

Chapter 4: The (Non) Ubiquity of E-tailing?

During the Internet euphoria, no market seemed immune from having an “e” put in front of its name. Yet the retail markets that most lend themselves to Internet sales have the particular characteristics of a) high value relative to bulk and b) items that are not ‘experience’ goods, c) not instant gratification goods and d) not perishable goods.

At the height of the Internet craze, received wisdom was that Internet retailing had advantages that were going to make brick-and-mortar firms relics, as if from some prehistoric age.

“Creation of New Distribution Channels Create Opportunities for Retailers. The Internet represents the potential creation of the greatest, most efficient distribution vehicle in the history of the planet.”

Mary Meeker, Morgan Stanley

"Economies and interest rates can come and go, but every business over the next few year must aggressively become an e-business."....

Robert Austrian, Banc of America.³⁵

Business Week: How will online selling change physical-world retailing?

Bezos (Amazon Founder): The short answer is that strip malls go away because physical retailing is not going to be able to compete on price. That can't happen. If you study the economics, online retailing is just more efficient. Online stores are going to be the low-cost providers.

As a result, that leaves other things for physical stores to compete on, and there are lots of dimensions that are important to customers besides price. One of them is entertainment...A second category of things is when you need something right now, this minute. In that case, you need to do the last inch of delivery yourself. Which means you pop in the car and go to the store, and you are willing to pay that half an hour to do that. ..So what's going to happen in my opinion is that stores are going to get more entertaining. The quality of the sales associates is going to go up to make that experience more pleasant. Stores are going to get cleaner. Every dimension you can imagine of making a physical store better is going to happen.³⁶

³⁵ Is There a Rationale That Can Justify New Economy's Lofty Stock Prices? By E.S. BROWNING, Wall Street Journal, March 23, 2000

³⁶ Business Week online, May 21, 1999, Q&A with Jeff Bezos. I should note that Bezos, in this interview, claims that increasing returns is not central to his business but that quality of service to consumers is. His view on this issue seems quite sophisticated. My major disagreement with his analysis is

The last few years have seen numerous Internet companies formed to sell everything from airline tickets to dog food. Everything, it seemed, was going to be sold over the Internet. The opinions expressed in the above quotation have been taken quite seriously. This claim that the Internet is an excellent vehicle for selling all products is **myth number 2**.

A. How Might the Internet Transform Business? E-ordering vs. E-retailing.

It is important to distinguish between Internet-based sales, which alters the nature of the current distribution system, versus using the Internet to replace the telephone as a means of ordering a product, but with distribution in the traditional sense. Ordering a pizza online, instead of calling up the store with the telephone is hardly a major transformation of the pizza business. In each case a local storefront will be used to create the pizza and serve as a location for delivery vehicles. The least important part of the transaction, the order, differs, but this is not a significant alteration in the pizza business.

There are several ways in which the Internet can alter a business model.

- a. It can alter the shopping experience, replacing actual physical stores and merchandise with virtual stores and virtual merchandise.
- b. It can alter the purchase of the product after shopping has been completed.
- c. It can alter the distribution (including warehousing and delivery) of the product, creating a distribution system to move the product from the manufacturer to the consumer.

A fully-transforming business model makeover would include all three of these components. Several new e-businesses, such as web-based grocery stores and some online bookstores (examined in D below) have attempted these complete makeovers. It is these markets that offer the greatest hope for major transformations, but also the greatest likelihood of failure.

In other instances partial makeovers are all that firms are likely to attempt. For example, many brick-and-mortar firms will allow some degree of shopping over the net, often as replacement for some sort of catalog or mail-

that he believes that the old distribution system is outdated for many retail businesses and can be improved upon by Internet firms.

order shopping that they had previously used. This type of activity combines (a) and (b) above.

If a firm only provides information about the product, but doesn't offer online purchase, the web would merely replace advertising circulars. This is a minor change for most firms, and one that would be unlikely to alter the industry in any serious way. The Internet just become one of several sources for the firm to try to communicate with potential customers.

It is difficult to see traditional mail-order surviving since the Internet would seem to dominate it on all fronts. Internet pages should be a less expensive technology for selling the product to consumers, and taking orders online should be faster and surer than using operators. Since both methods use the same distribution methods, there is no way for mail order to compensate for its deficiencies, unless it turns out that many consumers never adopt the web, or that consumers prefer to look at physical picture as opposed to pictures on the web, a rather implausible assumption.

B. Characteristics of Products that are Likely to Determine the Extent of the Internet Transformation.

Consumers like to see and touch many of the items they buy. They are used to and tend to demand instant gratification. They also like to save money. They like to avoid lines. All of these are somewhat contradictory desires, and only some are better met by virtual retailing than by traditional brick-and-mortar retailing.

Indisputably, the Internet does provide some advantages to consumers: a large selection that can be offered, no lineups at the register, and perhaps lower costs. Yet there are also many disadvantages. You cannot touch, smell, squeeze, shake, or feel products on the Internet. Transportation costs are likely to be higher, delivery less than immediate, and its current status as a sales-tax-free haven is likely to be short-lived.

Some products, such as airline tickets or the purchase of stocks from brokerage firms, can easily move to the web since these products have no disadvantage being sold on the web – no transportation costs, no examination required, no instant gratification. In these cases the Internet is the natural retail outlet. I expect that virtually all such products—software, music, videos, and other 'digital' intellectual products—to be sold over the web. Other products do not seem well-suited to sale on the net. The next few sections discuss the factors that distinguish the two categories of products.

i. Size and Bulk relative to Value

If we were to create a list of products based on the ratio of weight (bulk) to price, we would have a ranking of products that would tell us which products were likely to be shipped over large distances, and which were not. Some products, such as cement, are large and bulky, particularly relative to their value. At the other extreme are products like diamonds, which have very high value relative to bulk. Such a ranking would be very good at predicting which products are produced and shipped over large distances to customers and which products tend to be produced near consumers with minimum shipping.

Cement, having a low value relative to its weight, will tend to be produced locally. That is because the cost of shipping it over large distances would fairly quickly overwhelm production costs, giving local manufacturers a large advantage over distant manufacturers. Diamonds, on the other hand, can be shipped large distances with only a small percentage increase in price to cover the shipping, and thus it is not surprising that diamonds are shipped great distances

Digitized, information based products have the lowest ratio of weight to price for the simple reason that their weight is zero. These products travel at enormous speeds on electronic networks, such as the Internet. These products, by definition, must be delivered over a network, and the Internet is currently the king of the networks.

This is relevant to Internet commerce because products sold over the Internet have to be delivered to the consumer in some fashion.

Of course, it is important to also realize that these products were delivered to consumers in some fashion *before* the Internet came into being. The relevant criterion, therefore, would be to compare the costs of delivering products sold over the Internet versus the costs of delivering products through the more traditional mechanisms.

ii. Immediate Gratification Factor (Impulse buying)

Supermarkets carry several types of items at the checkout counter: candy, magazines, and of course, trashy tabloids. These are not randomly chosen items, but instead represent products that retailers believe tend to be purchased on a whim and for immediate gratification. Although it is certainly possible to stock up on candy, for example, it is often the case that a consumer really just wants to purchase one for immediate consumption. Indeed, the candy sold at the checkout counter is not sold as part of a large package but instead as individual items. For some consumers, the purchase

of an automobile can be an impulse good due perhaps to either great wealth or some form of personality disorder, so that this form of impulse buying need not be an aspect of the product itself. Although I do not pretend to be able to quantify the extent of these purchases, there are undoubtedly many that are made for immediate gratification.

With one important exception, it doesn't require any great effort to understand why these types of purchases are not going to occur over the Internet—the delivery delay on the Internet eliminates the possibility of immediate gratification. Therefore, these types of purchases will not migrate to the Internet.

Digital products are the important exception alluded to above. Because digital products can be transmitted over the Internet (except, as my girlfriend reminded me, if the connection fails) the delay between purchase and delight is actually greater when purchasing the products in brick-and-mortar stores, reversing the relative gratification speeds of the two types of retailing. In this instance, the Internet provides virtually immediate gratification, making it the channel of choice for digital products purchased by impulse buyers.

iii. Perishability

Some products lose their useful attributes over short periods time. Most foods that are not vacuum packed, particularly meats and produce, can last for only a few days or weeks before they go bad. Products with a shelf life of less than a few days are poor candidates to be sold over the Internet when that entails shipment of the product to the final consumer. The exception would be those small number of generally expensive food items that have been sold through mail order. Some small number of steaks, lobsters, desserts, and other food items have historically been sold and shipped in packages containing dry ice to keep them frozen during the delivery period. These are perishable foods with a very high ratio of value/shipping cost that could just as well be sold over the Internet. Clearly, it would be uneconomic to ship most ordinary perishables in this manner and the Internet

iv. Experience Products

Some products require close examination before the consumer is comfortable making a purchase. These would be products that do not have a high degree of uniformity at either a moment of time or over time. Perhaps also products that are bought infrequently so that consumers cannot rely on their learned information from their previous purchase since the products have since changed.

These would be products like clothing where consumers find fitting rooms to be very important. Automobiles, for which the 'drive' and looks are important, will tend to

require close inspection. Audio speakers that are highly variable and depend on the tastes of the consumer should fit into this category.

Examples of products that do not require inspection are books, where each copy of a title is essentially identical to all other copies, aspirins, videotapes, rulers, and so forth.

v. The Role of Taxes

Taxes, or more specifically the lack of taxes, are important if we wish to understand and predict the size and scope of Internet retailing. Currently, the Internet has benefited from its status as a tax-free haven, saving about 7% for most consumers. This is a substantial savings and would be expected to significantly increase Internet sales.

Governments, notwithstanding the contrary claims of politicians, are loathe to exempt significant economic activities from taxes. It is the height of naïveté to think otherwise. Further, brick-and-mortar retailers can legitimately claim that they are being unfairly penalized in their competition with online retailers since they are at a price disadvantage brought about by the tax inequity. It seems very likely, therefore, that if the Internet becomes the important retailing force that has been predicted, that this tax-free status will come to an end. When it does, sales of the Internet will be smaller than their current trajectory would indicate.

****recent news story about 5 year moratorium on taxes****

vi. The Ability to Lower Costs

One of the major advantages of e-retailing was supposed to be the fact that costs would be lower. E-retailing could avoid so many of the traditional costs of the brick-and-mortar stores—storefronts, salespeople, warehouses, and so forth. In fact, several stock analysts use to claim that only ‘pure’ Internet plays were worth the large premiums then being paid for Internet stocks. They did not understand the nature of profits discussed in Chapter V section A below.

C. What Types of Products are Most Compatible with Full-Fledged E-tailing?

There are hundreds of thousand of retail products (sometimes categorized by skus) any one of which could in principle be sold over the Internet. The characteristics described above provide guidance in trying to understand which of them may do better than others being sold on the Internet.

i. Digitized Products

Products that are naturally digital are obviously the most natural candidates for transmission over the Internet. Computer programs, which have always been digital, can be stored on various media and delivered that way, but are most conveniently and rapidly delivered over the Internet, and it would be natural to expect that this would be the primary form of delivery for these types of products. This implies that retailers like CompUSA should expect to have to increase the space devoted to hardware relative to the shrinking space that they should be devoting to software.

Of far greater interest are products that used to be delivered in some analog fashion but which now are capable of being delivered digitally. These include sound recordings, television, radio, movies, and other pure-information products.

We need to distinguish here between the digital property and its physical manifestation. Virtually any intellectual product, be it a song, poem, movie or painting can be digitized. Once cast in electronic form, however, it needs to be transformed into physical entity that then allows the contents to be released in some way for users to be able to enjoy its characteristics, since we can not consume electrons directly. Music, for example, when digitized, most often needs to be transformed into some physical manifestation, such as a CD or a cassette, before one can listen to it. Many consumers have the equipment to create CDs or cassettes from digital formats, such as MP3. What is new, however, is that the most popular digital format, MP3, has created a market for devices that specialize in playing back music digitized in this format. This is a new form of physical manifestation based on a digital standard that may some day become the dominant physical standard in which music is stored for use.

Movies can now be stored digitally in one of many physical manifestations, with DVDs in the MPEG format being the most common. Currently, the only individuals who can benefit from downloadable movies are those who use their computers to play movies since there are no consumer DVD writing machines available that might allow a user to download a movie and transfer the information to a disc that could then be viewed on the television with a DVD player. Most consumers still store movies in analog formats using the VHS standard and are not capable of playing DVDs. This is currently changing since sales of DVDs have been rapidly increasing and DVDs appear likely to diffuse through the economy the same way CD players did so that they will likely be commonplace in just a few years. When that happens (and DVD writers become common), downloading movies through the Internet will almost certainly replace the current videotape rental system.

Books and magazines can also be delivered digitally, although it is not yet clear that the physical manifestations of these digital products will be acceptable substitutes for our current printed-paper based products. It is still an open question whether and when electronic devices that display the words from magazines and books will be considered the equal of paper, which is currently the physical manifestation of choice for books and magazines. The portability of paper and the quality of the print displayed on the paper still seem, for most people, to outweigh any advantages of electronic devices, such as the ability to store multiple books, do word searches, or read in the dark. Paper's current advantages are likely to be eliminated by the continuous tide of progress that sweeps away old technologies and replaces them with the new.

There is no reason that these products will not all move to the Internet eventually. The Internet will provide the most immediate delivery. The least costly delivery. The most informed delivery. It is difficult to imagine that brick-and-mortar alternatives will continue to exist except to the extent that the Internet fails to penetrate the population of consumers. We are likely to see it first with music, due to Napster's somewhat premature evanescence. ** This, of course, opens up the whole issue of piracy and copyright, a subject I discuss in detail in chapter Chapter VIII.

ii. Information

A somewhat different form of information transmittal consists of items such as airline, car, and hotel reservations, the purchase of stocks, news retrieval, classified advertising, and so forth. All of these are a form of information and as such lend themselves to an easy form of digitization. The Internet should be able to allow information to be transmitted more economically, rapidly and efficiently than could be done with the telephone or mail. In order for this to happen, however, the Internet needs to be able to provide the same level of information that a skilled operator could provide. That means that the website needs to be easy enough to navigate that a novice can find what they are looking for easily and quickly. It also means that the same amount of information can be provided as would be made available by a live person. This is no easy task.

For example, if you try to book a hotel room on Microsoft Expedia's website, you often can get the price, but you may or may not be told what type of bed is available. You may be told that the price is for a 'standard room' without a definition of what constitutes a standard room. To make matters worse, the confirmation code that you often get is an Expedia confirmation, not a hotel confirmation. I often find myself calling up the hotel to make sure that the booking went through properly and that I am getting the type of room I like. I also usually double-check that my credit card

actually holds the room for late arrival since the website it unclear about that.

Yet Expedia is probably one of the better reservation sites. A web site is run by a computer, and to be able to emulate what a human operator can do, it needs to be set up with great care. Only when web sites reach this level of sophistication can we expect the web to replace the phone for almost any kind of reservation.

To the extent that investors do not rely on brokers for information but only for placing trades, using the Internet to track stocks and place orders should provide a better alternative. Again, this assumes that the website works. One potential problem was exposed during some of the more volatile and the heavy trading days. Some of the servers for discount brokers were overwhelmed and it became very difficult, if not impossible to have trades executed online. The online brokers all promised to fix the problem, and it is certainly the case that an old fashioned telephone based system could equally suffer from this sort of peak load problem.

Again, the web sites need to be capable of doing their job properly. TD Waterhouse, one of the brokers I use, has a fairly nice site. But if you try to buy options you need to get the option symbols somewhere else. Options have complicated symbols based on the strike price and expiry date. One might think that brokers would have the sense to just ask you for the underlying stock, the strike price and the expiry date, and to then provide you with the symbol. Indeed, some brokers do just this. But Waterhouse expects the customer to know these things. This is the type of oversight that needs to be corrected if we expect machines to replace humans in these activities. Eventually these inconveniences will be corrected, or else those sites that fail to provide such information will be driven out of business by those that are better able to provide this information.

Classified advertising is one area where the Internet should shine. There are strong network effects in the listing of used and often hard to find items. Sellers write the descriptions, so there is little expertise required from others. It is hard to imagine that most classified advertising will not move to the Internet. This will be discussed in far more detail in Chapter VII.

iii. Hardcopy Books, CDs, and so forth.

Although I have just described how books can be digitized and therefore might be sold over the net directly, this is not going to be the primary form of distribution for some time to come. Until that time arrives, traditional paper books will represent the vast majority of book sales. Books play a particularly important role in the history of e-retailing since the most famous e-retailer—

Amazon—began by selling books online. Jeff Bezos, the founder of Amazon, likes to tell the story that after realizing the potential of the Internet, he thought about various product that might best be sold over the Internet and came up with books. Was he right?

Based on the characteristics that are compatible with Internet sales, it would appear that he made a wise choice. Books are not perishable. Each copy is virtually the same as every other copy, so there is no need to examine the product for defects. The content of books is not, at least for most readers, an experience good. To the extent it is, Amazon has done a good job of providing or trying to provide at least that level of experience that could be achieved by potential consumers in a brick-and-mortar store, by providing reviews and often an introductory chapter to give the consumer a feel for the content of the book. This may actually preferable to standing in a bookstore and reading a book for 15 or 20 minutes to get a feel for the content. Further, the few days wait imposed by the Internet are not likely to be of great concern to most consumers. Virtually the same factors are at work in the case of CDs.

The last factor is the shipping cost. Here we have a open question of whether the Internet provides sufficient value. The Internet retailer replaces the internal shipping cost of the brick-and-mortar seller with an external shipping cost of an outside vendor such as UPS or Federal Express.

It will typically cost almost \$5 to ship a book. This can be quite large relative to the cost of the book itself. On the other hand, it can save an hour of time driving to the bookstore, finding the book, and getting through the checkout. If consumers can purchase several books at a time, so that the shipping costs get to within 10% of the value of the book, then the shipping costs become close to the sales tax savings and using the web becomes cost efficient. Amazon and other online booksellers have clearly benefited from this tax savings but they are likely to find that cost conscious consumers are likely to start shifting back to brick-and-mortar sellers

D. Examples of Markets likely to resist the Internet assault.

The characteristics of products that are likely to make them poor candidates to sell on the Internet are products with high bulk relative to value, perishable products, experience products, or products providing instant gratification. What might be some examples of these products?

Which products fit the 'experience' mode and are unlikely to be sold over the net? These tend to be one of a kind items where the consumers needs to

inspect the product before he or she is comfortable purchasing it. One example would be clothing for which the fit is very important, and this would be clothing that the user hasn't specifically ordered before, clothing that changes with fashions. Clothing that is purchased regularly and which does not change much, on the other hand, for example shoes or clothing that doesn't go out of fashion, perhaps the type of products found in LL Bean catalogs, might be better sold over the Internet.

Automobiles, for which the 'drive' and looks are important are not likely to be sold over the net. Homes that are unique and non homogeneous are unlikely to be sold over the Internet.

Perishability removes most prepared foods from the list of serious candidates of major Internet transformations of markets. Macdonald's, for example, is not going to make Big Macs in some central location and Fed Ex them to your home. This would be nonsensical. The time to delivery would be way too high (in part because prepared foods are often in the 'instant gratification' category). Additionally, the transportation costs would be too high, particularly if MacDonald's was concerned about keeping their products from losing all of its taste and/or basic healthfulness.

Neither would most purveyors of frozen food be likely to shift completely to web-based sales since no seller has a complete enough line of products to cover the tastes of consumers efficiently. Part of the reason for this is that there is a fixed cost to going shopping, even on the web, and consumers wouldn't want to place numerous orders for each brand and type of frozen food. Supermarkets have arisen to allow consumers to take advantage of economies of scale in the shopping experience and in the delivery experience.³⁷

A similar analysis can also be used to explain why most clothing, automobiles, furniture, pet food, prescription drugs, are not likely to migrate to the web. Automobiles are an interesting special case, particularly since there is a web of state laws protecting current dealers from competition. I plan to discuss many of these markets in some detail in order to provide an understanding of the strengths and weaknesses of the Internet as a primary conduit of exchange for these products.

i. Grocery Items

Several factors are at work making grocery items very unlikely candidates for products that can be successfully sold on the web. The items

³⁷ The economy in the delivery experience includes economies of shipment from the manufacturer to the retailer *and* economies in the delivery of the product from the retailer to the consumers.

they sell are bulky relative to their value, making them poor candidates for economical delivery. Perishable and frozen items cannot be left on the porch, particularly in the summer, thus requiring pinpoint delivery times, which is a necessarily more expensive form of delivery. Various items, such as fruit and meat, are experience products in the sense that consumers like to look at or squeeze the items. Given this set of factors indicating that groceries were not likely to be a major online market, it was unfortunate that web grocers were considered one of the more publicized and funded set of entities.

Early prognostications were rosy. In late 1999 the two leading online grocers, Webvan and HomeGrocer had market capitalizations that appeared in excess of 5 billion dollars, which compared favorably with the number four chain, Winn-Dixie, which had a \$3 billion market capitalization (on sales of \$14 billion). The values were even in a similar ballpark to Kroger's \$20 billion (based on sales of \$47 billion) and Albertson's \$11 billion (on \$31 billion in sales) even though the online grocers generated sales of only about \$100 million and generated no profit.³⁸ The general outlook was quite rosy:

Why the flurry over groceries? With sales of \$450 billion - not including over-the-counter drugs and prepared meals, which add another \$100 billion or so - it's too rich a marketplace to ignore. Zona Research estimates there are 31 online companies going after a share of the more than \$7.5 billion online consumers are expected to spend on toothpaste, ketchup and other grocery items by the year 2003. They include Amazon.com-backed HomeGrocer.com and first mover Peapod.

According to Jupiter Communications' Ken Cassar, while grocery stores as they exist in the brick-and-mortar world are a low-margin business, the gross margins for groceries are high: 25 percent to 30 percent, compared with 20 percent for books and 17 percent to 18 percent for music. "The gross is good; it's the fixed expenses that drag down grocery sellers," Cassar said.

And that leaves plenty of room for some bright, nimble Internet start-up to figure out a way to cash in on the inefficiencies that bog down brick-and-mortar competitors.³⁹

Note the hubris in the last sentence, one that nicely encapsulates the heady feelings of the times. Instead of delineating the advantages that the Internet might bring to consumers and producers who adopted it, the claim is that inherent 'inefficiencies' would be reduced. Forget the fact that these grocery firms had been slugging it out for decades and that inherent

³⁸ November 2, 1999, HomeGrocer Raises \$100 Million In Additional Venture Funding, By GEORGE ANDERS, THE WALL STREET JOURNAL,

³⁹ Will Online groceries deliver profits? WebHouse Club says name your own price. Webvan takes the products to your door. But will either prove a safe way for investors? By Connie Guglielmo and Edward Cone, Inter@ctive Week, September 24, 1999 11:21 AM PT .

inefficiencies would have likely been reduced by this competition. Forget the fact that Wal-Mart, the king of retailer efficiency, was entering the supermarket business in a big way. Instead, a bunch of kids were going to outsmart prior generations because they knew how to use the Internet better.

Note also the claims about profitability. The profitability comparison that the Jupiter analysts make is with ‘gross’ margins on sales. These are reported to be much higher than net margins. But of course, this is due to the fact that a good part of the costs of grocery stores is the physical plant they need to warehouse the merchandise before they sell it. Net margins must be much higher in this business—it couldn’t be any other way. The claim that Jupiter analysts seem to be making is that web grocers wouldn’t need anywhere near the amount of physical plant that offline grocers would, certainly a questionable assumption since online grocers would need a fleet of delivery trucks not required by offline grocers, and would still need freezers and space to warehouse their products, even if not quite to the same degree as offline grocers.

The more fundamental mistake of the Jupiter analysts, however, one that has nothing to do with web business versus offline business, is the claim that either gross or net margins have any relevance whatsoever for investors in this business. Margins on sales do not tell you anything about the profitability of an industry as I discuss in more detail in Chapter V section A below.

Several economic models were put forward an attempt to make online grocery shopping a viable market. The major players were/are HomeGrocer, Peapod, and Webvan.⁴⁰

Webvan and HomeGrocer intended to reinvent the grocery business as it was currently known. Webvan tried to change some of the underlying economics of warehousing and transportation costs by automating warehouses and developing special trucks. It is always possible that there could be an inefficiency in the present system. It does seem unlikely, and there is no reason in principle that any inefficiencies would not have presented profit opportunities independent of the Internet. For example, most people shop for pretty much the same food week after week. Why couldn’t home deliveries of groceries worked using fax, telephone, or mail?

The answer, I believe, is that when people are throwing money at virtually any idea or company with an e in front of its name, it seems worthwhile going forward with any long shot. In WebVan’s case it seems clear that its backers believed in the model, but its backers were not the

⁴⁰ I leave of the dot com “.com” extender on each of these firms to simplify the names.

seasoned businessmen they thought they were. In many cases they were young and rich from previous investments that had more to do with being in the right place at the right time than with any long term business sense. Warren Buffet, on the other hand, the famous investor and Berkshire Hathaway CEO, was a seasoned investor with the sense to stay out of investments that didn't make any sense to him.

Peapod, at least early on, attempted to use existing grocery stores and their distribution centers and leverage off this distribution system to provide home delivery using the Internet as a ordering mechanism for consumers. This is what I referred to as a partially transforming Internet makeover since the incumbent distribution system used to get the products to the retailer was left intact and only the order-taking final portion of delivery was altered. Because Peapod never was a complete Internet play, its stock (or in this case, its imputed value from the private sale of a portion of the stock) never entered the stratospheric heights that other Internet stocks, e.g., Webvan, were able to achieve.

To understand what the web grocers were up against it is necessary to have the proper level of respect for the current offline grocers. This is a business that has been competitive and has seen many venerable chains, such as Grand Union, Pathmark, and A&P fall by the wayside. This is a mature business where the identities of the leaders has been changing and where mergers have led to major shifts in market shares. It is a market that has proven tough to crack, even for the most fearsome foes, such as Wal-Mart and Costco. The market leaders have proven themselves as fearsome competitors. And certainly, they can, or should, be presumed efficient in their distribution systems given the current state of the art.

This means that it is reasonable to believe that the distribution methods that have evolved must be quite efficient, or else a smart competitor would have been able to make great inroads. It means that the pricing strategies, in-house labeling of products, advertising, and so forth were probably state of the art. It means that the concept of having consumers shop and bring their products home in their cars was one that resonated well with the public.

Nevertheless, there is always room for innovation. The question was whether the innovation brought about by web retailers was something desired and valued by consumers. The other question is why anyone would expect an innovation in distribution to be developed by a young web entrepreneur as opposed to someone experienced in distribution.

The innovations promised by the web grocers were (a) online ordering and purchase; (b) home delivery; and in some instances (c) efficiencies in distribution. Prior to the Internet, home delivery was possible, and even

existed in some localities such as Manhattan. One needs to ask why home delivery of groceries had not already become established, and what the Internet could do to alter the equation. Home delivery required ordering food, and although there are thousands of possible items, most families make repeat purchases from a much smaller set of products. Filling out a hard copy form would be somewhat less convenient than ordering over the Internet, updating the forms to reflect changing prices would also be more costly, but it is hard to imagine that this enhancement in ordering ease would be of such crucial importance as to be the key difference between success and failure.

In principle offline grocers could have shoppers send in their orders and pick up their filled orders later in the day. This would shorten the time spent in the store by the average shopper, although the drive and pickup would still remain.

The crucial distinction between regular supermarket shopping and that offered by online grocers is (b), delivery of the product. This is where the true time-saving for consumers takes place. The web grocers substitute the time of their paid employees (and the cost of this time) for the time of the consumer in shopping and delivery. The real question was in part whether most or many consumers preferred to make this substitution of an employee's time for their time and also whether they found it more convenient to go shopping when they had the time as opposed to taking delivery of food items in a specific time period. Some consumers probably value the ability to make last minute decisions that might happen as they go through the aisles of a supermarket and others might actually enjoy shopping. For these consumers or these circumstances, Internet shopping clearly will not be preferred.

There are compelling economic reasons why grocery delivery was always a small niche market and the Internet does nothing to change those conditions.

It is useful to compare online grocers to pizza delivery stores. Delivery has become predominant form of pizza purchase. Consumers, apparently, are willing to pay someone to deliver the pizza as opposed to picking it up themselves. Wouldn't these same consumers favor delivery of grocery items also? There are several important differences that pushing the answer to this question into the negative. Pizza is simple to order. Pizza delivery occurs almost immediately after ordering, so the recipient doesn't have to worry about being home when the delivery occurs. Pizza delivery is cheaper since the pizza vendor doesn't have to purchase a fleet of vehicles. This last point is worthy of some additional analysis.

Economists often talk about capacity problems as "peak load" problems. One example would be electric companies trying to meet demand on very hot

summer days when the peak demand can surpass the capacity of the generating stations. A similar problem occurs with food delivery. Most people are home at nights and weekends. They are likely to prefer to have groceries delivered at those times. At other times the number of deliveries is likely to be much smaller. If a web grocer buys a fleet of vehicles to meet the peak demand, then there will be a great deal of unused capacity sitting around during other parts of the day. This makes the cost of delivery much higher than if there weren't this wasted capacity.

Pizza delivery handles the peak load problem by hiring drivers who use their own cars. They hire drivers to match expected demand and so there is no wasted cost in vehicles (or drivers) sitting around during non-peak times. Online grocers have not tried to emulate this strategy, presumably out of concern that their vehicles need to meet special standards to ensure that delivered products arrive in good condition. Presumably, consumers wouldn't be happy seeing someone driving up in his beat up Pinto and pulling them out of the beat up trunk, scooping up fallen items in the process. This understandable concern for quality imposes considerably higher costs.

Instead online grocers have spiffy new vans with refrigeration units to keep frozen food from thawing out. This requires that the fleet of vans be quite expensive. If these vans were to sit around unused for a majority of the day, then online grocers would be faced with much higher costs than if they could alleviate the peak load problem.

In principle the peak-load problem can be eliminated if consumer demand could be massaged so that it became evenly spread out during the day. There are several ways in which this could be brought about. One method might be to charge higher delivery prices during peak periods to discourage consumers from requesting those times. The problem here is that consumers might switch to the alternative of old-fashioned shopping, eschewing the Internet altogether as a method of purchasing groceries.

Another method would be to use technology to allow the delivered food to keep fresh and safe when it is delivered at a time that is not convenient for consumers. This has been tried in several instances. In California, web-grocers have installed locked refrigeration units outside the homes of customers so that deliveries could be made throughout the day or night at a time convenient for the *seller* without serious degradation of the grocery items for the consumer who then gets to store the product at a time convenient to them. This is obviously a very expensive solution. Consumers often change their minds about their vendors. It would obviously be uneconomical to go to the expense of installing these refrigeration units at a consumers home for who will only purchase food for two weeks. Also, different consumers have differing percentages of frozen food, meaning that

the outdoor units might sometimes not adequately hold all the food items unless there was a great deal of excess capacity in these units, further increasing their cost. This solution obviously raises the cost differential between delivered grocery items and picked-up grocery items, making the old fashioned shopping experience relatively more attractive.

Finally, webvan claimed that it was going to revolutionize the grocery distribution system. This was a claim of monumental hubris, as discussed above. xx.

It is thus not surprising that online web grocers have fallen by the wayside. Homegrocer was bought by WebVan which itself went out of business.⁴¹ xxx.

ii. Automobiles

The future of web based automobile sales is clouded by a myriad of state and local regulations controlling who can sell automobiles, where they can locate, and various other aspects of the business.** get more detail.⁴² [articles\cars direct ipo and article about site.htm](#)

These regulations notwithstanding, there are still great problems in trying to sell automobiles on the web. The key problem is that automobiles are quite clearly and strongly 'experience goods'. Few people would buy an automobile without being able to sit in it to have a test-drive of at least a similar model if not the actual specific vehicle. There is no way to recreate this experience on the web. Therefore, assuming that automobile producers can overcome the various regulations regarding automobile sales, we can expect that Internet sales would require local showrooms for automobile inspection and driving, even if the ordering is done over the Internet.

If this is to be the case, it is unclear that it automobile companies would wish to forgo the high-pressure sales tactics that they have found so successful in the past. If automobile companies were to keep the salesmen, then the consumer wouldn't be able to actually order the automobile over the Internet and the 'showrooms' would be virtually, or perhaps I should say 'actually', identical to current showrooms.

The concept of Internet sales implies take-it-or-leave-it pricing, where prices are posted and no negotiations are possible. This is how Saturn automobiles are sold, but this is quite unusual in the industry and would

⁴¹ April 3, 2001 Webvan Auditors Question Grocer's Ability to Continue By NICK WINGFIELD THE WALL STREET JOURNAL

⁴² "CarsDirect Files for IPO, Takes \$17 Million Investment," Joseph B. White, The Wall Street Journal, May 17, 2000

require a significant change. Once again, as I repeat throughout the book, it is important not to underestimate the value of those institutions that have survived and evolved over many years since there are usually good economic reasons for such survival. It is reasonable to presume that employing salespeople and high pressure tactics increases the profits of automobile dealers, otherwise this technique would have died out long ago.

iii. Furniture

Furniture would seem to be a product extremely poorly suited to Internet sales. It is heavy and bulky, although not inexpensive. It is an experience good—who would purchase a sofa without the opportunity to sit on it?

One might imagine that furniture delivery would share some characteristics with automobiles—showrooms for the furniture but ordering on the Internet, and delivery either at the showroom or through a shipper, depending on which was more economical. There are many small manufacturers and a web site would have to deal with a large number of them in the hopes of having a large variety of products, one of the advantages of web retailing. Of course, it would be impractical to have numerous showrooms with display items for hundred of different manufacturers. It is difficult to imagine, however, that shipping from the factory would be more economical than from a showroom, otherwise that is how we might have expected the industry to have evolved. Of course, if the firms selling furniture over the Internet tried to sell a very wide variety, that would limit their ability to use showrooms. Once again, we need to be respectful of the institutions that have emerged and flourished in a competitive environment as did furniture showrooms.

Furniture sales were tried but floundered early on.⁴³ [articles\Can Furniture.com deliver.htm](#) In an MSNBC article in March of 2000 Jane Weaver suggests that consumer complaints might be the undoing of online furniture deliverers, and catalogs the woes of a handful of customers with horror stories to tell of undelivered furniture that went on for months. Nevertheless, she ended her story with this projection from Forrester Research; “Online furniture sales should top \$3.9 billion in 2004, up from \$268 million in 1999.” On November 20, 2000, furniture.com filed for bankruptcy.⁴⁴

⁴³ “Can Furniture.com deliver? Customer complaints cloud IPO outlook,” Jane Weaver, MSNBC, March 1, 2000.

⁴⁴ Go to the website www.furniture.com.

iv. Prescription Drugs

Prescription drugs can be dichotomized into distinct groups: those which are purchased on an ongoing basis to mitigate a chronic disorder, and those which are purchased unpredictably when someone suddenly becomes ill. The former group contains better candidates for Internet selling than the latter group which contains very poor candidates. Drugs used to help alleviate or cure unpredictable illnesses are like impulse goods—the consumer wants immediate consumption (relief). After all, who wants to remain sick any longer than necessary? With overnight delivery being so expensive and still significantly slower than the current system of using one's corner drugstore, it seems extremely unlikely that consumers would turn to Internet drugstores to fill prescriptions for unpredictable illnesses.

Even for drugs that are ordered with regularity, however, it is difficult to see any strong advantage held by the Internet store, particularly relative to a telephone based system. The consumer does not have to choose between a large selection of products, since it is his doctor who determines which drugs he is going to purchase, ruling out the advantage of the Internet's ability to provide information better than a phone call. The prescription still needs to be filled by a licensed pharmacist housed in some building with the required ingredients and shipped so there is little savings there for an Internet firm. The doctor's prescription needs to be sent to any distant location, Internet or not. The Internet firm's ability to take orders 24 hours a day might be an advantage, but not a very large one. Therefore, it is unclear that Internet pharmacies have much of a reason to exist except as a minor convenience to customers who may prefer it to the phone, perhaps to avoid busy calls during peak times.

Chapter IV. Chapter 5: The value-profit paradox, the Cruelty of Competition and the drivers of success.

This chapter makes three points. First, that great profits do not necessarily flow from creating great value. The share of the value going to producers depends on the degree of competition in the producing market. Second, competition is very, very bad for profits. Since the Internet has few fewer entry barriers than one finds in many brick-and-mortar markets, this bodes poorly for high profits. Third, the causes of success in Internet undertakings are going to be virtually the same as those in brick-and-mortar industries since the differences between them are usually far less than has been claimed.

The Internet is going to create great value. That is not in dispute. What do I mean by this? First, consumer's are going to be better off as they