Chapter II

E-Commerce: The Benefits, Security Risks, and Countermeasures

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ABSTRACT

E-commerce has grown immensely with the increase in activity on the Internet, and this increase in activity, while immeasurable, has also presented several different security risks. As with any other means of business, it cannot be assumed that all players will abide by a code of moral conduct. This essentially means that all users of e-commerce, whether they are on the consumer or supplier side, must be wary of the problems that this technology can present. Both the legal and illegal services present a unique set of security risks that can present immense problems to anyone who is affected by them. In order to combat these problems, the user must first understand them. Only then will they be able to take proper action, so as to protect themselves from the risks presented by online music files. To build this foundation of understanding, this chapter is going to first focus on not only the benefits of e-commerce, but also the security threats and risks that it presents, along with the main problems organizations and individuals face as a result. Lastly, the discussion will go on to argue some of the proposals that have been established that have the goal of making e-commerce more secure.

INTRODUCTION: WHY E-COMMERCE?

E-commerce is a very useful and convenient technology, but it is something that must not be taken lightly, and until its security risks are worked out and lessened, it will not be able to reach its full potential (Ghosh, 1998). The technology is a necessary asset for any business that wants to be successful in today’s high tech world. Customers expect that they will be able to purchase items online and that their personal and financial information will be secure and not given to other companies without their consent.

For customers, e-commerce can be used in new commercial ways to do such things as file and pay taxes and attend to other personal matters (Scheer, 2005). Also, e-commerce makes it convenient for customers, because it enables them to directly make payments for purchases made online. A bill can be sent electronically to a customer, who then can authorize the bank by electronic check to transfer funds from the customer’s account to the vendor’s account. The
customer’s monthly electronic bank statement then lists the payments.

Technically, e-commerce is a new channel for doing common, everyday actions via the Internet. The Internet’s main feature is that it improves productivity, streamlines some operations, and achieves cost savings. Companies that want to affect measures for cost control should use e-commerce as a gateway to more customers, as well as to save on overhead. E-commerce reduces operating costs by improving coordination and communication in manufacturing, sales, and distribution. Research has shown that further cost reductions enhance competitive position, and may also ensure better operating efficiency, but can also lead to downsizing (Mazon, 2001). Using the Internet can also reduce or lower costs by eliminating paper use for certain information—for instance, issuing and filling purchase orders in electronic form, rather than the traditional paper form. Depending on the type of items the company is selling, the company can actually deliver over the Internet, eliminating the need for packaging and printed documentation (Ghosh, 1998). Product upgrades may be automatically transmitted to the customer by computer, instead of subject to the will and memory of an employee to upgrade a product. Furthermore, online electronic catalogs save time and eliminate the costs of printing and mailing. All of these examples make it apparent that e-commerce can be a very cost-effective way of doing business for both the consumer and supplier.

Another positive reason to move toward e-commerce as a business method is the competitive advantage an e-commerce business may have over physical businesses. A “digitalized” company can gain this advantage by adding special features, more options, adapting to variability in customer demand, providing more and better products and services, shortening the product life cycle, and eliminating geographic boundaries (Kuzic, 2005). To have a successful site, the company should offer automated suggestions for accessories, add-ons, or other compatible products throughout the product selection process. The company must also offer substitutions for items that are out of stock. These features are necessary, since digitalized companies do not have the advantage of a live employee to suggest these factors to customers. Furthermore, companies should offer customers the ability to pick up the item in the store that is located nearest to them. This allows for the cost of shipping and packaging to be low, compared to if the company would have to send the package to the customer. This can also serve as a mechanism to ensure that the proper product is going home with the customer.

Some other key reasons that a company would want to participate in e-commerce are related to distribution control, inventory management, better management of supplier relationships, making payment management more efficient, and channeling management (Ghosh, 1998). Distribution control is improved by using e-commerce to progress how shipping is done, and improve how purchase orders, shipping notices, bills of lading, and claims are transmitted. E-commerce also enhances the timeliness and accuracy of the data transmitted in these documents. When it comes to inventory management, e-commerce is beneficial because it takes less time between order and shipment. Inventory information is transmitted instantly, which is important for inventory management, as stock is always up to date. Also, with e-commerce, there is better tracking than with physical stores, because it is done electronically. This allows for things such as better documentation for audits. As a result, inventory can be reduced, inventory turns over faster, and stocking of merchandise is better. E-commerce also makes it easier for companies to reduce the number of suppliers and the cost of using these suppliers. A result, an e-commerce company would need fewer staff members to process purchase orders, which will further reduce cycle time between a placement order and product shipment (Kuzic, 2005). Payment management is also better achieved electronically, because when electronically linking businesses with suppliers and distributors, e-commerce enables electronic transmission of payments. This inevitably leads to more accurate computation of invoices, faster invoice processing, and lower transaction costs. Also, in e-commerce, electronic linking of manufacturing information with global distributors and resellers lowers man-hours and facilitates the sharing of more reliable data.

SECURITY RISKS IN CURRENT E-COMMERCE

Despite the potential rewards of conducting business via the Internet, there are several major organizations that have been unenthusiastic to embrace e-commerce. Research has shown that there are critical reasons for this concern that we discuss in this section.
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