

# Consumer Reservations Concerning Internet Commerce

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**ABSTRACT:** Though consumer confidence is not the only barrier that prevents the development of the electronic marketplace, it is the largest as well as the most difficult to surmount. As these consumer reservations dissipate, more and more consumers will begin to purchase goods over the Internet. The progress that has already been made and the continued efforts of the industry and individual vendors to erase the present consumer-confidence issues no doubt will induce many more buyers to take advantage of the consumer opportunities provided by Internet commerce.

The Internet is rapidly becoming an important medium by which companies do their business. Large computer networks, like the Internet, make it easy for businesses to advertise, sell products, and communicate with their customers. The development of the World Wide Web has increased the effectiveness of Internet business because it allows individuals and organizations to easily create their own web space. The web space, or page, can be used to inform consumers about products or services and can be viewed by anyone with access to a compatible browser. This ease of access to the World Wide Web from home and office situations has greatly increased the market size for businesses who utilize it. The convenience of buying and selling online could be extremely beneficial to consumers and businesses. However, online marketing has barely begun to realize its potential. "[C]urrently, the majority of consumers use the Web to browse or search much more than actually to purchase something" (Hoffman, Novak, Chatterjee). At this point, the industry is faced with one large setback. Consumer confidence is extremely low for Internet commerce. Some of the greatest areas of concern are security and privacy of personal information, the safety of international trade, and the lack of a uniform payment system. This type of market will never reach its true potential if Internet vendors do not take action to relieve the concerns of consumers.

At present, many problems impede the growth of Internet commerce. Today's businesses must understand that certain physical goods can be marketed with much greater efficiency than others. Products that are computer-related are the most popular items sold through the web, with Books and flowers close behind. The reason that these products are easier to sell online is that they can be identified without close inspection. It would be hard for a consumer to purchase an antique, for example, via the Internet because the web offers little or no opportunity to inspect the product. This gives rise to another concern that consumers express about commerce on the Internet. Consumers need a way to be sure that they

are going to get what they think they are purchasing. Another reason that some products don't sell well through the Internet can be attributed to the expense of delivery. CDs, books, and flowers are all relatively cheap to deliver. On the other hand, appliances and other large products would be extremely expensive to ship and deliver. Size isn't the only factor that affects the cost of delivery. The distance that a product must travel can also affect the price. When international trade slides into the picture, even the smaller items can become rather expensive to deliver to the consumer.

The most efficient types of products to sell on the web are any products that can be reduced to digital form and delivered directly through the Internet. Computer software is an example of a digital product. Many types of software have an evaluation version that can be downloaded for free so the consumer can test the product before the full version is purchased. Information is another example of the type of product that can be digital. An example of this is a US organization that offers weather information especially for farmers. In addition, online magazines are becoming prevalent on the World Wide Web. Music and video are also digital product candidates due to the rapidly developing technology that allows for easy conversion to a digital state. A vendor who can reduce a product to digital form gives himself a definite advantage by doing away with the problems involved with delivery. "[T]here is potential for a genuinely global market, as the distance between buyer and seller is irrelevant to the cost of completing a purchase" (Cuneo, 6).

The service industry is another area of Internet business that will grow if consumers gain confidence in the market. Internet services include banking, insurance, travel services, and stock-broking. Online banking usually consists of funds transfers and viewing account information only. Some banks have installed computer programs that allow their customers to view their statements and bring up images of their own checks once the drafts have cleared. Even though the banking industry is rapidly improving, the development of computer-based electronic cash and stored value cards will allow the online banking industry to become much more advanced. Insurance firms that do business online offer advantages of speed and convenience. It is hard to be sure, however, with the present methods of authorization, that insurance company to which one is sending money is genuine. The sale of stocks and bonds is quickly growing into one of the largest areas of Internet service because using online brokers is an inexpensive alternative to conventional firms that usually complete transactions in person, or over the phone. "The commissions

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that are received by the broker are drastically reduced due to the massive amount of people that each broker can advise" (Hoffman, Novak, Chatterjee). The advantages gained by using the Internet to sell services include greater consumer convenience, larger markets, better communication with customers, and lower costs. Though the Internet may be a time and money-saving option for many service industries, others may only be able to use the Internet for certain aspects of their business. For example, real estate agents might be able to use the Internet to improve client access to information about properties for sale, but the potential buyers are not able to physically inspect the properties.

Though there are many obvious advantages for consumers and organizations to do business online, consumers have learned to be wary of Internet commerce. "Many businesses are reporting that the level of sales over the Internet has been disappointing" (Survey-Net). The consumer wariness found today appears as a direct result of the severe nature of consumer fears about doing business online. The majority of today's consumers feel that the savings that might be possible are not worth the risk of transferring their personal information by insecure means. The first step that vendors must take to facilitate a greater trust in the Internet market is to aid in the development of secure and convenient methods of payment. The most important aspect of these new methods of payment is that they should provide consumers with clear and accurate information about what they do and do not offer. For instance, some methods in the developmental stage will provide the consumer with a detailed record of each transaction, others will only provide security of transfer with very limited ability to record it. Also, the terms and conditions provided to consumers should indicate the risks and obligations placed on them. The three basic types of payment that meet the above requirements include: secure authorization of funds transfer, computer based electronic cash, and stored value cards.

To illustrate the latest developments in online security, experts point to Visa and MasterCard, both of which are developing a transfer protocol that utilizes public key cryptography. Known as Secure Electronic Transaction, this protocol is configured in a way, with the help of public key cryptography, so the vendor never receives access to the consumer's card information. "Secure Electronic Transfer is now being tested and may be available by the end of 1997" (Cortese 81). When consumers use SET, the financial institution that keeps the cardholder's account will have a full record of the payments the cardholder has made. SET makes it easy for both the payer and the payee to identify the other. With a Secure Electronic Transfer the vendor must acknowledge the consumer's order. There are, however, some drawbacks to SET payments. For example, the consumer must have suitable software in order to use SET.

Computer-based electronic cash is another of the three developing payment methods for use on the World Wide Web. Computer-based electronic cash has already been set into use in the form of the DigiCash Ecash system. With the Ecash system, electronic "coins" can be downloaded to the consumer's hard drive. The consumer must purchase these "coins," however, by conventional means. Ecash payments

can be anonymous, but if the consumer waives his or her anonymity, he or she can have a thorough record of the payment and to whom it was made. Ecash has a mechanism for re-crediting the value of lost, stolen, or malfunctioning "coins." This is by far the cheapest of all of the online payment methods, costing less than a cent per transaction.

The last of the developing payment methods is stored value cards. The holder of a stored value card can transfer funds to the card and use it to transact with a suitable vendor. One such system, Mondex, will be able to transfer credit from one card to another over telecommunications systems. With the Mondex system, users would have to purchase a Mondex chip card and have a Mondex card acceptor installed on their home computers. However, these items are not expected to be expensive (Mondex International).

Each different method of online payment offers its own advantages. However, the advantages and disadvantages of the developing payment methods are not easily defined because each payment method is still in a period of testing and has not been declared ready for the market. Once the bugs are worked out of the newest online payment methods the public will be able to decide which one they deem best. Each will provide a varying level of security for the consumer. Methods that offer the most secure means of electronic funds transfer, of course, will be slightly more costly, but security seems to be the largest concern of consumers doing business on the World Wide Web (Global Concepts Payments System Consulting). The payment method that can most efficiently provide the consumer with a private, high-quality record of each transaction at a relatively low cost will emerge as the leader in the field of online payment methods. Companies, such as Mondex International, that are developing these new online payment methods hope that increased security will ease the concerns of consumers and prompt buyers to delve into the world of Internet commerce.

Another issue that concerns today's online consumers is the ease of cross-border transactions. A cross-border transaction takes place when a consumer purchases a product from a different country. The present methods of Internet transactions make it possible for a consumer to purchase a product from a company located in another country without even knowing it. When a consumer accesses a page on the World Wide Web, the only information that will always be displayed is the Uniform Resource Locator, or URL. The URL identifies the Internet vendor's home page. Though the URL does provide the location of the home page on the World Wide Web, it does not identify the state or country in which the actual company is located. The only information available to the consumer is that provided by the supplier.

The ease of cross-border transactions poses a number of problems to consumers and governments. The numerous laws dealing with international trade which apply to conventional commerce simply cannot be effectively enforced in the Internet marketplace. Sales tax laws are among those that will be extremely difficult to maintain over the World Wide Web. Many consumers may not view this as a disadvantage, but the United States Government, as well as governments from countries all around the globe, will disagree. The international commerce laws that will heavily affect consumers

are those that deal with the prevention of fraudulent business operations. Fraud on the Internet is an increasingly difficult problem for enforcement agencies because it is so easy to start up a business. The cost of opening a business on the Internet is extremely low compared even to mail-order types of fraudulent businesses. Conartists and thieves welcome the new market that the World Wide Web has created. They prey upon the weakly-protected and uninformed consumers who dare to do business on the Internet. These thieves can move easily from one web address to another and change the properties of their deceitful shadow companies. For example, they frequently give information about a product that doesn't exist. When a consumer orders one of the nonexistent products, the con-man promises delivery and accepts payment. When the product doesn't arrive as promised, the consumer often attempts to return to the home page from which he or she made the transaction only to find that the home page is no longer there. The problem of fraud is much more prevalent in Internet commerce because the laws that prevent consumer deception are not being enforced.

Given these obstacles to Internet commerce, companies hoping to broaden their market by utilizing the Internet have begun to create solutions to some of the problems that cause consumer dissatisfaction. These include self regulation by the industry, a widely accepted code of conduct, and consumer education. First, the Internet business community has a very strong incentive to provide a safe and acceptable business environment for consumers. The vendors' primary incentive is the growth in the online market that presumably will occur from their improvements to the online market place. Even though it may cost the suppliers more to make changes to ensure security, they will attempt to do it anyway in order to ease the concerns of potential consumers. One method to promote the creation of a code of conduct for vendors is for the government to mandate such a code. There have been efforts by the governments in some countries, like Australia, to create a code of conduct for Internet vendors; but a widely accepted draft has not yet been created. Still, the idea of government-mandated codes of conduct may not be as effective as its supporters like to think. For example, it will be difficult to enforce government power over an industry that virtually lacks regulation.

Consumer education is perhaps the most plausible option that has been presented in order to combat safety problems on the Internet. Government and business sponsored web pages are one means to educate consumers so they recognize fraudulent offers and particular scams that have been repeated. These pages advise about the risks that consumers take when they complete cross-border transactions. Most important, they inform consumers of the different avenues they can take if they have a problem with an Internet vendor. Also, Internet vendors can give information on their

pages that tell consumers of their policies concerning shipping, returns, and anything else. The easiest way to inform prospective consumers about Internet commerce is by utilizing the Internet itself. When consumers realize the role they must play in protecting their own safety within the Internet marketplace, they will be more willing to trust their own instincts and take the chance of jumping into the marketplace of the World Wide Web.

The aspect of web business that worries consumers considerably more than any other factor is the security and privacy of their personal information. Most Americans value their privacy and shudder at the thought of making their personal information easy to access by anyone or any institution. Several steps must be taken by the government and individual Internet vendors in order to lift consumer fears of Internet business and to ensure that the consumer's information will remain private. In order to do this, the government and businesses must come to an agreement about who will have access to a user's personal information, and then these entities must impose regulations that enforce their decision. More effective systems of encryption must be developed that can ensure that the only persons who may access the information sent are those for whom it was intended.

The most efficient and effective way to accomplish this is with public key cryptography. Invented in the 1970s, public key cryptography allows the creation of pairs of keys, each consisting of a public key and a private key. Information can be encrypted using either key. However, the information can only be decrypted by the other key in the pair. The major advantage of public key cryptography is that any two parties can communicate securely without having to share any secret information. Another feature of public key cryptography is its ability to add an electronic signature to any document. Ease of electronic signing also enables the consumer and the vendor to verify the authenticity of any correspondence. Public key cryptography also creates verifiable records of all arrangements made over the Internet. If public key cryptography is adopted by the Internet marketplace as the standard for secure transfers of information, this technology will greatly reduce the tension felt by prospective Internet consumers.

Though consumer confidence is not the only barrier that prevents the development of the electronic marketplace, it is the largest as well as the most difficult to surmount. As these consumer reservations dissipate, as they will in time, more and more consumers will begin to purchase goods over the Internet. The progress that has already been made and the continued efforts of the industry and individual vendors to erase the present consumer-confidence issues no doubt will induce many more buyers to take advantage of the consumer opportunities provided by Internet commerce.

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