in staffing the order-taking department that answers the phone. In e-commerce both the catalog distribution cost and the order taking cost fall toward zero. That means that it may be possible to offer products at a lower price, or to offer products that could not be offered before because of the change in cost dynamics.

However, it is important to point out that the impact of e-commerce only goes so far. Mail order sales channels offer many of these same advantages, but that does not stop your town from having a mall. The mall has social and entertainment aspects that attract people, and at the mall you can touch the product and take delivery instantly. E-commerce cannot offer any of these features. The mall is not going to go away anytime soon...

Easy and Hard Aspects of E-commerce(Advantages/Disadvantages)

The things that are hard about e-commerce include:

- Getting traffic to come to your Web site
- Getting traffic to return to your Web site a second time
- Differentiating yourself from the competition
- Getting people to buy something from your Web site. Having people look at your site is one thing. Getting them to actually type in their credit card numbers is another.
- Integrating an e-commerce Web site with existing business data (if applicable)

There are so many Web sites, and it is so easy to create a new e-commerce web site, that getting people to look at yours is the biggest problem.

The things that are easy about e-commerce, especially for small businesses and individuals, include:

- Creating the web site
- Taking the orders
- Accepting payment

There are innumerable companies that will help you build and put up your electronic store. We'll discuss some options in the next section.

Building an E-commerce Site

The things you need to keep in mind when thinking about building an e-commerce site include:

- Suppliers - this is no different from the concern that any normal store or mail order company has. Without good suppliers you cannot offer products.
- Your price point - a big part of e-commerce is the fact that price comparisons are extremely easy for the consumer. Your price point is important in a transparent market.
- Customer relations - E-commerce offers a variety of different ways to relate to your customer. E-mail, FAQs, knowledge bases, forums, chat rooms... Integrating these features into your e-commerce offering helps you differentiate yourself from the competition.
- The back end: fulfillment, returns, customer service - These processes make or break any retail establishment. They define, in a big way, your relationship with your customer.

When you think about e-commerce, you may also want to consider these other desirable capabilities:

- Gift-sending
- Affiliate programs
- Special discounts
- Repeat buyer programs
- Seasonal or periodic sales

The reason why you want to keep these things in mind is because they are all difficult unless your e-commerce software supports them. If the software does support them, they are trivial.