The Internet and Commerce—The New Economy and the Old Economics

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ABSTRACT. In this article, the author demonstrates how the tools taught in principles of economics courses provide insight into the bursting of the e-tailing stock bubble. The author demonstrates that the tools of principles of economics provide keen insight for business decisionmaking.

The Internet, it has been said, is changing the face of retailing. Recent estimates show that sales over the Internet total over $61 billion (Bulkeley, 2000). “E-tailing” apparently got off to a grand start just as new dot-com firms were demonstrating extravagant success in their IPOs, in spite of the absence of profits. Perhaps the most widely known example is Amazon.com. Amazon, however, watched its stock price fall by 31% during the first 6 months of 2000. The plunge continued as Amazon’s stock closed at $13.55 a share on April 10, 2002. Two years earlier, the stock had been trading in the mid-$60 range (Bulkeley & Carlton, 2000).

As I write this article, estimates project no earnings for the company through the year 2003. Indeed, bond analysts at Lehman Brothers suggested in June 2000 that the financial underpinnings of Amazon are the same as those that have “driven innumerable retailers to disaster throughout history” (Streitfeld, 2000, p. E1).

Another “hot company” in the e-tailing market was CDNow, an on-line retailer of CDs and other music-related products. Recently, however, its stock prices have also fallen back to earth, from $23.25 to under $4 (Bulkeley & Carlton, 2000) a share because of negative earnings and forecasts. In view of these events, I would like to describe some of the economic issues that e-tailing raises and show that standard ideas of market structure provide good guidance for navigating the e-tailing waters.

A Move Toward Perfect Competition

1. A large number of buyers and sellers
2. Complete information
3. Homogeneous products
4. Free entry into and exit from the market

Though a competitive market is the ideal one in that it maximizes the total surplus in the economy, a move toward competition may not always be the best outcome for firms and investors. Let us briefly examine each of these conditions, together with the impact of e-tailing on buyers and sellers in the market.

Large Number of Buyers and Sellers

In one respect, the Internet broadens the market area for any particular buyer or seller. The company eBay, for instance, operates much like a nationwide garage sale. This can be good news for both buyers and sellers. The sellers are no longer constrained to sell their wares in what may be a small area (Anders, 1999). For instance, if I were to sell my old lunch-box collection in the rural area in which I live, I would face a very small market for those goods and likely would receive a lower price than if I were located in a more urban area. Additionally, transaction costs would be high if I were to try to access a larger market. With a service such as that provided by eBay, I am able to make these lunch boxes available to a nationwide market. This works to the advantage of small-market sellers.

The case of eBay also illustrates another benefit of e-commerce. It is likely that firms are imperfect distributors of goods. As a result, arbitrage opportunities exist as a result of a surplus of a good (such as Beanie Babies) in one market and a shortage of that good in another market. This induces individuals to buy in surplus markets and resell in short markets. Again, transaction costs would be high if buyers and sellers had to meet physically. By providing a virtual market space, the Internet reduces transaction costs and enables these efficiency-enhancing trades to take place. (From the viewpoint of the original seller of the prod-
Web sites containing product information ranging from simple technical specifications to complete user’s manuals. This information makes it easier to distinguish a product from those of other firms. Though this may work to the manufacturer’s advantage, the end retailer may find him- or herself at a bit of a disadvantage because the consumer may have gained product knowledge that is equal or superior to that of the salesperson. This is particularly true in tight labor markets.

The Internet also serves to reduce transaction costs. One assumption of a competitive market is that firms and consumers are reasonably well informed with regard to the prices charged in the market. The “tourist trap” model uses search costs as an explanation for nonstandard prices among closely located shops. In this model, there is some cost that a consumer must pay to gather price information. For instance, the cost may be the value of the time spent visiting a store to learn its prices. As a result, nonhomogeneous pricing can result for identical goods in stores within reasonably close proximity to one another. (Would you, for instance, walk from one end of a mall to another to save $.50 on an item?) However, various on-line shopping programs, such as mysimon.com, make it quite easy for consumers to search the prices for goods, and thus it would be expected that prices would become more standardized across the Net. Indeed, eBay has done battle recently with AuctionWatch.com to prevent AuctionWatch from displaying pricing and item information from eBay along with similar information from other auction sites.

**Homogeneous Products**

Homogeneous products in the competitive market may in fact be the downfall for many attempts at e-commerce. The Bertrand model describes the interactions of oligopoly firms selling homogeneous products under price competition. If the goods sold by a number of firms are perfect substitutes, then it is expected that prices should fall toward marginal cost. This is the result of a perfectly competitive market. A principal danger that e-commerce firms face is the lack of product differentiation. Consider the case of CDNow. If the primary product offered by CDNow is music CDs, this product is not very distinct from that offered by a multitude of other music retailers both on- and off-line. The Bertrand model would then lead us to believe that price will be the point of competition, and as a result, price should fall toward marginal cost. Though it may be appealing to consider that a firm may be the only one selling its particular good on the Internet, monopoly is not defined by the avenue of sales, but by the end product. From a consumer’s point of view, CDs purchased from CDNow, Tower Records, Wal-Mart, the BMG Music club, or a number of other outlets should be close to perfect substitutes.

Though it is clear that a fall in price toward marginal cost is a benefit for consumers, it is quite problematic for Internet retailers. Many e-tailers have spent considerable sums of money to establish name recognition and attract consumers. If prices fall toward marginal cost, they will find it hard to recover the fixed costs of operating the e-tailing site. As an example, Cha (2000) reported that, in fall 1999, iParty Corporation paid $1.8 million to America On-line for on-screen advertising. Such large advertising expenses need to be recovered if an e-tailing firm is to become profitable.

Product differentiation represents perhaps the biggest challenge for e-commerce firms: How does a firm establish product differentiation when its products are identical to those of other firms? That is, what can a firm such as CDNow do to motivate customers to search its Web site rather than buy CDs from other on-line vendors or traditional brick-and-mortar stores? One solution to this problem is to distinguish one’s service as from one’s product.

**Free Entry**

Economic theory suggests that when entry into a market is relatively easy, economic profits will be driven to zero. From an investor’s viewpoint, this is not particularly desirable. Though it is true that the process of establishing an
order-taking Web site is not particularly difficult, and thus in some respects entry should be easy, a valid argument can be made that there is a significant first-mover advantage to on-line commerce. Significant economic barriers to entry may be related to name recognition issues.

The significance of this is that investors will have little incentive to move money out of current uses and into new e-tailing stocks. In the auction market, the case of eBay is illustrative. Though there are numerous other auction sites (Amazon.com being one of the more well known), eBay has by far the highest volume of the auction sites. If you are a seller, you are then more inclined to sell on eBay because you will reach more potential buyers. Additionally, if you are a buyer, you will tend to look first where the majority of the sellers are—eBay. This is simply a form of first-mover advantage. The essential problem is no different than that faced by companies who wished to enter the copier market (against Xerox) or the facial tissue market (against Kleenex).

William M. Bulkeley and Jim Carlton (2000) illustrated some of these costs. They reported that Pets.com spent $30.7 million on marketing in a recent quarter and that a new e-tailer spends about $45 to acquire a customer. A recent study by Shop.org/Boston Consulting Group indicated that, whereas Internet-only retailers spend $82 to acquire a new customer (Quick, 2000), bricks-and-mortar-based e-tailers spend $31 and catalog-based e-tailers only $11 for the same purpose. Why might this be?

Consider the case of Tower Records. Tower Records had an existing network of bricks-and-mortar stores before entering the on-line fray. Tower was already shipping products to out-of-store consumers. Tower had existing purchasing and distribution networks. In addition, it already had name recognition in its product areas. As a result, on-line sales were simply an extension of Tower’s existing business activity, not an entry into a new market. This would then allow Tower to maintain profitable on-line divisions at a much lower output price than that sustained by Internet-only firms. So long as existing bricks-and-mortar firms could supply the market at these lower costs, one would expect that Internet-only firms eventually would be driven from the market in the face of price competition.

Who Has the On-Line Advantage?

Taking all of this into account, we can begin to determine who among those on-line may have the advantage. The result, though it may be surprising, is in many ways quite obvious. Start-up e-commerce firms attempting to take advantage of the new dot-com world are not likely to have the advantage. The advantage would lie with the bricks-and-mortar firms that expand to develop a Web presence.

Why is this? If on-line firms are competing primarily with regard to price, then, as mentioned previously, we should expect to see price fall close to marginal cost. Though this is a long-run competitive equilibrium outcome, it is only a viable outcome if fixed costs are relatively low. In many ways, the fixed costs of establishing a Web presence for an existing firm should be reasonably low. A new firm, however, may face high start-up costs (which may stem from advertising to establish name recognition) that would need to be recovered from sales.

What Does It All Mean?

Though economic activity may be changing, the laws of economics are not. Wise business decisionmakers will recognize that though the Internet provides a new means of matching buyers and sellers, it does not change the essential products being sold. In hindsight, we can easily see that many unsuccessful Internet entities (a) failed to appreciate the difference between the market for the product and the means of meeting the customer’s needs and (b) falsely assumed that selling on the Internet was a market unto itself. A key to success in Internet commerce, as in any form of commerce, is to recognize the market structure in which one operates and make strategic decisions accordingly.

A further key to success in Internet sales, as in any market, is to differentiate one’s product from other similar products. Though we most often think about product differentiation in terms of products that are similar, but distinct, firms selling on the Web need to begin to think about differentiation in terms of service and added value. An example drawn from Information Rules: A Strategic Guide to the Network Economy, by Carl Shapiro and Hal Varian (1999), is useful at this point. News services provide information. Information on its own is essentially a public good, and thus a good that is hard for a private market to profitably provide. However, if one considers the packaging of information to be the good, profit opportunities open up. A firm may realize that it is not profitable to try to resell news wire information but that it is profitable to collect and organize information that people may find useful and send only that information to them.

Finally, the world of e-commerce reminds us that an understanding of the basic principles of economics can provide great insight into business decisions. We are often surprised in hindsight that the laws of economics studied
long ago are flexible enough to accommodate market technologies unheard of even 10 years ago. Those who recognize this in advance will have a strategic advantage in the marketplace.

NOTES

2. CDNow was eventually purchased by Bertelsmann.
3. For more information on the tourist trap model, see Dennis W. Carlton and Jeffrey W. Perloff, Modern Industrial Organization (2nd ed., pp. 568-572), New York, Harper Collins.
4. It should be noted here that some price difference would be expected between, for instance, an on-line retailer and a local record store because of the important issue of timing. One may be perfectly willing to pay $3 more to have a CD immediately than to wait for it to be shipped. In addition, a proper understanding of the price differential would account for shipping costs.

REFERENCES
