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# What Matters Most in Internet Retailing

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# What Matters Most in Internet Retailing

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**David R. Bell, Jeonghye Choi and Leonard Lodish**

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## What Matters Most in Internet Retailing

The fashion eyewear company Warby Parker's strategy to get products in front of customers includes "pop-up" stores and a free home try-on program.

# What Matters Most in Internet Retailing

Although online retailers theoretically have unlimited trading areas, they need to know where to look for customers.

BY DAVID R. BELL, JEONGHYE CHOI AND LEONARD LODISH

ONLINE RETAILING IS far and away the fastest growing retail sector in the United States, with overall growth of about 15% in the past year and with categories such as apparel and footwear up by more.<sup>1</sup> Internet retailing currently represents approximately 8% of U.S. retail sales, and in many countries it's an even larger percentage. Forrester Research expects that from 2010 to 2015 online retail sales in China will more than triple, to about \$160 billion.

What's driving the growth, and to what extent do the principles of success for online retail differ from those of traditional brick-and-mortar retail? Internet retailing expansion is being fed by two forces: (1) traditional retailers are getting their "Internet acts" together, and (2) "pure play" retailers are becoming increasingly innovative. Consumers are now at least willing to consider purchasing more categories of products online than before. Many are expanding from an early emphasis on items such as books and CDs (which can be specifically described online in terms such as title, number of pages and shipping time) to other types of merchandise such as fashion apparel and gourmet food (which are characterized by "nondigital" attributes such as the fit and feel).<sup>2</sup>



**THE LEADING QUESTION**  
How can companies increase their online sales?

#### FINDINGS

- ▶ Look for geographic areas where traditional retail is not meeting the needs of your potential customers.
- ▶ Once a consumer in a given neighborhood finds shopping online for particular products attractive, the chances increase that his or her neighbors will do so, too.
- ▶ Tailor customer acquisition methods to the demographics and other characteristics of particular locations.

Traditional and Internet retailing differ in two critical ways. First, in theory at least, Internet retailers have “unlimited” trading areas.<sup>3</sup> Second, and less obvious, while traditional retailers can identify and target customers with relative ease (most customers either work or live within a few miles of the store), Internet retailers without physical stores find this much more difficult to do. Many Internet retailers have trouble getting noticed and acquiring customers. Indeed, having an unlimited trading area can be a mixed blessing: There are no straightforward rules about where to look for customers. As a result, some Internet retailers are making small forays into traditional retailing, using strategies that include pop-up stores, kiosks and partnerships with well-known retailers.

One category of businesses that we studied sells popular-brand consumables for the home, such as laundry detergent, pet supplies and diapers; companies in this group are attempting to transform the way consumers buy everyday items for the home. A second category of online retailers sells specialty items, including fashion eyeglasses and apparel for men; these companies are trying to change where people purchase fashionable merchandise with significant nondigital attributes. Although it’s true that the two groups face different challenges, we found that some general principles apply broadly to retail businesses facing hurdles to growth. (See “About the Research.”)

### The Primacy of Location

By employing new and classic theories of retailing and consumer shopping behavior<sup>4</sup> along with econometric analysis of sales data linked to data on environmental characteristics, we arrived at findings that have important implications for many different types of retailers. Although we set out to develop ideas for pure-play Internet retailers, we believe our findings have broad relevance to other retailers, including traditional organizations that have brick-and-mortar stores. We developed five principles:

1. Individual consumer acceptance depends on offline shopping costs.
2. Sales evolution is structured and predictable.
3. Migrating from “good” to “great” requires expansion to niche locations.
4. “Isolated” prospects are worth pursuing.

5. Different locations require different customer acquisition strategies.

**1. Individual Consumer Acceptance Depends on Offline Shopping Costs.** In order to assess the appeal of Internet retail, you need to first understand the competitive retail environment overall. Consumers living in different locations have dramatically different offline retail options. Those with easy access to well-priced offline stores have less incentive to shop online.<sup>5</sup> Studies show that where offline stores are more numerous and more accessible, online retailers experience lower sales,<sup>6</sup> and consumers who live further from retail stores spend more on the Internet than those who live closer.<sup>7</sup> China offers a case in point: Luxury-brand Internet orders in outlying cities exceed those in Beijing and Shanghai.<sup>8</sup>

Sales tax rates, too, can provide incentives (or disincentives) for consumers to shop online. For many years, online sales tax rates in the United States have often been zero. (Online retailers collect sales tax only in states where they have a physical presence.) Early research on Internet shopping behavior found that if Internet retail transactions were taxed at the same rate as traditional retail (approximately 8%), online demand would decline by more than 20%.<sup>9</sup> Another recent study shows that when an Internet retailer opens physical stores and collects sales tax in locations where it previously did not, Internet sales for that retailer suffer in those locations.<sup>10</sup> This is because the company’s Internet site is now less price-competitive than those of other Internet retailers who do not have physical stores in the state and are therefore not required to collect sales tax. In our own research, we found that Internet sales are higher in locations where shoppers have to travel farther to access offline alternatives or pay higher prices (for example, where they have to pay sales tax).<sup>11</sup> For Internet retailers, the implications are clear: The best market opportunities are in locations where offline retail shopping is limited and costs (including sales tax) are high.

**2. Sales Evolution Is Structured and Predictable.** A related finding about the role of the market environment involves the importance of word of mouth in Internet sales growth. Once a consumer in a given neighborhood finds shopping online for particular products attractive, the chances increase

that his or her neighbors will do so as well. Not only do colocated customers face the same basic costs, but they also interact with each other. (For example, “Hey, have you tried Soap.com?”) And they see evidence of their neighbors’ behavior, such as discarded shipping boxes on trash day. Such information sharing is good news for Internet retailers: Although initial online sales in a particular region, and some geographic variation in sales across regions, may be driven by offline product costs, growth is fueled by the sharing of information among friends and neighbors.

Of course, there have been numerous studies over the years about imitation and information transmission through direct communication and social observation. In some situations, individuals emulate each other even without direct communication.<sup>12</sup> For example, our own research on Netgrocer.com, an online retailer that delivers groceries, including perishable and frozen items, throughout the United States, shows that ZIP codes with lots of new customers tend to be adjacent to areas that had high concentration of customers in earlier periods.<sup>13</sup> This is true even after controlling for important differences across locations in income, education, age, access to the offline stores, broadband penetration and so on.

The same principle was reinforced in our recent work with Bonobos, a 5-year-old company that manufactures and markets quality U.S.-made apparel and accessories for men. (In addition to buying online, customers can buy Bonobos clothing at the company’s Manhattan offices, a Bonobos store in Boston and selected Nordstrom department stores.<sup>14</sup>) We modeled the behavior of new customers who weren’t able to assess the “fit and feel” of the items Bonobos sells.<sup>15</sup> Potential consumers were able to resolve some of their uncertainty about the company’s offerings by interacting with existing customers located nearby. In neighborhoods with higher levels of interpersonal trust and interaction (something sociologists call “social capital”<sup>16</sup>), information about Bonobos.com spread more efficiently, resulting in faster sales increases. These findings demonstrate that businesses selling products with nondigital attributes can benefit substantially from customer-to-customer interaction and that the quality of the interaction varies by location.

## ABOUT THE RESEARCH

Our academic research in the Internet retail sector draws on data from four companies: Bonobos.com, Diapers.com, Netgrocer.com and WarbyParker.com. In each case, management provided us with five data fields: unique customer ID (disguised for confidentiality), transaction date, transaction items, transaction value and customer (shipping) ZIP code. The companies also shared data from the inception of their operations to allow us to analyze the sales diffusion process.

Simple descriptive analysis of the data from the four companies revealed a common pattern. The success of each online retailer varied dramatically across locations: Sales were high in some locations yet very low, or even zero, in others. At first glance, there was no unifying reason. Nevertheless, the geographic variations in sales suggested that the physical characteristics of the locations where customers and potential customers live were important sales drivers.

In order to explore this possibility, we paired the sales data of each company with a rich set of geo-demographic data available from both government and commercial sources. These data allowed us to characterize each U.S. ZIP code according to several local features, including the age, income, education and ethnicity of local residents, total population and population density. Using data purchased from Esri, of Redlands, California, a provider of GIS software and geo-database applications, we were also able to describe several aspects of the local retailing environment, including the number of offline stores likely to compete with each website, offline expenditures on the product category, travel distance to offline retailers and so on. Finally, we derived and estimated a series of econometric models to understand key customer behaviors, including the timing of trials in ZIP codes and the number of new and repeat customers and relative market shares of different brands sold at each website.

### 3. Migrating from “Good” to “Great” Requires Expansion to Niche Locations.

In addition to understanding comparative costs and the influence of proximity to other customers, online retailers need to understand the outsized importance of niche locations. In his book *The Long Tail*, Chris Anderson describes how niche products often become significant sources of profit for Internet companies.<sup>17</sup> We’ve found that niche locations can play similar roles for online retailers. For example, after three years in business, Netgrocer.com had customers in about 18,000 U.S. ZIP codes. At the same point in its history, Diapers.com, which sells baby products over the Internet, shipped to customers in about 18,000 ZIP codes as well. We found that there is a pattern in the short- to medium-term sales evolution of Internet retailers. Sales emerge first in areas where customers face high offline shopping costs; they are propagated later through local customer interactions based on physical proximity. But in order for online retailers to extend their reach beyond locations picked up through proximity, they need to tap into hundreds or thousands of markets that individually represent few sales but collectively add up to significant numbers.

Over time, successful Internet retailers move beyond early and core markets and increase their

coverage by absorbing customers from markets that, while geographically separate, are similar on other dimensions such as demographics and customer preferences.<sup>18</sup> They acquire small numbers of customers in many niche locations to build a broad and profitable customer base.

**4. “Isolated” Prospects Are Worth Pursuing.** A fundamental limitation of offline retailers is shelf space. Generally speaking, stores don’t assign shelf space to merchandise that doesn’t sell. What’s more, traditional retailers don’t just stock what you want — they stock what your neighbors want. For example, if you’re looking for a good selection of children’s toys, you’re more likely to find it in a neighborhood full of families with young children than in a neighborhood with lots of retirees.<sup>19</sup>

In an effort to understand how this concept plays out in the diaper market, we studied pairs of neighborhoods with equivalent numbers of potential customers. In instances where two neighborhoods had the same number of potential customers but different numbers of residents, we did comparisons. Consider two neighborhoods, each with 100 potential customers. Neighborhood #1 has only 200 residents, so local stores are more apt to pay attention to young families needing diapers, who make up 50% of the market. Neighborhood #2, with 1,000 residents, presents different incentives to local stores. The potential customers in Neighborhood #2 are more isolated in their preferences for baby-related products (they are only 10% of the residents); not surprisingly, the local stores allocate less space and attention to the items these customers want. We found that customers in this type of neighborhood spend up to 50% more online in the baby goods category than do customers in “sister neighborhoods” such as Neighborhood #1. Such demand patterns (whereby local selection is limited by what the neighbors want) are exacerbated for niche brands: If a local shopper can’t find her preferred SKU of the leading brand (for instance, Pampers) in a local store, she will have an even harder time finding a niche brand (for instance, Seventh Generation).

**5. Different Locations Require Different Customer Acquisition Strategies.** Internet retailers can take advantage of several different customer acquisition methods: offline word of mouth, online

word of mouth, online search and traditional advertising (print, radio and sometimes even television). The effectiveness of each method varies considerably from one geography to another, depending on a variety of local factors. In Chicago, for example, where many residents live in larger suburban homes, Diapers.com has been very successful in acquiring customers through print advertising in magazines. In contrast, in the majority of ZIP codes in Los Angeles, offline word of mouth has been the most successful method. (See “How Diapers.com Gets Noticed by Customers.”)

Our investigation into the relative efficiency of different approaches to customer acquisition provided a surprising insight into how disparate methods of customer acquisition work in different geographies and reinforce each other.<sup>20</sup> In ZIP codes with a high physical density of customers, for example, offline word of mouth can be particularly powerful because physical proximity among customers amplifies the possibility that they will interact with or observe one another. A neighbor may comment on retailer-specific benefits that come with that location and share product and shopping information.<sup>21</sup> (For example, “Hey, if you use Diapers.com, you won’t have to pay sales taxes, and the order will arrive in one business day!”) Traditional print advertising tends to work best in less dense environments where customers have more limited opportunities for contact. However, online word of mouth and online search appear to generate new customers proportional to the total number of potential customers in a given location. The implication is clear: The cost-benefit payback of different customer acquisition methods varies significantly across locations according to the characteristics of each location.

The strength of location effects can be assessed by analyzing the behavior of consumers who migrate from one U.S. city to another.<sup>22</sup> For example, customers at Diapers.com who change locations become more or less likely to shop online, depending on the increase or decrease in their offline shopping costs in their new neighborhoods. Specifically, shoppers who have some experience shopping online and then move to a new location with homes with more storage capacity and relatively few stores will increase their online shopping activity. In addition, if the pre- and post-migration

neighborhoods have markedly different *offline* market shares for a given brand (if, for example, a customer moves from a “Pampers-dominant” location to a “Huggies-dominant” location), we found that their online brand preferences will begin to mirror the new location’s offline brand preferences. Thus, geography not only affects the success of different customer acquisition methods but also the mix of products sold in different locations.<sup>23</sup>

Although it is clear that technology-enabled acquisition methods, including online word of mouth and search, are important to Internet retailers, traditional methods of customer acquisition remain vital even in the Internet retail economy, particularly when the products themselves have significant nondigital attributes. At WarbyParker.com, a 2-year-old company that sells fashion eyewear, for example, management realized that it was critical to get products in front of customers so that they could experience the fit and feel. This led them to design a hybrid strategy composed of three elements: sales over the Internet; a home try-on program that allows customers to try five pairs of

glasses for five days, with no shipping charges; and sales through pop-up stores. These twists on traditional selling methods (home try-on is a form of sampling, and pop-up stores are a form of physical retail) enable customers to experience Warby Parker’s products before they buy. Preliminary analysis suggests that the company generates significant awareness and spillover benefits from its home try-on program and retail exposure. Management believes these elements add value even if customers decide to postpone their purchases.

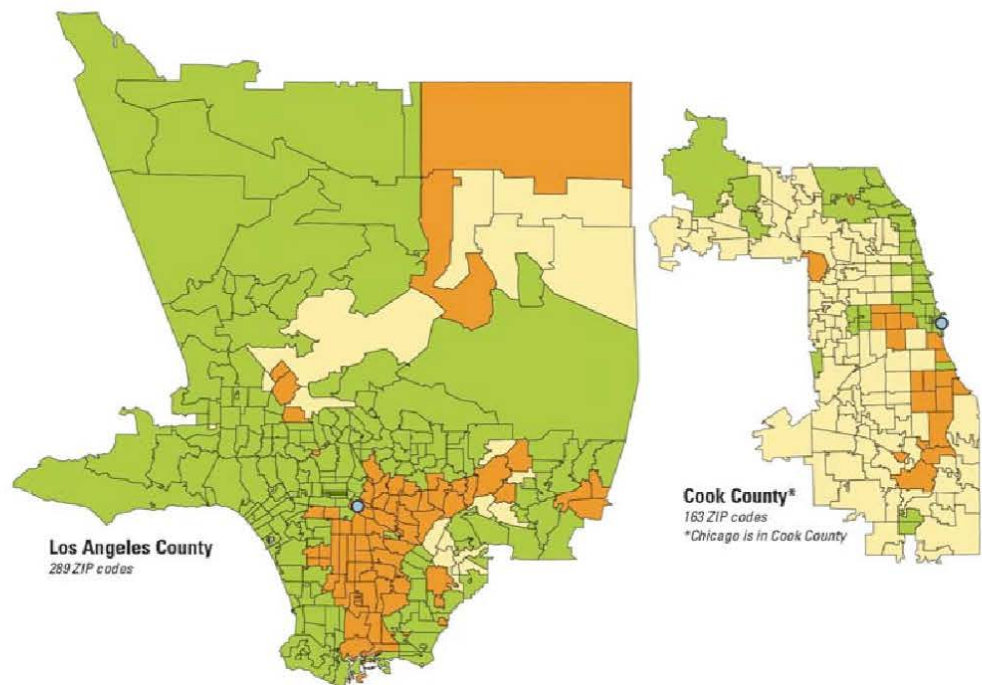
### Going After the “Low-Hanging Fruit”

Although we are the first to admit that Internet retail success is influenced by many factors — including website design, social media strategy and marketing innovations — Internet retailers must pay particular attention to the physical environment. We believe that a large amount of “low-hanging fruit” is available to those who understand how sales vary according to ZIP code or neighborhood. We say this because the physical environment has two critical

#### HOW DIAPERS.COM GETS NOTICED BY CUSTOMERS

Different neighborhoods have different characteristics, which in turn lend themselves to different customer acquisition strategies for Diapers.com. In Cook County, Illinois (which contains 163 ZIP codes), the most successful method of customer acquisition is print advertising. In contrast, in Los Angeles County, California (with 289 ZIP codes), the best method is offline word of mouth. In both counties, the leading ways of acquiring customers are traditional ones. Online search is effective in some clusters; and online word of mouth, although it generates customers, is not one of the top three methods in either location.

- Offline word of mouth is the most effective
- Online search is the most effective
- Print advertising is the most effective





properties that make research both doable and actionable: (1) variation in the characteristics of the physical environment can be measured relatively easily and cheaply, often by using data from government sources, and (2) physical environments don't change quickly, which means that actionable insights tend to have a long shelf life.

So how can Internet retailers — and traditional retailers selling through the Internet — apply these insights to business strategies? We recommend that executives pay attention to the following:

**Collect ZIP code information.** Internet retail sites should gather their customers' ZIP codes (ideally, for both homes and workplaces) and match them with commercially available data on ZIP code demographics and offline store locations. Early customer data can be used to estimate the impact of location variables such as offline competition, preference minority status (in other words, the extent to which target customers are isolated in their preferences and marginalized by offline stores) and ZIP code demography on customer acquisition and purchase probability. The “impact estimates” can then be used to apply the right customer acquisition methods to the right ZIP codes.

**Understand local interaction.** Since Internet retail customers reside in offline locations and interaction among customers can benefit Internet retailers, it's important to understand how potential customers interact in their physical neighborhoods as well as in the virtual world. The level of neighborhood social capital can enhance the efficiency with which information about a new retailer spreads. Neighborhoods where customers regularly interact offline and those with natural clusters of communities (campuses, clubs, dog parks and so on) are great venues for introducing pop-up stores and product demonstrations. Such markets have a greater “future multiplier” for every new sale.

**Delight the “right” customer.** Online retailers should make an effort to delight their customers, but as you do, make sure you know which customers are most valuable. Internet retailers typically focus on big markets, such as “hot spots” where they have large numbers of potential customers. But it might also be profitable to target relatively obscure local markets where few retailers compete. Catering to the tastes of underserved preference minorities may be worthwhile.

**Engage in location-based experimentation.** It's relatively easy to test the extent to which location-targeted efforts increase performance. Online retailers can select local markets to “seed,” and early customers in these markets can influence how sales evolve over time. In addition, retailers can localize the user interface of their websites as different locations express brand preferences. The key is to use experiments to explore, measure and take advantage of the location effect.

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