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THE CURRENT AND FUTURE LANDSCAPE OF RETAIL

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## ABSTRACT

The rapid integration of the internet into the everyday lives of consumers has raised many questions in recent years about the viability of brick and mortar retail in the future. However, in order to appropriately determine the future of retail, it is necessary to understand the present. The business of retail is linked directly to the consumer. This thesis contends that consumers living in urban, suburban, and rural areas develop different behaviors and preferences. These preferences are derived from differences in the accessibility of goods for each of these areas. Retailers are adapting their strategies to better suit consumer preferences. The distinction between online and in-store retail is becoming increasingly unclear, as many retailers use both online and physical outlets to cater to the desires of the modern consumer. This thesis examines modern consumers, in terms of their utilization of technology and the role location plays in their consumption decisions. The recent history of online retail is charted in order to chronicle its rapid ascent and its expanding impact on both consumers and in-store retailers. Various profit-maximizing strategies are discussed for both online and in-store retailers to indicate ways the process of retail may change in the future. The role played by geographic location within in-store retailing strategies is examined alongside demographic changes in the US to suggest which types of retailers will succeed in the future. Finally, issues of distribution and sales tax are addressed as factors that retail strategy.

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## Chapter 1 Introduction

The history of online shopping begins in 1994 when a customer used the internet to order a pizza with pepperoni, cheese, and extra mushrooms from Pizza Hut (Webley 2010). Shortly thereafter, in 1995, the online retail giant Amazon got its start in a Bellevue, Washington garage with little more than a few boxes of books ready to be distributed to consumers across America. Today, it is possible to buy almost anything online, with products such as F-18 fighter jets and aircraft carriers appearing in eBay auctions. As the online marketplace evolves, interactions between retailers and consumers are constantly changing.

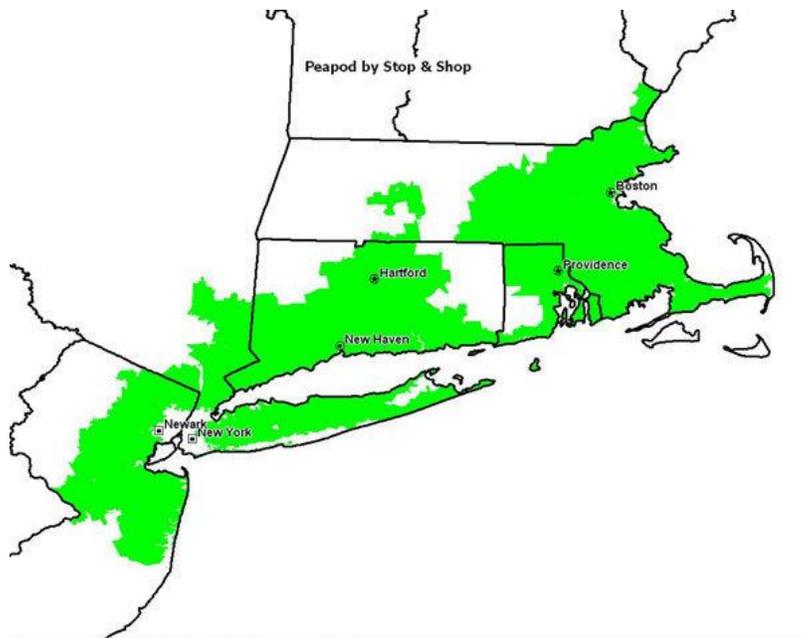
Before shopping online was an option, purchasing items required visiting stores or ordering them in a catalog. Both of these options result in extensive time commitments. Shopping in-store means time spent travelling from store to store comparing prices, selecting the right product, and travelling home. The speed of catalog shopping is heavily restricted by the speed and consistency of mail. Online shopping, on the other hand, allows for instant comparisons of prices on products offered by a multitude of retailers. The online marketplace is essentially a giant digital mall, where thousands of retailers are vying for sales by offering superior customer service, lower prices, or cheaper shipping than their rivals. The rise of the online marketplace in the late 1990s was life-changing for people living in small-town markets who did not have access to local in-store retailers selling such a wide range of goods. Even challenges caused by the costs of shipping from online retail warehouses to consumers are beginning to disappear.

Increasingly, more products bought online can be enjoyed instantly. “Digital goods” are products that can be enjoyed without a physical copy. Some of these products include texts, music, and videos that can be bought online, delivered to your computer instantly, and used without delay. The rise of digital goods was devastating to many in-store entertainment retailers such as Blockbuster Video and Sam Goody who could not compete with the prices and unparalleled convenience offered by the online marketplace. The general feeling from retail experts is that the role of in-store retail will change drastically in the future. Many believe that as communications and transportation technologies continue to improve, online retailers will become more efficient and capable of offering far better value than companies tied to specific locations and a geographically determined customer base. However, there are some products that tend to have weak online sales.

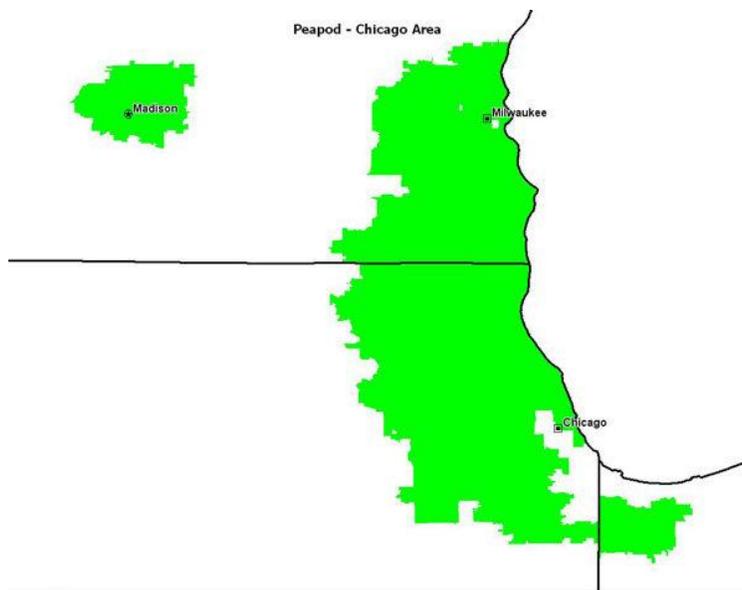
One such category of products, historically, has been groceries. Customers assume that the products they see advertised online are exactly what they will receive. Over time, the reputation of the online marketplace has grown to the point where 82% of customers feel comfortable shopping online (Geddes 2012). Consumers trust the quality of online products in general, but for some reason do not extend the same level of trust to purchasing groceries. When purchasing food, consumers tend to value freshness very highly, and there is no way to investigate the freshness of a product firsthand while shopping online.

Despite this challenge, companies such as Peapod have attempted to bring online grocery shopping to large metropolitan areas. Peapod allows customers to order groceries online select between two fulfillment options: retrieval from a physical grocery

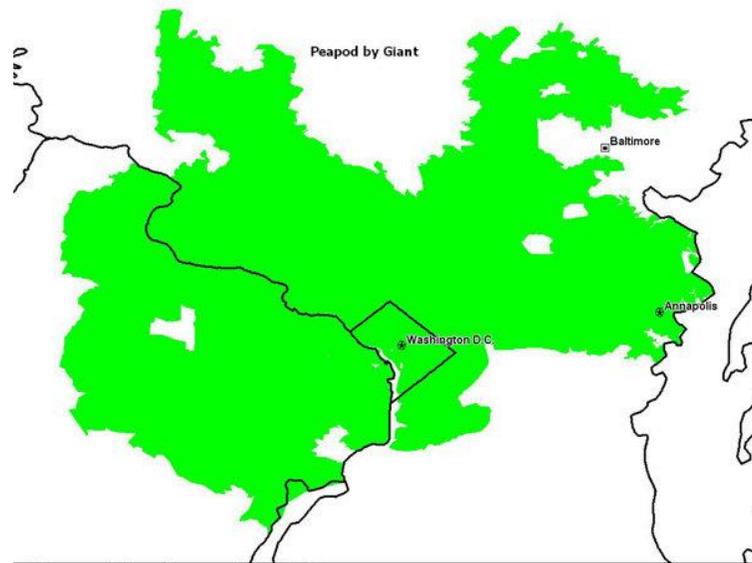
store or home delivery. Figure 1 shows the locations where Peapod currently offers its online grocery pickup or delivery service.



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**Figure 1: Peapod Grocery Service Availability Regions**

Peapod itself is headquartered in suburban Chicago, but utilizes the retail outlets of sister companies Stop & Shop and Giant in the New York-Boston and Washington DC metropolitan areas respectively. By associating with a supermarket chain, Peapod is able to convey the freshness of its products to consumers through the brand recognition of Giant. Peapod is in the process of overcoming one of the fundamental challenges associated with online sales: generating trust in products consumers cannot see.

Peapod's location in large metropolitan centers is not a coincidence. This thesis contends that population density and distribution are determining factors in the popularity of online retail, the goods available to the public in-store, and the long term viability of in-store retail in an area. Specifically, areas classified as urban, suburban, and rural each foster different patterns of consumer behavior. Chapter 2 examines these three classifications while Chapter 6 analyzes why each classification causes different patterns of consumer behavior.

This thesis also examines how both online and in-store retailers cater to the modern consumer. Chapters 3 and 4 provide a summary of statistics useful in understanding the current landscape of online and in-store retail respectively. Strategies used by online retailers to manage price competition and establish effective distribution are discussed in Chapter 5. Issues affecting in-store retailers such as locating physical retail outlets, competing with online retailers, and establishing brand loyalty are discussed in Chapter 6. The business model of retailers utilizing both online and in-store retail outlets is analyzed in Chapter 7. Chapter 8 breaks down the process of distribution and explains the link between producers, distributors, and retailers. Chapter 9 addresses the issue of sales tax within retail and the different role it plays within online and in store retail. Finally, trends emerging in both in-store and online retail are identified and scenarios of how they will impact the retail landscape of the future are also considered in Chapter 9.

### **Key Concepts & Definitions**

Retail, in the most general sense, is the link between commodity production and consumers. Specifically, retail trade is defined as “the purchase and onselling, commission-based buying, and commission-based selling of goods, without significant transformation, to the general public” (“Information Paper: Measurement of Online Retail Trade in Macroeconomic Statistics, 2013”). A retailer does not necessarily produce anything, but rather serves as a middleman between the producer and the consumer.

However in truth, retailers survive by offering the best shopping experience to the consumer which, as this paper will examine, is production in itself.

The definition of retail described above is broad enough to cover the transactions that take place in both online and in-store retail. Also, it is a common practice in retail today for a retailer to manage both online and in-store shopping outlets that allows customers the option to pursue either consumer experience. In this situation, the online and in-store outlets both provide sales profits to the managing firm. While the firm may profit equally from sales recorded online and in-store, it is important for the purposes of this paper to separately define online retail and in-store retail.

First, according to the Organization for Economic Cooperation and Development (OECD), an electronic transaction involves “the sale of goods which are ordered via the internet or any other computer mediated network” (“Information Paper: Measurement of Online Retail Trade in Macroeconomic Statistics, 2013”). The electronic transaction signifies a sale for an online retailer. The online retailer is then responsible for the delivery of the good or service to the purchasing consumer. Typically, the good is shipped directly to the consumer, retrieved by the consumer at a physical retail site, or delivered online with no physical copy of the good ever produced.

In-store retail, on the other hand, does not involve the use of electronic transactions. While consumers frequently have the option of paying with a credit card, transactions made in-store always occur within the confines of the physical retail space. A common term used to describe businesses that sell products directly to consumers is “Brick and Mortar Retail.” A brick and mortar retailer runs its business out of a physical storefront as opposed to online or through a catalog. As mentioned previously, an

increasing number of brick and mortar retailers are adding online retail options for their consumers in order to stay competitive in the digital age.

Retailers that offer both online and in-store outlets are commonly known as “click-and-mortar” retailers (Lindstrom xii). The term click and mortar retailer, coined by Charles Schwab in 1999, refers to businesses in which the on and offline outlets share their mutually exclusive assets with one another. The online aspect brings the benefit of innovation, fast turnover, and highly tailored marketing, while the offline aspect brings brand recognition, customer loyalty, and an established infrastructure. This thesis addresses the relationship between the online and offline sides of click-and-mortar businesses and digs deeper into the advantages and disadvantages of this business plan.

## Chapter 2 The Modern Consumer

Modern consumers have access to more product information and price options than ever before in history. The term “modern consumer” refers to consumers during the age of the online marketplace which first began in 1994. In having such a large number of options, modern consumers are faced with a dizzying array of decisions on a daily basis. Additionally, 21<sup>st</sup> century Americans place a very high value on time, causing convenience to be of paramount importance. In his paper *Theory on the Allocation of Time*, economist Gary Becker contends that every product consumed by an individual has a price that is derived both from its cost and the time spent to attain it (Becker 1965). Becker argues that through the process of development, as the wage rate rises, the prices of time-intensive goods will rise rapidly relative to the prices of market-intensive goods as individuals and households assign a higher value to time. Using food as an example, time-intensive goods would be groceries needed to prepare a meal, while a market-intensive alternative would be a meal purchased already prepared. Essentially, this means that modern consumers demand convenience more than ever, and, assuming these demands continue, consumers in the future will value their time even more.

The combination of a high value on time and a myriad of retail options has led some experts to argue that it is no longer possible to be a “smart shopper.” However, modern information technology has reached the point where consumers can remain

informed shoppers while committing little time to comparing products and prices. A Deloitte report uses the term “connected consumer” to describe this modern shopper (Geddes 2011). The connected consumer, he argues, is time poor, environmentally aware, socially connected, and above all more connected and informed than ever. According to Deloitte research, 75% of consumers research a product both online and in-store before purchasing.

Convenience is the first main influence on a consumer’s perception of a good. Aside from making more transactions online, consumers are now using the internet to save time researching the products they buy. Findings by PricewaterhouseCoopers (PwC) report that in 2012 over 83% of Americans used the internet to research the purchases of electronics, computers, books, music, and movies (“Key Findings...” 2012). The report also finds that 80% of global consumers and 73% of US consumers (about 60% of global online consumers) research clothes, shoes, toys, and health and beauty products online before buying them. Interestingly, of the more than 7,000 global respondents to the PwC survey, about 20% had made their first online purchase within the past year. Furthermore, more respondents (28%) reported the convenience of e-retail rather than low prices as their primary reason for shopping online.

However, even in the age of the connected consumer, brand trust and loyalty plays an important role in a consumer’s perception of value. Comparison shopping, including comparisons between in-store and online outlets, is a practice that is becoming increasingly common with the help of the internet. However, the decision to buy a product remains rooted in consumer rationality and preference. As mentioned before, this is an area in which brick-and-mortar retailers have an advantage over online retailers

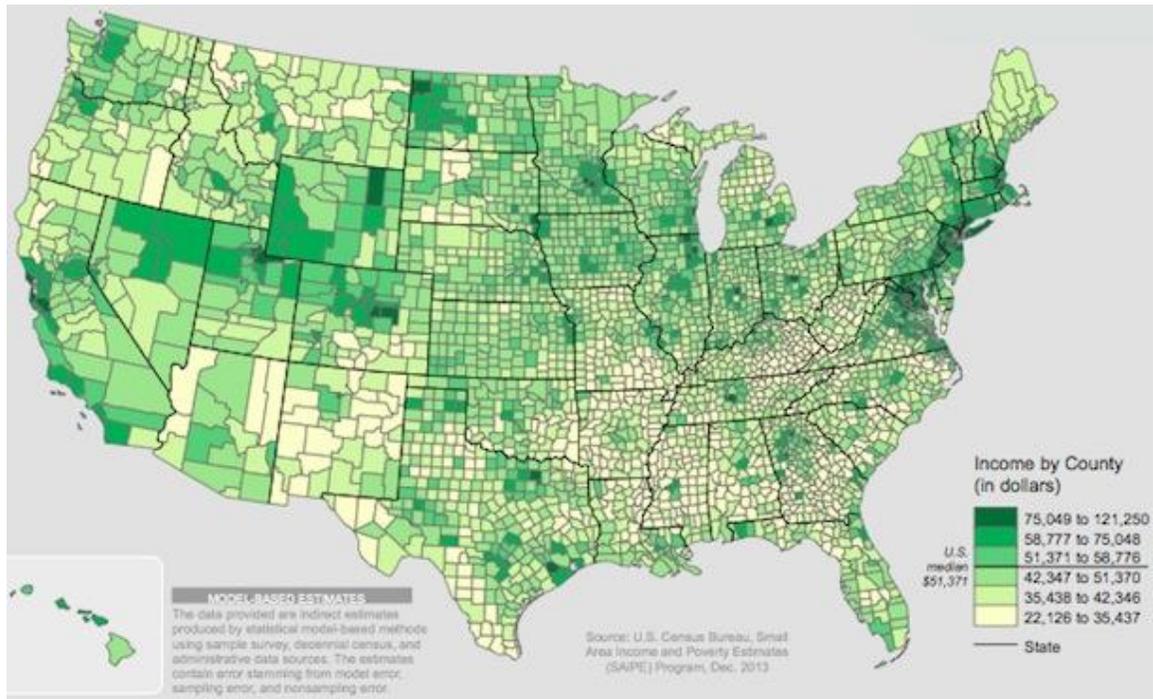
as they may offer a personalized face-to-face shopping experience that cannot be matched by a website. According to a University of Florida study, consumers tend to be wary of online retail because they cannot confirm the quality of the product they are purchasing or ensure the product they order will be delivered (Toomey & Wysocki 2009). This gives established offline brands with high levels of consumer trust the advantage when entering the online market. For example, according to Forrester Research, because of its brand recognition, an established offline brand will spend 18% less on an average creating a retail website than an online startup (Lindstrom 14). While consumers may gain more trust in online retail brands over time, brand loyalty and trust will remain an important factor in consumer decisions.

Another key factor in consumer product decisions is price. The idea of consumer rationality stipulates that given the choice between two identical bundles of goods, the consumer will always select the one that is less expensive. While this may seem like a fairly straightforward concept, additional expenses associated with online shopping as well as the limits of consumer information can make finding the lowest price of a good very difficult. The purchasing factor of price has a very strong communicative effect on the consumer. Often, price serves an indicator of a good's value and consequently, when a consumer considers the offered price to be less than the good's actual worth, the presence of a "discount" increases the perceived value of the good. The perceived value of a good varies from consumer to consumer as it is derived from the individual's subjective marginal value. The marginal utility of the market as a whole determines the market value and demand for a particular good. For retailers, the ability to change prices quickly to reflect changing demand and compete with other retailers is a great asset. This

is an area in which online retailers have the advantage over in-store retailers. Online retailers can easily monitor the prices of the competitors, change their own prices to offer discounts, and target individual consumers with information the sales. Furthermore, online retailers typically have lower overhead costs than in-store competitors because they can operate with fewer workers and do not need to cover costs associated with physical retail space.

The modern consumer, therefore, values three factors above all else: convenience, brand trust, and price. For both online and in-store retailers, making a sale requires offering a combination of these three factors to consumers. The next two chapters will highlight ways in which retailers provide convenience, establish brand loyalty, and sell their goods at a competitive price.

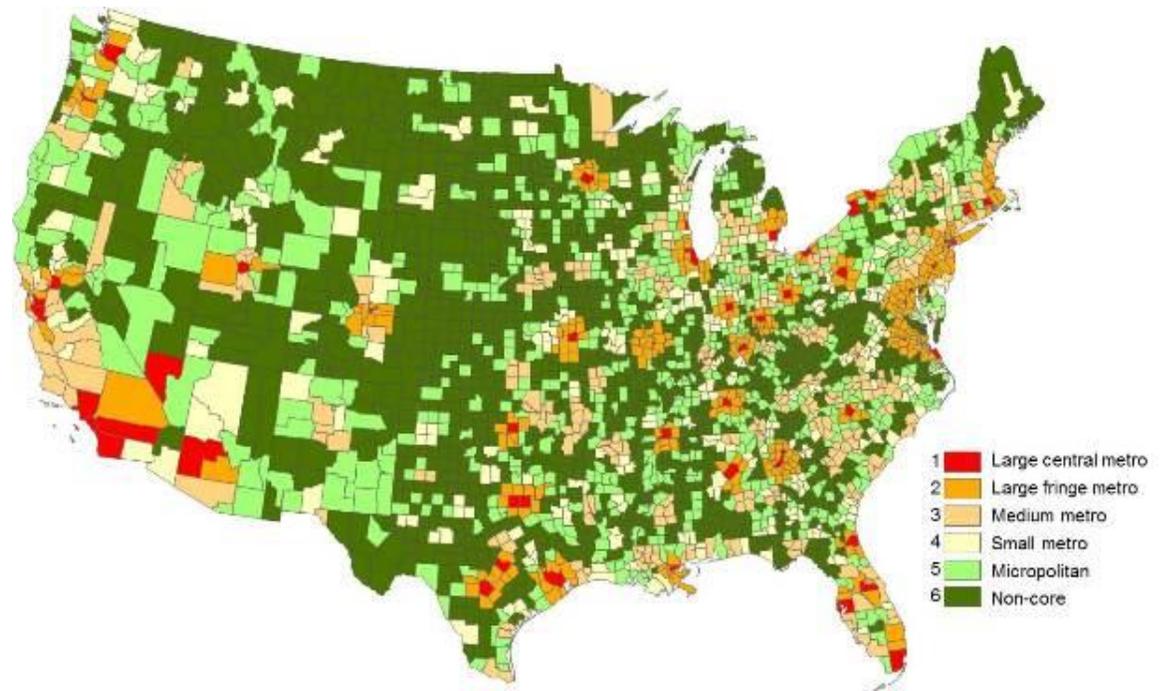
In addition to the three factors listed above, the geographic location of modern consumers affect shopping habits. In this context, geographic location refers to the environment in which consumers live, whether it be urban, rural, or suburban. Consumption is the highest in regions that have the highest wealth. Figure 2 below shows wealth distribution in America by county.



**Figure 2: Median Income of the US by County (2013)**

The vast majority of wealth in the US is located in the northeast region including Maryland and Virginia (Badger 2013). Of the 75 counties with the highest median income, 44 are located in this northeast region. Similarly, the south is home to the highest concentration of poverty with 79% of the poorest counties with median income below \$35,438 located in this region. Median income plays a major role in determining both store and distribution center locations, a topic that will be discussed in further detail in Chapter 6.

The distinction between urban, suburban, and rural areas is made primarily on the basis of population, with consideration also given to proximity to an urban center. Figure 3 below displays US counties color coded to indicate the population classification of each county using 2006 data.



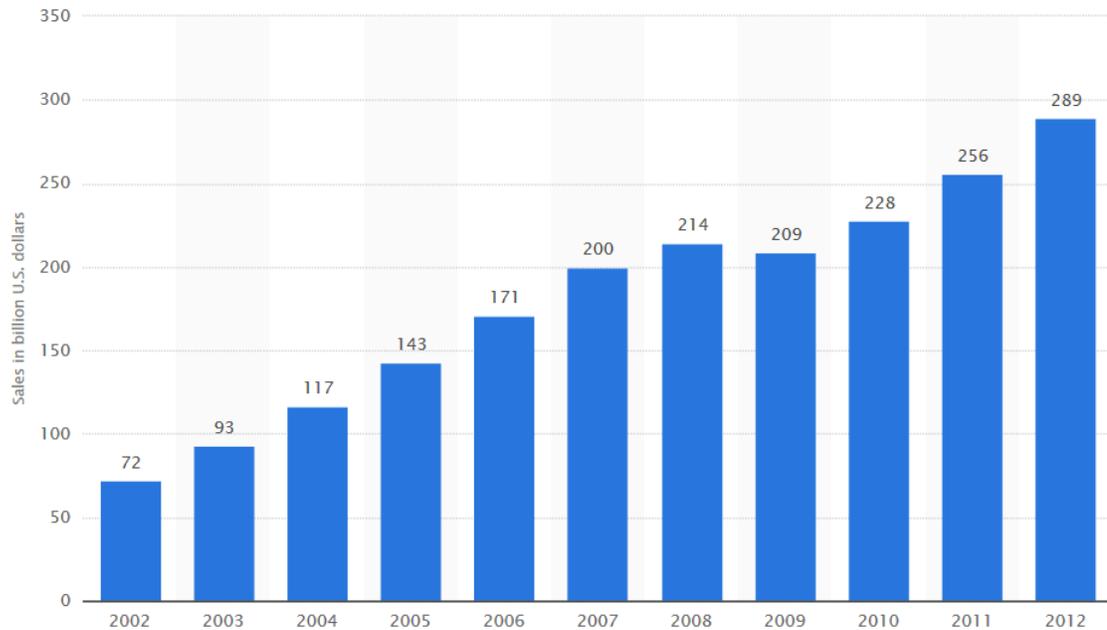
**Figure 3: US Counties by Population Classification**

In Figure 3, the red “Large Central Metro” areas indicate counties that contain either the majority or the entirety of the principal city in a “metropolitan statistical area” (MSA) with over 1 million residents (“NCHS Urban-Rural Classification Scheme for Counties.”). MSA is a term given by the US Census Bureau to an area with a large population nucleus with adjacent communities that have a high degree of social and economic interaction with the nucleus (“Metropolitan Statistical Area”). Large Central Metro areas qualify as urban and typically contain the largest number of retail options. “Large Fringe Metro” areas are also located in MSAs with over 1 million residents, but do not include the primary city of the MSA. These counties qualify as suburban and are increasingly becoming the target location for the big-box stores discussed in the previous chapter. “Medium Metro” areas are located in MSAs with populations between 250,000 and 999,999. While these counties typically do not have as wide a range of retail options

as urban centers, Medium Metro areas serve as important centers of commerce for the surrounding area. Finally, counties that are not a part of MSAs greater than 250,000, qualify as rural areas. These counties, labelled pale yellow, pale green, and dark green represent the three lowest population classifications for counties in descending order. Rural counties typically offer the fewest shopping options of the three main population classification and many residents of rural counties are forced to buy specialty items in nearby MSAs or online. The Central Place Theory Model discussed in Chapter 6 will further explain retail in urban, suburban, and rural settings, both in terms of retail site selection and consumer behavior.

### **Chapter 3 Online Retail by the Numbers**

Data from the past ten years helps paint a picture of just how rapid and massive the growth of the internet and the online marketplace has been. Of the 7.084 billion people in the world 2.4 billion are internet users (Davis 2013). In 2013, Facebook surpassed 1 billion users and 1.3 million people owned smartphones. These statistics indicate the degree to which modern consumers are tied to the use of the internet. Not surprisingly, as the world has embraced the digital age, online retail has continued to grow. In 2013, online retail in the US was a 200 billion dollar industry projected to generate 370 billion dollars in revenue by 2017. Mobile payments in the US are expected to grow to 90 billion dollars by 2017. Digital wallet transactions accounted for an estimated 8% of all transactions in 2013. Figure 4 below displays the growth of online sales from 2002 to 2012 as a bar graph. The only year in this period that saw a decline in online commerce was 2009, in the wake of the housing market collapse of 2008.

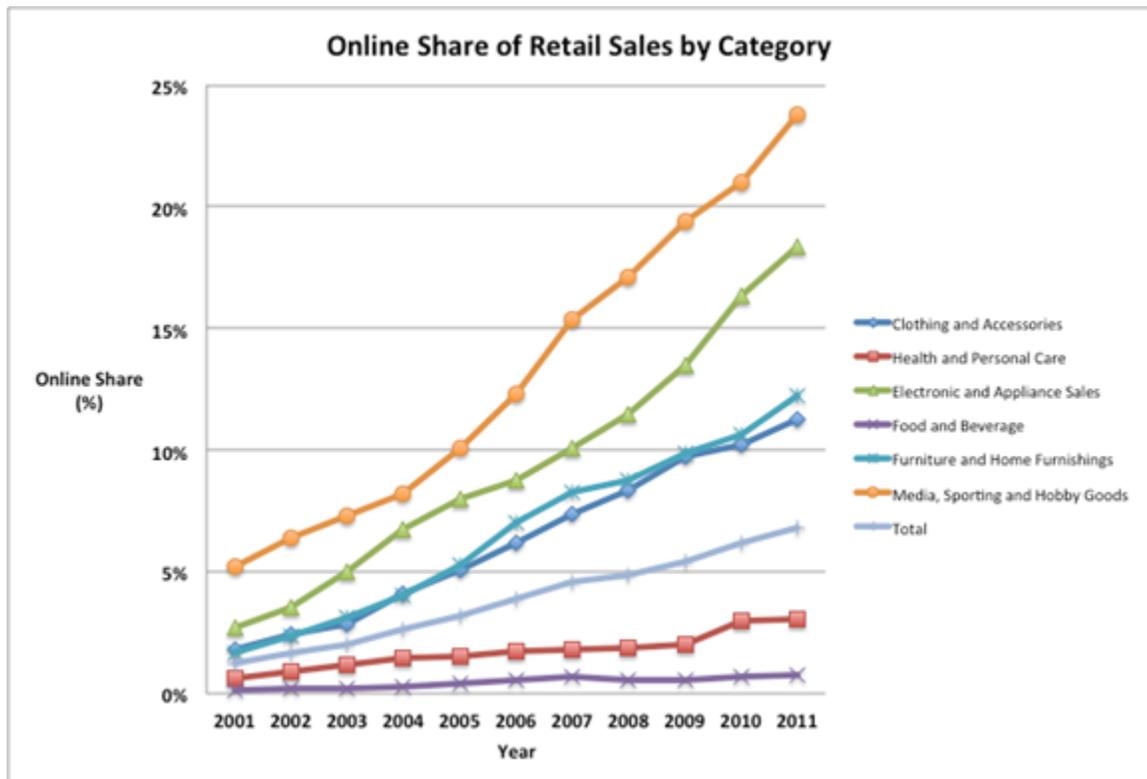


**Figure 4: E-Commerce Sales in the US from 2002 to 2012 (In Billions of US Dollars)**

As more and more consumers take their business online, more online retailers are entering the market. For example, the software as a service industry (SaaS) produces web-based apps, cloud computing programs, and other software that improves the connectivity and efficiency of businesses. *Forbes* magazine reports that the SaaS industry hit 14.5 billion dollars of sales in 2012 (McCue 2012). Kathleen Davis of *Entrepreneur Magazine* reports that that very same SaaS sector in the US made 59 billion dollars in sales for 2013 and is projected to hit 75 billion in sales for the year 2014 (Davis 2013). As both large corporations and small businesses aim for a greater degree of connectivity, business is thriving for the SaaS industry.

Based on the numbers so far, it should not come as a surprise that the number of software and online retail startups has soared in recent years. According to Davis, one of the main reasons for this is a surge in investor interest in internet entrepreneurs. In the

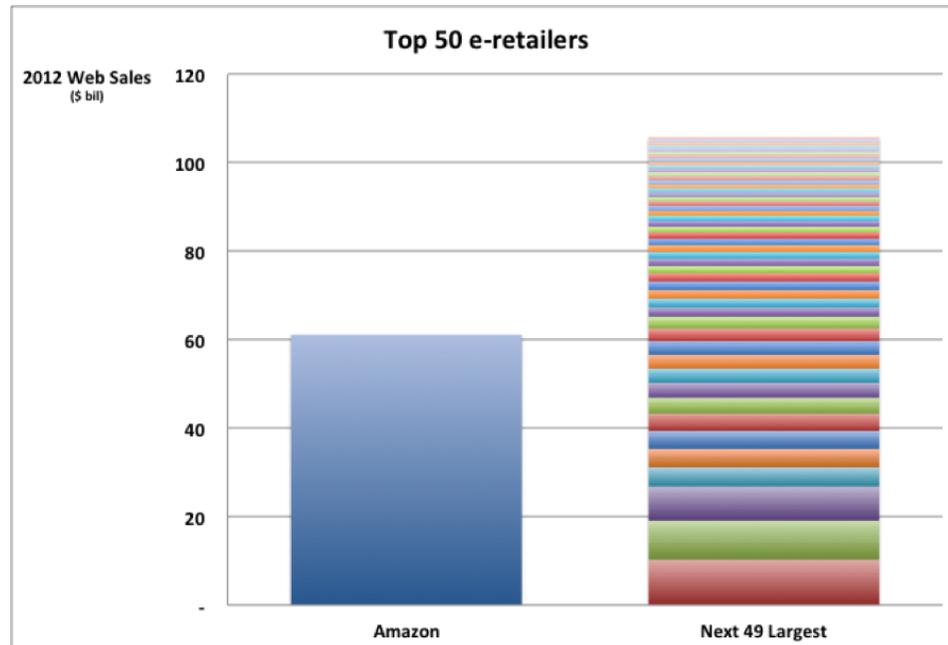
first quarter of 2013, venture capitalists invested 242 million dollars in startup e-retailers. When adjusted for inflation, this is the most investment in the online retail sector since the year 2000 (Davis 2013). Besides the high availability of investment capital, modern online startups are benefitting from the dawn of the crowdsourcing movement. Crowdsourcing solicits volunteer assistance from programmers across the world in creating open source software and application program interfaces (API). This make it cheaper and easier than ever for startups to create the programs needed to manage a website and run a business online.



**Figure 5: Online Share of Retail Sales by Category**

In terms of the products that are purchased online, Figure 5 shows that the two most popular categories for online retail are “media, sporting and hobby goods” and “electronics and appliances.” Only sales in the categories of health and personal care and

food and beverage fall below the percentage of all retail sales made online, which is marked on the graph by the “total” category. For every category, the online share of retail has increased since 2001, e-commerce accounting for approximately 7% of the overall retail trade in 2011.



**Figure 6: Top 50 E-Retailers**

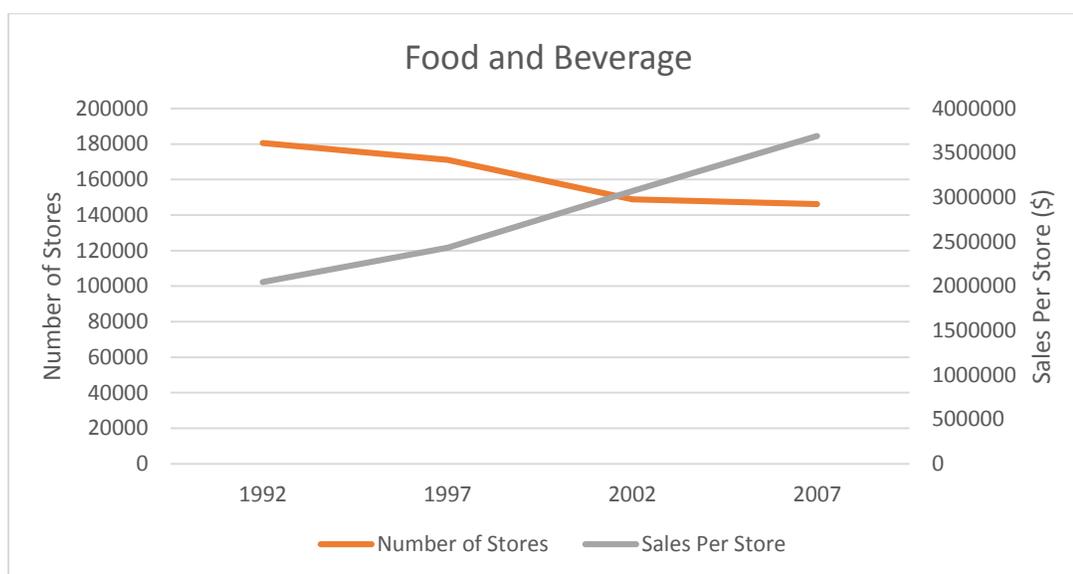
Although it is relatively easy and inexpensive to begin a startup online retailer, the market is dominated by Amazon. Amazon is the top online retailer and produces as much revenue as the next twelve top online retailers combined. Figure 6 was derived using 2012 sales data provided by *Internet Retailer*. The online retail branches of Apple and Walmart are the second and third largest online retailers respectively. The extent of Amazon’s dominance over its online retail competitors creates an interesting dynamic that will be discussed in more detail in Chapter 5.

## Chapter 4 In-Store Retail by the Numbers

While data from Chapter 2 indicates the growth and scope of online retail, sales made through in-store outlets have risen since 1992, even when adjusted for inflation. Consider the example of the online grocery store. Research has shown that consumers are hesitant to buy perishable items such as food without personally examining them (Toomey & Wysocki 2009). Many online grocers, such as Peapod, operate in conjunction with a brick-and-mortar grocery chain (Heller 2012). Peapod cooperates with Stop & Shop and Giant Eagle to offer pickup and delivery services for customers living near these grocery chains. This cooperation allows Peapod access to fresh foods sold by the grocery chains as well as an effective means of distribution. However, this ultimately means that Peapod is simply an alternate way to buy groceries in the NY-Boston and Washington DC metro areas (See Fig. 1).

Overall, retail sales for food and beverages should remain relatively steady during the rise of online retail, while the sales of goods such as electronics, books, movies, clothing, and accessories, which consumers report buying frequently online, should fall. However, a review of US Economic Census data since 1992 indicates otherwise.

The US Economic Census compiles sales and employment data collected from physical retail sites across the country. These retail sites are then divided into categories based on the types of products they sell.



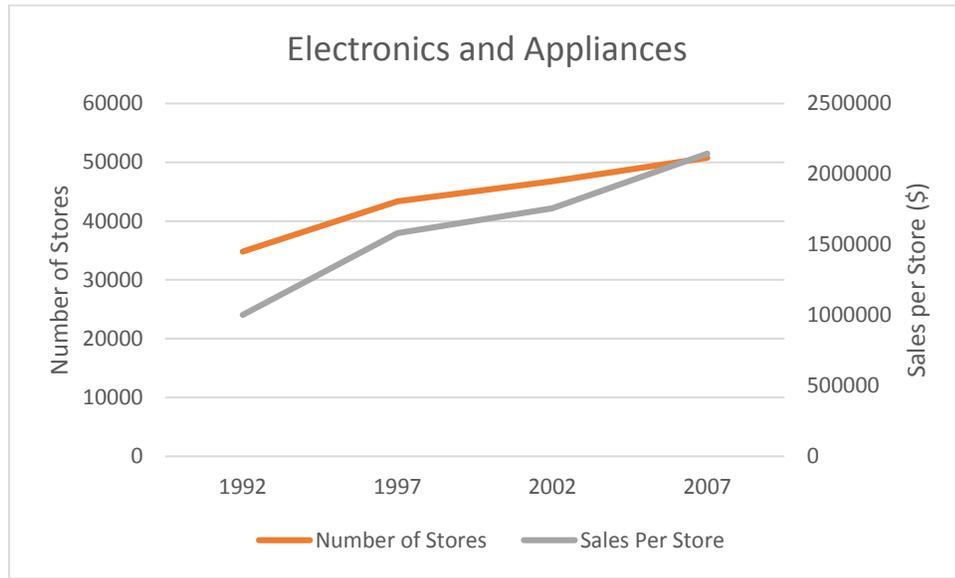
**Figure 7: Food and Beverage Retailers**

Since online shopping has become prevalent, the number of retail outlets for the food and beverage sector has fallen while sales per store have risen as seen above in Figure 7. However, overall sales from the food and beverage sector, when adjusted for inflation have not changed significantly since 1992. In 1992 the food and beverage sector had over 369 billion dollars of revenue while in 2007, the sector yielded 364 billion dollars in revenue when adjusted for inflation. The most apparent trend in food and beverage retail since 1992 is the decline in the number of stores. Since sales during this period remained largely steady, it is probable that food and beverage outlets are becoming larger while the amount of outlets is declining.



**Figure 8: Clothing and Accessories Retailers**

Figure 8 shows that the sales trend for clothing and accessories stores shows that the number of outlets has remained largely constant since 1992 while the sales per store have risen. In 1992 the total revenue for clothing and accessories stores was nearly 102 billion dollars. In 2007, when adjusted for inflation clothing and accessories stores earned over 145 billion dollars in revenue. Also, the highest increase in sales during the 1992 to 2007 period came between 2002 and 2007, the same period of time during which online sales rose from 72 billion dollars to 200 billion dollars.



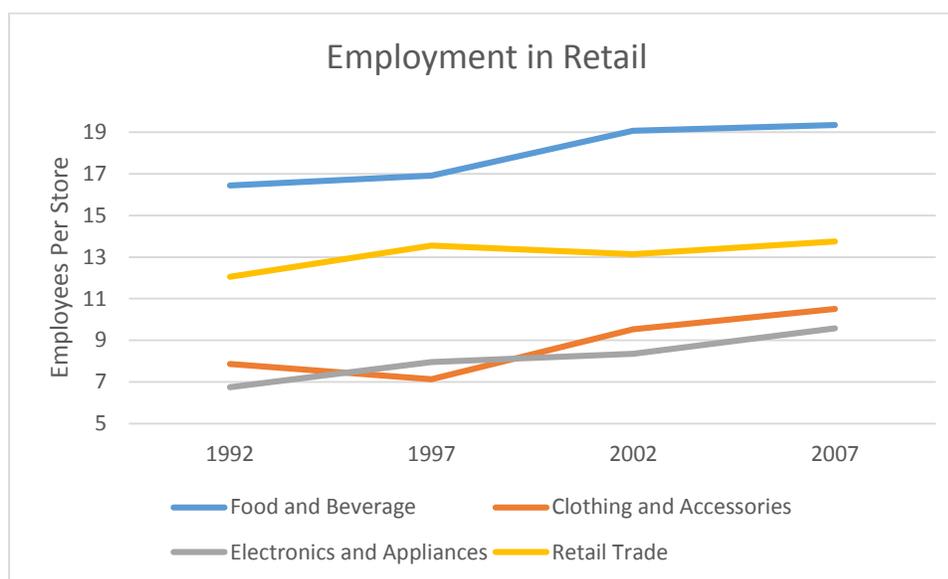
**Figure 9: Electronics and Appliances Retailers**

Figure 9 shows that both the number of stores and the sales per store appear to be increasing for the electronics and appliances retail category from 1992 to 2007. The electronics and appliances sector recorded over 34 billion dollars in sales in 1992 compared to almost 74 billion dollars in sales in 2007. Much of the growth in this sector can be attributed to innovations in electronics during this period such as the popularization of cell phones, digital cameras, laptops, and other accessories that were not available in 1992. However, electronics and appliances are reported to be a category for which online shopping is a popular retail outlet among consumers.



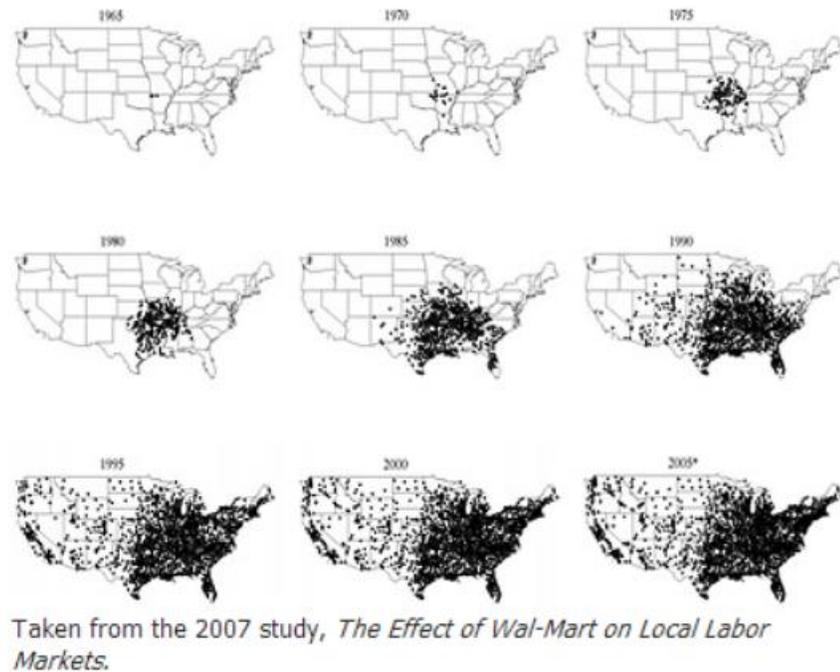
**Figure 10: Retail Trade**

The sales figures for the retail trade, shown above in Figure 10 suggest that the number of retail sites has declined since 1992, while the sales per location have increased. While the numbers of clothing and electronics stores have risen, the number of overall stores has fallen. The most likely reason for this discrepancy is that since 1992, there have been an increasing number of large stores that sell a wide variety of things. By selling both clothing and electronics, a store can count in both categories for the economic census, while counting as one retail site in the overall calculation. The same applies for food and beverage retail sites, although in that particular case, the number of sites is falling while the likely size of each site is increasing.



**Figure 11: Employment in Retail**

The economic census tracks the employment in every retail sector. Figure 11 shows how employment in the food, clothing electronics sectors, as well as in the retail trade as a whole has risen from 1992 to 2007. This indicates that the average scale of operation for retail outlets has increased and supports the theory of increasingly larger stores selling a wider variety of items. While the number of employees per store has risen across all sectors in retail the overall number of people employed in retail has fallen from 18.4 million in 1992 to 15.5 million in 2007. It is apparent that brick-and-mortar retailers are adjusting their business practices to be compatible with the evolving preferences of the modern consumer.

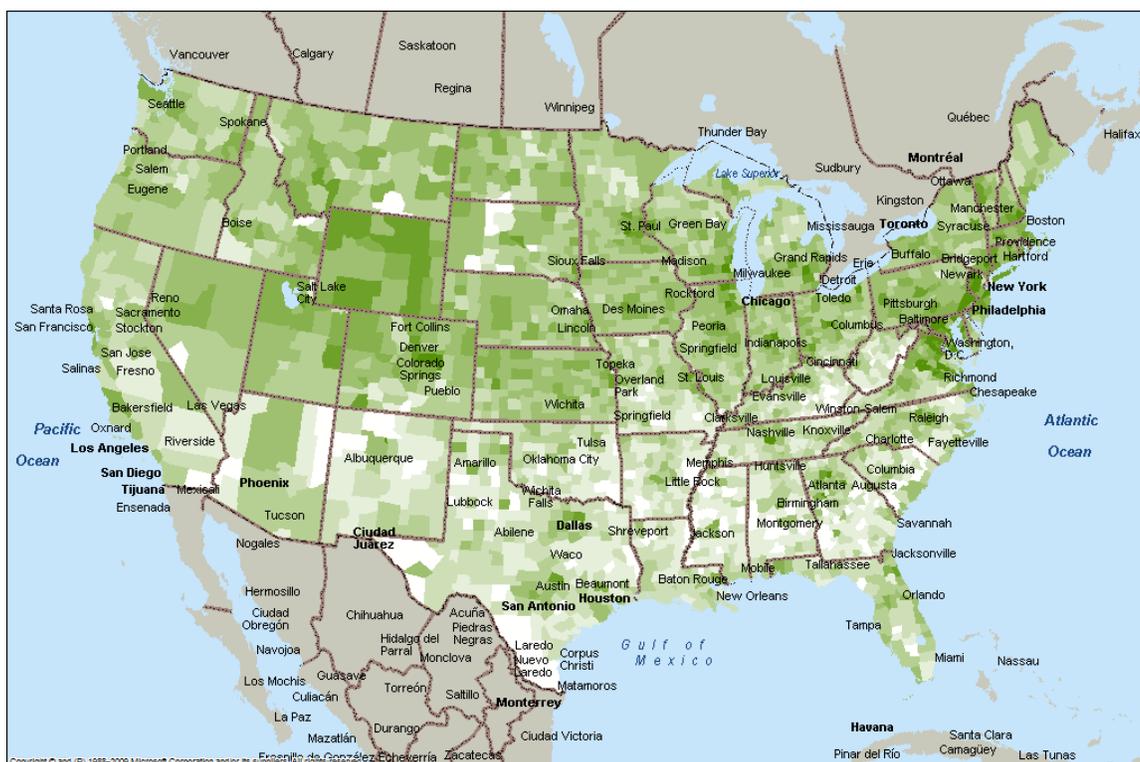


**Figure 12: Walmart Locations 1965-2005**

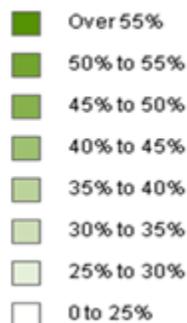
Figure 12, above, shows the massive expansion of the Walmart chain since 1965. These data are consistent with the growing trend of “big-box retail.” Big-box retail is a term derived from the appearance of large-warehouse type retailers that typically occupy upwards of 50,000 square feet of floor space (“Big Box Retailer”). Big-box retailers, such as Walmart and Costco offer an immense range of products and allow customers to complete virtually all of their shopping in a single location. This makes shopping at big-box stores far more convenient than smaller, more specialized retailers. The high value modern consumers place on convenience allows big bog stores to compete with online retail. The regional popularity and distribution of big-box stores is discussed in Chapter 6, along with a more detailed look at the Walmart business model,

## **Chapter 5 Strategies for Online Retailers**

The online retailer is in a unique position with respect to the ways in which modern communication grants it the ability to interact with its customer base. Modern consumers with smartphones have access to the internet nearly everywhere during the course of their daily lives. The online marketplace is always open, and for consumers that highly value time and convenience this is a major attraction. Online retailers can use the internet to connect products to consumers instantly. Consumers have the ability to browse through vast inventories of goods with a couple clicks of the mouse while retailers can track browsing history and tailor the shopping experience to fit individual consumer preferences.



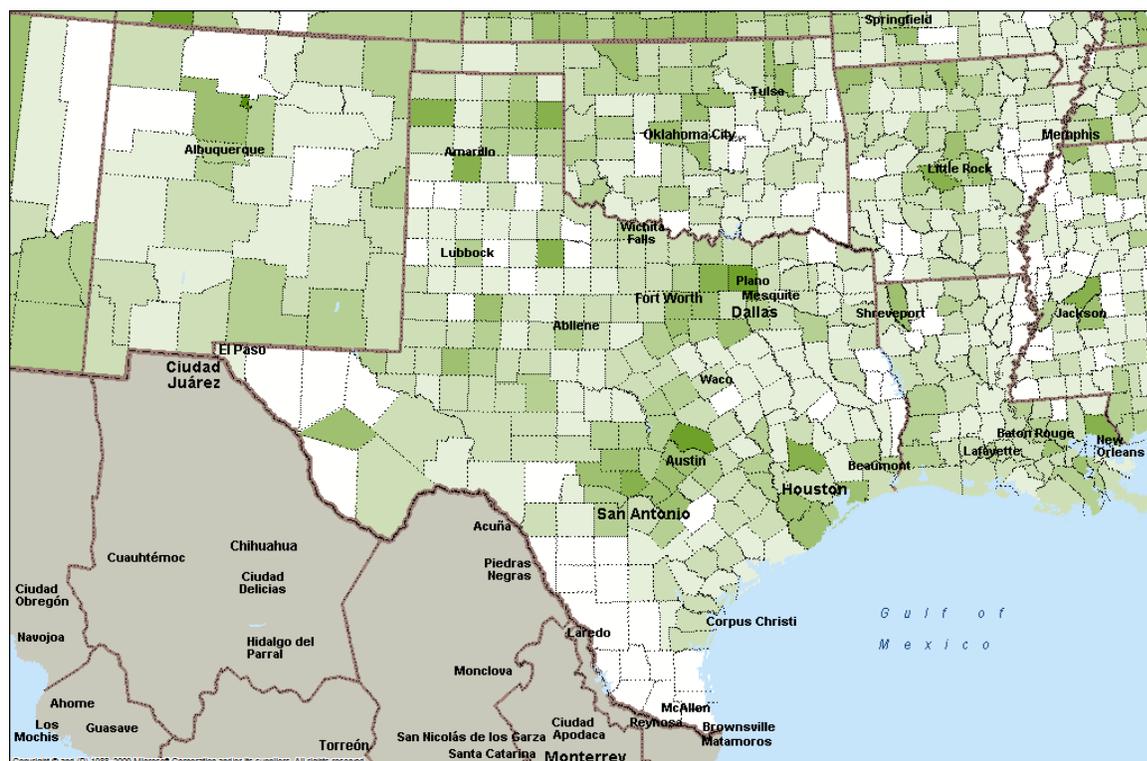
#### Percentage Making Online Purchases by County



**Figure 13: US Counties by Percentage of Population Utilizing Online Shopping**

Figure 13, above, shows the percentage of the population in each US County that shops online according to survey results. While conventional wisdom would suggest that online shopping would be more prevalent in rural areas with fewer stores, Figure 13 suggests that this is not the case (Borden 2014). In fact, rural counties tend to shop online far less than urban and suburban counties. The relative popularity of online

shopping in rural counties is most likely due to the prevalence of one-stop big-box-stores in these areas. Figure 14 below is a more detailed view of Texas as depicted in Figure 13 above.



**Figure 14: Texas Counties by Percentage of Population Utilizing Online Shopping**

Figure 14 shows in greater detail how online shopping is most popular in suburban counties that fall under the category of Large Fringe Metro (Borden 2014). The use of online shopping is relatively high in the counties surrounding Dallas, Houston, and San Antonio compared to the urban Large Central Metro counties. Urban areas offer a large variety of shopping options within walking distance of consumers, making in-store shopping a more convenient option than online shopping which involves searching for products and waiting for delivery. On the other hand, in suburban areas, in-store

shopping involves driving, parking, and browsing aisles of items, making online shopping a comparatively more convenient option.

In some cases, online retailers can deliver their products to consumers instantly over the internet. These products, known as “digital goods,” include items such as music, video, images, text and software that can be downloaded directly onto a computer’s hard drive. For digital goods, the cost of producing additional copies is next to nothing. Instead, the price of a good reflects its high initial production and development cost regardless of whether the retailer is the original creator. A strategy commonly used by retailers when selling digital goods involves selling different editions of the same product to capture different markets. This process, known as “versioning,” takes advantage of consumers whose personal preferences make them willing to pay more for a higher quality experience of the good. Versioning also gives consumers the option of purchasing a less expensive and more basic edition of the good. By appealing to the preferences and budgets of different consumers, versioning effectively increases the size of the market, and thus increases “aggregate welfare.” Aggregate welfare is a measurement used in economics that is the sum of consumer surplus and producer surplus. In cases of versioning, producers do at least as well when moving from a single price for a good to differentiated prices because they are able to sell to a larger market and always have the option of returning to the single price. Many economists regard versioning as a form of price discrimination which implies that some consumers are made better off and some are made worse off. However, there are cases in which this form of price discrimination results in a Pareto improvement, or a situation in which all consumers do at least as well. Hal Varian provides the example of a hardcover textbook

that sells for \$50 in the US and a newsprint basic edition of the same text that sells for \$5 in India (Varian 2000, p. 146-147). Since it is likely that if only one version was produced it would be the high quality hardcover edition, it is an increase in aggregate welfare to offer an affordable version to the Indian market. In many cases, versioning is an effective strategy utilized by online retailers to reach larger markets and increase aggregate welfare.

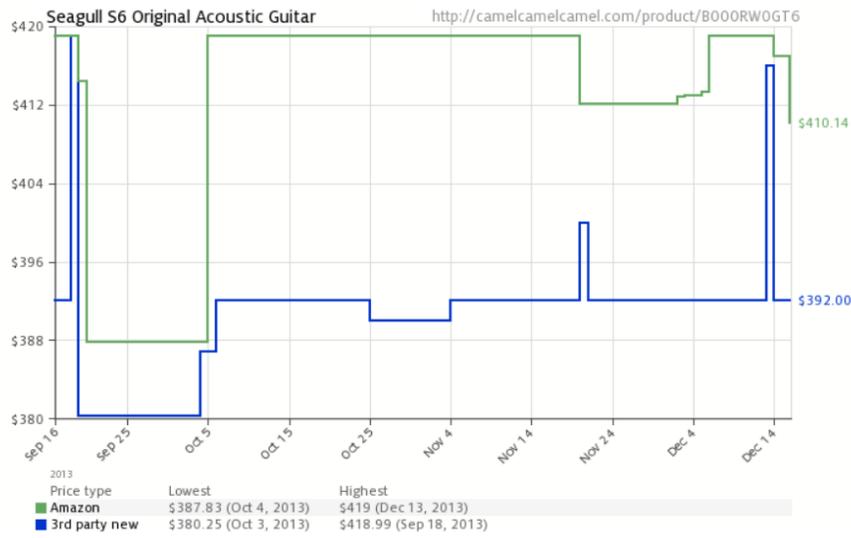
Some online retailers take advantage of the speed and accessibility offered by the internet using the strategy of flash promotions. Flash promotions offer discounts on items that are available only for a span anywhere between one minute and three days (Varian 2000, p.141). In the online marketplace, competition is only a click away, so flash promotions can be a way for a retailer to build customer loyalty, sell off excess inventory, or compete directly with other retailers. Limiting the duration of the sale creates a sense of urgency, increasing both consumer purchases and retailer profits.

Consumers may also make use of “deal aggregators” or “shop-bots” (Varian 2000, p. 135). Both of these tools search the internet for flash promotions and sales and return the best available offers to the consumer. These tools benefit the consumer but are generally unpopular among retailers as they open sales up to extensive competition and reduce the sense of urgency flash promotions are designed to produce.

Many online retailers combat the use of deal aggregators and shop-bots by offering customer loyalty programs. Companies such as Amazon offer free t-shirts, mugs, and upgraded shipping as some incentives for repeat customers in order to build loyalty. Online retailers often track the purchase histories of their consumers to offer customized shopping suggestions and deals based on what they have bought in the past.

Some customer loyalty programs operate on a cumulative basis, assigning points for every dollar spent that can be redeemed for different prizes or upgrades in the shopping experience. However, the customer loyalty program that most effectively encourages repeat customers uses a nonlinear reward system where customers are given a big reward once they have accrued a certain number of points. In this case, customers are encouraged to use the same online retail outlet repeatedly in order to earn enough credit for the big reward. While customer loyalty strategies are often used by in-store retailers, the ability to track buyer history and communicate with customers over the internet gives online retailers an advantage in conveying rewards to their customers.

Aside from developing customer loyalty, online retailers are in a constant battle with other online or all? retailers to offer the lowest prices. Prices listed on the internet can be changed with a few clicks of a mouse meaning that the price of a particular good might change several times in a single day. This also means that competition can respond to a change in price within minutes. Shop-bots, as mentioned before, can also be used by online retailers to monitor the flash promotions offered by their competitors. If consumers are able to move faster than the competitors, the retailer offering the initial price drop benefits as it is likely the flood of customers will recoup the cost of offering a discount. However, when firms are able to move faster than consumers and match a discounted price, both the incentive to cut prices and the resulting flood of consumers is reduced.



**Figure 15: Price Competition: Amazon vs. Third Party**

Figure 15 shows an example of price competition between Amazon and a third party retailer on an acoustic guitar over a three month span. There are three clear instances of competitor response in this example: first, around September 19<sup>th</sup> when Amazon responds to the drastic drop in the price offered by the third party; second, around October 5<sup>th</sup> when the third party raises its prices in response to Amazon's price increase, and finally, after December 16<sup>th</sup> when Amazon drops its prices in response to a decrease in price by the third party. While Figure 15 does not illustrate changes that happen during the day, it shows long term price competition between online retailers and highlights how drastic and sudden responses can be.

In recent years, online retailers have been increasingly taking advantage of information given out by consumers over the internet. Besides purchasing histories, online retailers can use interactions with customers to gather information about their consumers such as their family status and where they live. According to a *Wall Street Journal* investigation, Staples, as well as other online retailers, adjust prices offered

online based on where they believe the customer lives. Staples, because it uses both physical and online retail outlets, qualifies as a click-and-mortar retailer. *The Wall Street Journal* reported in 2010 that when Staples perceives a competitor such as Office Depot or Office Max to be within 20 miles of a customer's computer, it will offer a lower price to that customer (Valentino-Devries et al. 2010). An online retailer can easily determine the location of its customers by asking for a zip code as part of registration for use of the online store. This information can also be determined if the customer is using a mobile device with GPS capabilities for online shopping and some positional information can be derived from the IP address of a customer's computer. This is simply another instance of price discrimination at work in online retail. Retailers claim that tailoring prices based on specific consumer characteristics such as geography is simply an attempt to address local supply and demand, which is a common practice among brick-and-mortar retailers. In doing so, retailers are changing the level playing field aspect of the online marketplace, forcing underprivileged and rural communities to pay higher prices because they live in areas with little retail competition.

The use of geographic location to tailor prices offers online retailers an opportunity to compete directly with in-store retailers for customers and sales. Even online retailers that do not have physical sales outlets can observe the prices offered by in-store competitors within the zip-codes of their customers. The web-based software company Personify developed an application in 1997 that allowed retailers to track the purchasing histories of their customers and use this information to place their customers into different categories (Valentino-Devries et al. 2010). For example, a consumer might be labelled as price conscious and the software would target them with low cost goods.

Today, Personify can be modified to produce customized pages for consumers that display different prices based not only on browsing history but on geographic classification and local competition as well. The ability to utilize software that automatically carries out the price competition process is a tremendous advantage online retail possesses over in-store retail. Furthermore, varying prices based on consumer characteristics makes price competition difficult as competing retailers may not be able to locate areas where different prices are being offered.

The largest online retailer, Amazon, also customizes its shopping experience for different consumers. Amazon asserts its dominance over the online marketplace by aggressively competing with online vendors within its own site. Part of the reason for Amazon's dominant position within the online marketplace is the seemingly limitless range of products it offers. For many items, consumers can find a variety of models and prices on Amazon as well as access numerous customer reviews. While Amazon receives a percentage of every sale made on its site, many products are sold by independent vendors that list their products on Amazon in order to access its vast customer base (Bensinger 2012). These products are stored and distributed by independent third parties who do not use any of Amazon's infrastructure other than its website. Through the years, Amazon has expanded from a small garage-based company to a world-leading retailer by expanding its product selection and distribution infrastructure. Figure 16 below displays Amazon's fulfillment centers in America with the blue dots denoting centers built prior to or during 2012 and the red dots marking new fulfillment centers built in 2013 ("Amazon Fulfillment Center Network." 2014). Amazon

plans on opening another 9 fulfillment centers during the 2014 calendar year, which would bring the total number of Amazon fulfillment centers in America to 61.



**Figure 16: Amazon Fulfillment Centers**

In Figure 16, it is apparent that Amazon places heavy emphasis on the northeastern US. 19 of Amazon's 62 fulfillment centers are located here or approximately 30% ("Amazon Fulfillment Center Network." 2014). This is not surprising considering both the high population and high wealth contained in this region. It is also interesting to note that many fulfillment centers are located close to Large Metro Centers. Locating fulfillment centers close to urban areas allows fulfillment centers to take advantage of transportation infrastructure in the area as well as maintain close proximity to the suburban areas that are the largest market for online shopping. Fulfillment centers that are located well away from urban centers, such as those in southern Indiana and

central Tennessee, are located to take advantage of nearby interstate highways and serve large and medium urban centers in the proximity.

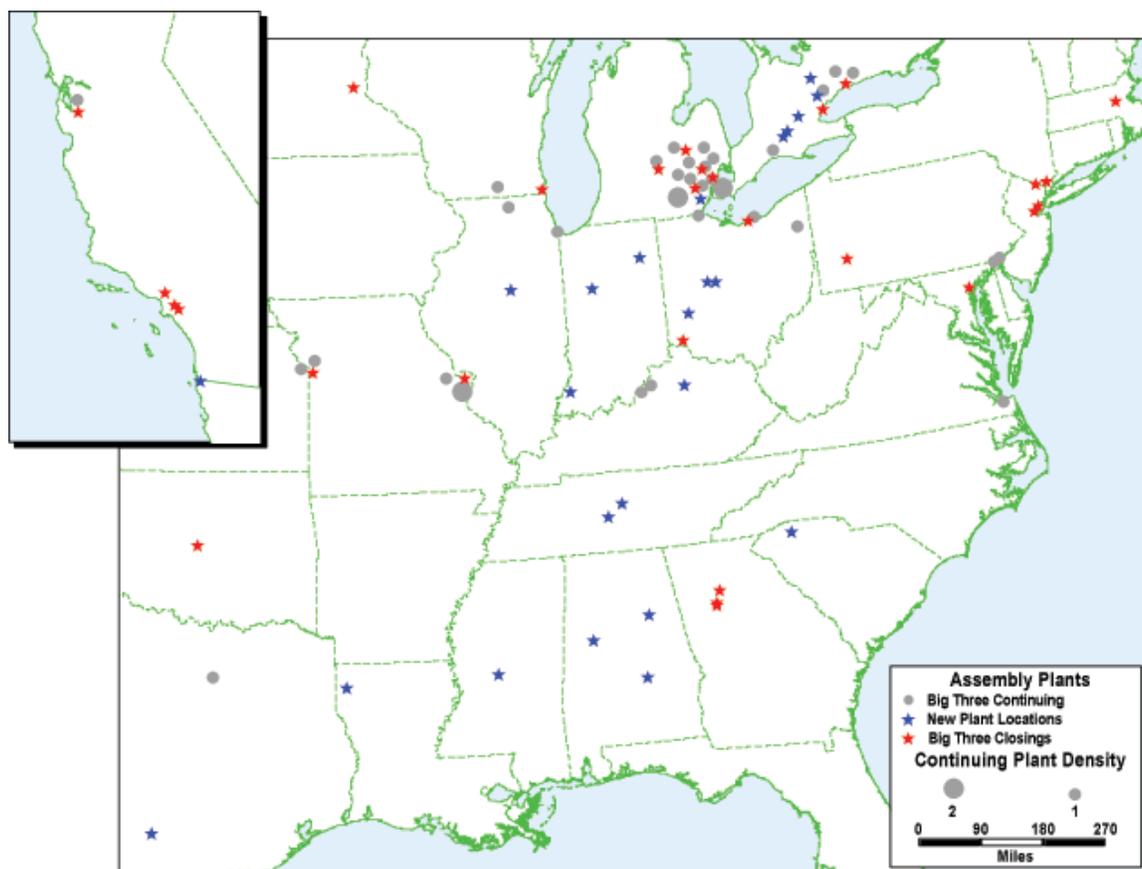
Vendors pay Amazon to have their products packaged, labelled, and distributed within fulfillment center. For items under a pound, Amazon typically charges \$1.32 per item for this service. Amazon can easily identify when a product sold by a third party attracts a large number of customers and begin to carry it independently. Amazon has access to a much better distribution infrastructure than third party vendors and upholds strong relationships with many prominent manufacturers because of its size, meaning that it can almost always undercut the prices offered by its vendors. Alternatively, Amazon can better advertise its own products more prominently on the site than third party products. This means that Amazon can offer a good at a higher price than its vendor and still sell more of it.

Overall, strategies for online retailers involve taking advantage of internet capabilities to the fullest extent. As the customer base for the online marketplace grows, competition for sales among retailer continues to grow fiercer. In order to remain profitable, the modern online retailer makes use of the high speed interaction enabled by the internet to monitor competitors' prices and stay connected with its customer base. Now, with the use of geographic information, online retailers are able to compete directly with in-store retailers to an unprecedented degree.

## Chapter 6 Strategies for In-Store Retailers

Brick-and-mortar retailers face a very different set of challenges than online stores. While they can also use the internet to connect and communicate with consumers, in order to make sales in-store retailers must attract customers to a physical retail location. As discussed in Chapter 4, many modern consumers make purchasing decisions based on the importance they assign to convenience, brand quality, and price.

In-store retailers must first choose a retail location that is accessible by its customer base. The process of choosing a location is deeply rooted in the geographic concept known as central place theory. German geographer Walter Christaller coined the term Central Place Theory in 1933 to address the regional hierarchy of cities and towns in terms of market importance (Berry 1967). Central-place theory revolves around the idea that consumers have access to different sets of goods depending on the size of the “market center” closest to where they live. A market center is simply a location where the process of exchange takes place. Consumers must travel to market centers in order to exchange money for the goods and services they want purchase. Geography of retail studies this exchange in terms of the equilibrium between the geography of production and the geography of consumption. While the geography of production includes massive regional differences in terms of activity, geography of consumption involves the demand for similar goods across the nation as a whole. Consider the retail geography of automobiles for example.



**Figure 17: Automotive Assembly Plants in the US**

As Figure 17 shows, there is a heavy regional concentration of automobile production in the Detroit MSA. However, the demand for automobiles is roughly consistent across the US as a whole. In order for customers outside of southeastern Michigan to have access to automobiles for sale in their local market centers, a system of articulation is necessary. Chapter 8 discusses the process of distribution in detail, but the main idea is that market centers in areas of higher population density tend to have access to a wider variety of goods than market centers in areas of lower population density.

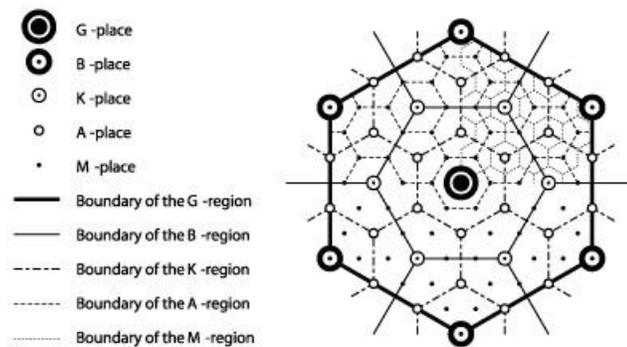
A market center that contains a cluster of retail establishments that provide goods and services a consumer routinely purchases becomes a “point of focus” for that consumer. The concept of “centrality” refers to the effort to which consumers are willing

to go for a particular set of goods. Consumers that visit a market center on a regular basis in order to obtain the goods and services they desire will select the location that minimizes the effort of travel. These consumers are willing to travel only short distances in order to obtain the goods they need regularly. However, trips to purchase goods needed less frequently, such as luxury and specialty items, can be postponed and planned so that many items can be purchased during a single outing. This means that for different items, different scales of centrality exist. Retailers selling specialized goods will attract consumers from a wide area, while retailers selling basic necessities may only attract locals.

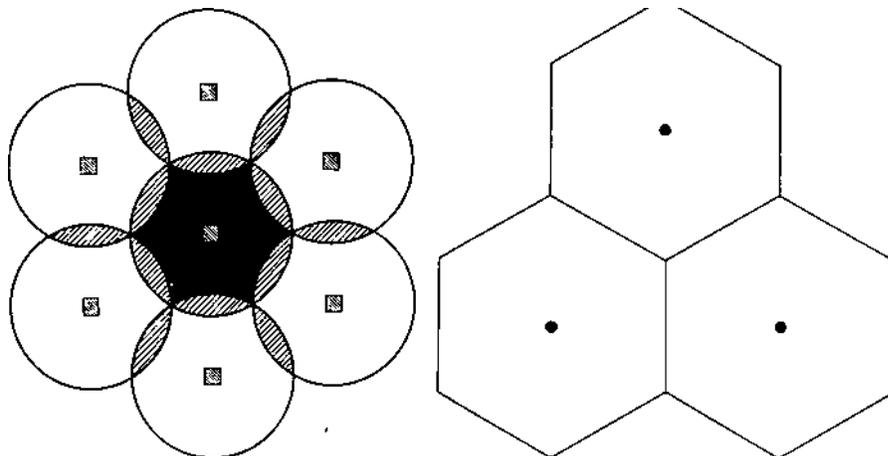
The range of goods offered by a particular market center is contingent mainly on the population density of the surrounding area. In the smallest cities and rural areas, the closest market center may only provide products needed on a daily basis such as groceries and medicine. Residents of these areas need to go to market centers with higher populations to buy more specialized items. In order to obtain luxury items, residents of the villages and towns must visit major cities that have a large enough market to sustain demand for highly specialized goods and services. In urban centers, the geographies of production and consumption converge. As sites of production for specialized goods, urban centers store the goods to sell to the local population, distribute the goods for sale in nearby smaller urban centers, and sell the goods wholesale to other large urban centers. Wholesale distribution will be discussed more thoroughly in Chapter 8.

Centrality determines the market centers that become points of focus for consumers. In general, consumers select the market center geographically closest to them for their most frequently purchased items. For more specialized items, consumers travel to the

market center closest to them that offers these goods. If the geographic landscape were a flat plane with no impediments to travel, Figure 18 below would represent the ranges from which consumers are drawn to particular market centers. The G-Place, representing the largest urban center in the area, has the largest range as it offers the most specialized items for which consumers are willing to travel the greatest distance.

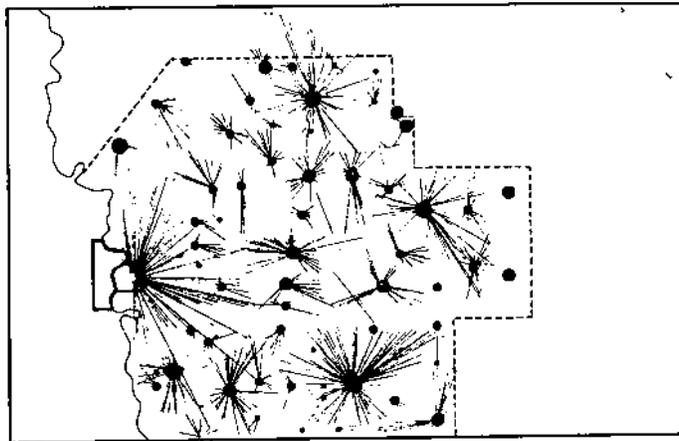


**Figure 18: Christaller's Central Place Theory Model**

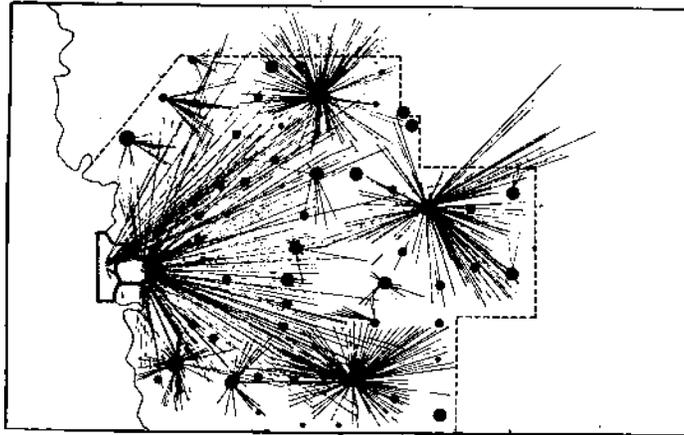


**Figure 19: Generating Christaller's Model**

Figures 18 and 19, above, contain points representative of market centers and boundary lines indicative of the extent to which consumers are willing to travel for the set of goods offered by that center. The Figures assume that the prices offered at each market center are identical. Consumers select the market center that is easiest to access. Both Figure 18 and Figure 19 assume that there are no topographical hindrances between any of the locations pictured. While there are few regions of the world that are both flat and populated in the same manner described by Christaller, Central Place Theory is valuable in assessing the important role location plays in retail.



**Figure 20: Desire Lines for Groceries in SE SW Iowa**



**Figure 21: Desire Lines for Women's Coats and Dresses in SE NebraskaSW Iowa**

Figures 20 and 21, above, show the ideas of Christaller in action in a region of southwestern Iowa. This region, much like the eastern region of Germany upon which Christaller's Central Place Theory is based, is flat and largely rural. The relative populations of cities and towns within this region are marked by the relative size of the shaded circles representing them. The box on the far western side of the map represents Council Bluffs, IA, and Omaha, NE: collectively the largest urban center in the region. These maps drawn from 1930s data display what are known as "desire lines," which show the distance a consumer travels from their home to where they purchase a particular good. Figure 20 shows the desire lines for groceries and Figure 21 shows the desire lines for women's coats and dresses. While groceries are clearly the more basic need, many more consumers travelled outside of their communities to larger urban centers in order to access the women's coats and dresses, the more specialized good. This is indicative of Christaller's hierarchy in that nearly all the population centers have a retail outlet that sells groceries, but only a handful of towns sell women's clothes, with many forced to

travel in order to obtain these goods. The rise of big-box stores in rural areas has greatly altered these desire lines. Today, consumers in rural areas are more likely to drive to the nearest Walmart to obtain everything they need, than to travel to a nearby small town. However, Figures 20 and 21 still serve to display the principles of Christaller's Central Place Theory in action.

Although Central Place Theory is useful in explaining regional patterns of retail, in general, store locations are chosen based on their local surroundings. Retail site location is rooted in the geographic concept of "site and situation" which is the idea that immediate surroundings have an effect on business. Factors such as proximity to other retailers, residents nearby, and even side of the street have an impact on business. In-store retailers use consumer surveys and census information to select a region or county that contains a high number of the target demographic for the products they plan to sell (Thompson 31-35). This involves looking at factors such as age, family status, income, and density. While online retailers can gather this information by directly communicating with their customers online, in-store retailers often resort to phone surveys for information on the consumer base of an area. Once a broad area for the potential retail site is selected, a more specific sub-area is identified in which existing competition is weak or non-existent. Finally, the specific retail site is selected based on factors such as the amount of land needed, the position of the site relative to major roads, and the cost of the land. Overall, the goal of the retailer is to find a site that produces the most "gravity," or attraction of the largest customer base from the largest area possible.

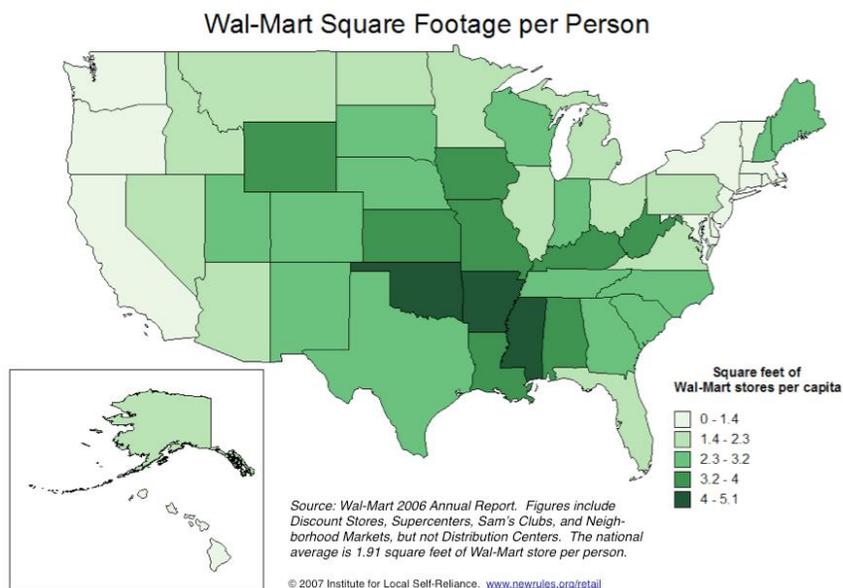
The current trend in brick-and-mortar retail discussed in Chapter 3 indicates that retail sites are on average becoming larger, selling a wider variety of goods, and

employing a larger number of people. This suggests that in-store retailers are generating higher gravity by constructing these larger and more diverse outlets. These big-box retailers compete with online retailers by offering an extensive selection of products while allowing for instant transfer of the good to the consumer. Furthermore, big-box retailers compete with more specialized stores as they are generally able to offer lower prices and can maintain a much wider selection of products than smaller competitors. Big-box stores require large parcels of land for store area and parking, causing them to be commonly built in rural or suburban areas, outside of urban centers. This creates a shopping destination which often attracts a variety of retailers to the vicinity, further increasing the gravity of the location.

The increase in the number of suburban superstores is closely tied to the trend of suburbanization within America. Suburbanization is a term given to describe the migration of middle and upper class citizens from the city center to the surrounding suburbs. Similarly, “exurbanization” is the settlement in areas outside the traditional extent of the suburbs. The distinction between these two terms, according to Wendell Cox of *New Geography*, is that “You can usually tell when you are in an exurb because you have to drive through the countryside to get to the “city” (Cox 2009). Given Christaller’s model, as larger populations move to the suburbs, the consumer base of these areas grow and more goods become available. Data from the economic census show that a majority of these goods are being provided by big-box stores and online retail.

In terms of price competition, in-store retailers use many of the same strategies adopted by online retailers such as promotions and customer loyalty programs. However,

the process of building brand loyalty is much different for in-store retailers compared to online retailers. On one hand, in-store retailers can offer personal customer service and a pleasant store environment for customers with features such as music and bright promotional displays. On the other hand, in-store retailers cannot offer expedited or free shipping to customers who make multiple purchases and may not carry an extensive enough line of products to satisfy their customers' entire range of needs. Furthermore, most in-store retailers operate with similar levels of customer service and can offer a comparable level of shopping experience. The result is that many in-store customers fulfill their needs by visiting multiple stores. According to a study in the GfK Marketing Intelligence Review, over 61% of consumers report using multiple stores to complete their grocery shopping (Gijsbrechts et al. 2013). The study also found that when consumers visit different stores on a single shopping trip, the stores visited tend to differ in terms of size, price, atmosphere, or quality or product sold and that consumers rarely visit multiple stores of the same type on a single shopping trip. This means, for example, it is typical for a consumer visiting a high end supermarket to also visit a discount food store on the same trip. This suggests that much like online consumers, in-store consumers are willing to put in effort searching for the best values on products they desire.



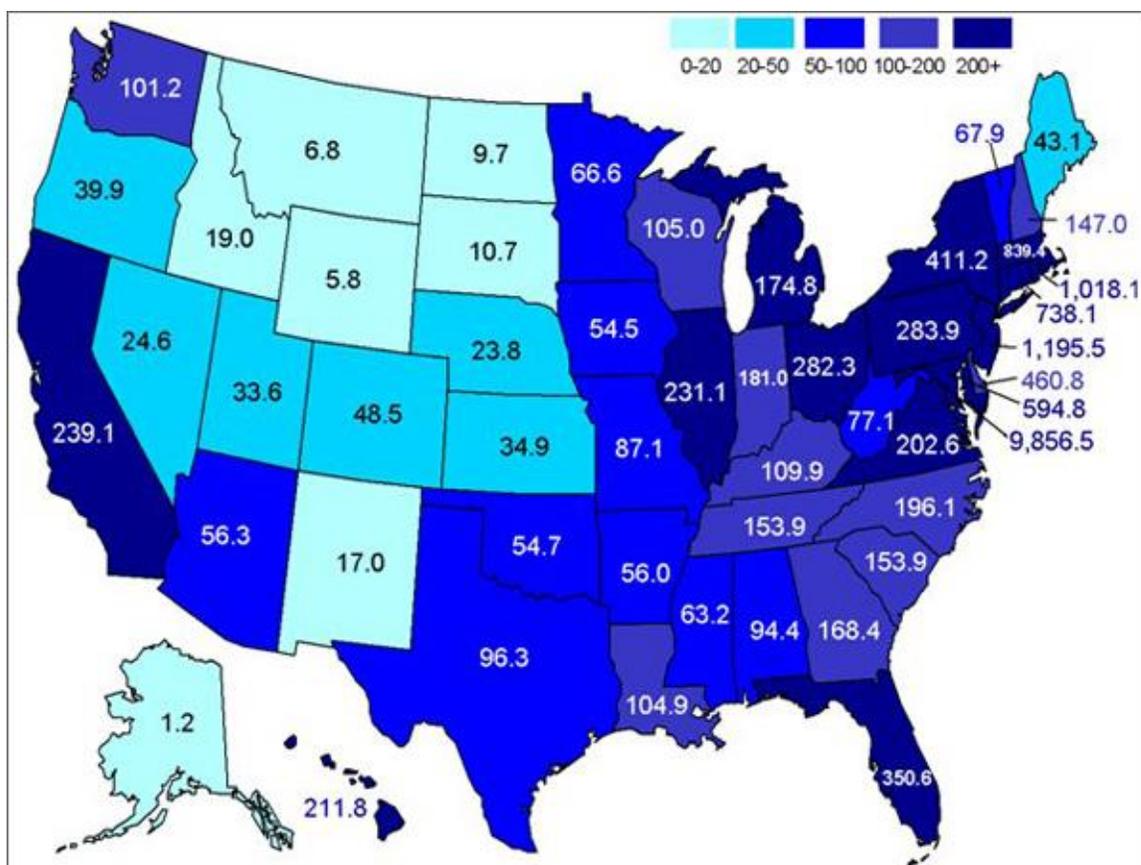
**Figure 22: Walmart Square Footage per Person**



**Figure 23: Number of Persons per Walmart Store**

Figures 22 and 23 show the concentration of Walmart stores in the US with square footage per person and number of persons per store respectively. Note that the

highest concentration of Walmart stores per capita are the southern Midwest region of the country, including Arkansas, Oklahoma, and Mississippi. Figure 24 below calibrates the above figures with the population density of the US by state.



**Figure 24: Population Density by US State (Persons per Square Mile)**

Some of the states with the highest density, such as New York, New Jersey, and California, have among the lowest square footage per person and the most persons per store. At the same time, the states with the highest concentration of Walmart stores have population densities between 50 and 100 persons per square mile. This is indicative of the dominance of big-box stores over rural and suburban markets, and their weakness in urban markets. Urban residents have access to many retail outlets in close proximity and

are able to access the wide array of goods offered in urban market centers with little effort. However, for suburban and rural customers who are forced to travel for goods, one-stop-shopping is highly valued and big-box stores cater to this market.

In-store retailers strive to become repeat shopping destinations for their consumers. Big-box retailers, because of the vast selection of products and low prices they offer, are best suited for meeting this goal. The GfK study indicates that big-box stores capture the vast majority of spending from single-store shoppers (Gijsbrechts et al. 2013). The low prices offered by supercenters are in part the result of efficient distribution systems and close relationships with manufacturers, and in part an illusion created to entice customers. For example, the largest supercenter retail chain in America, Walmart, highlights its best discounts with large displays at the ends of aisles in its stores and extensive media advertisements. This leads the consumer to believe that Wal-Mart offers the best price available on all of its products, when in fact, products found on shelves within the aisles are often marked-up to prices that are higher than those offered by Walmart's competition.

Shrewd in-store retailers may also take advantage of a strategy known as price matching. Price matching is an announcement that a retailer will accept coupons offered to consumers by competitors, or in general match any price offered by a competitor on any product it also sells. While it may seem like a great benefit to consumers in that it makes promotional prices available in a greater number of stores, in practice, price matching is viewed in the antitrust world as a form of tacit collusion among retailers. Guarantees to match price can be seen as commitments to respond instantly to any attempt to undercut the currently accepted "cartel price" (Moorthy & Winter 449). While

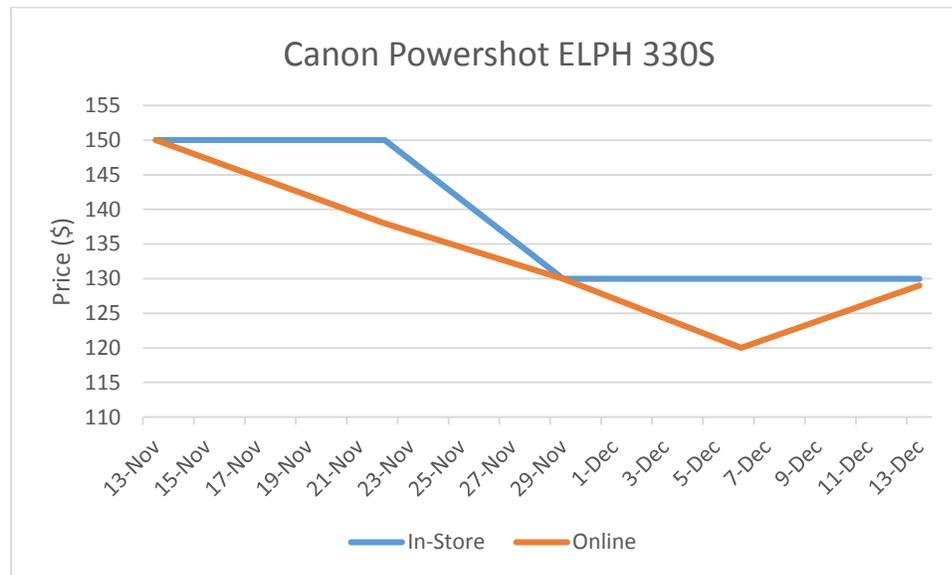
it is illegal for retailers to overtly agree on a cartel price, price matching creates one by removing the incentive to offer discounts. Much like the promotions offered by online retailers discussed in the previous chapter, price matching removes the rush of customers to a sale that are necessary to make the sale profitable.

Offering the best price and shopping experience are ways in which retailers build customer commitment. Customers form relationship with retailers and brands by consuming their products. Customer commitment can be simply defined as the attitude a customer has towards maintaining this relationship (Fullerton 98-100). Fostering this commitment is one key for retailers attempting to establish solid customer bases and increase their gravity. There are two main ways in which customer commitment can be built. First, affective commitment is generated when a customer associates positive feelings with a shopping experience offered by a particular retailer. Affective commitment is built through creating a pleasant store environment, providing supportive customer service, or offering low prices on desirable products. In comparison, continuance commitment does not depend on the shopping experience at all. Instead, continuance commitment is generated when customers feel bound to a relationship or perceive no alternatives outside of their current relationship. This can be achieved to some extent by customer loyalty programs that lock in customers in order to earn rewards. However, for in-store retailers, continuance commitment is caused in many cases by geography. A retailer can gain this type of commitment when they are the only seller of a particular set of products for a consumer base. Continuance commitment can also be generated when the shopping experience offered by a retailer's competition that consumers do not see the competition as an alternative.

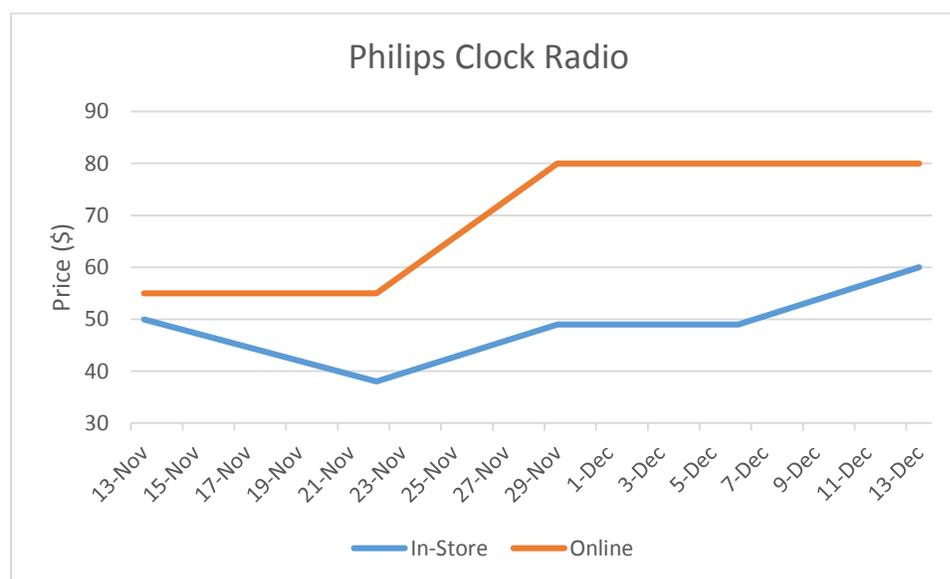
Overall in-store retailers are charged with offering consumers convenience, good prices, and a positive customer relationship. The first key to establishing success as a retailer is choosing a good location for a retail outlet. This is done by offering the items and prices desired by the customer base. This process involves catering to the consumer preferences of the local market. Big-box stores cater specifically to the preferences of rural and suburban consumers while smaller, more specialized stores are common in urban markets. Catering to consumers can be accomplished with price matching, promotions, and heavily advertising the best values a retailer has to offer. The final key is establishing customer commitment to a retail relationship. This is achieved either by offering a positive shopping experience or targeting consumers with no alternative retail options.

## Chapter 7 Click-and-Mortar Retail

Click-and-mortar retail offers the advantages of both online and in-store retail. Customers can browse a selection of products online, find the best price, and pick up the product in person at a physical retail outlet. Alternatively, operating an online retail outlet allows in-store retailers to sell products they do not have in stock or to customers that cannot easily access their physical retail site. For retailers with hundreds of physical outlets spread across the country, the prices offered online often do not match the prices offered in every store. In these instances the difference between prices for an identical product offered both online and in-store can be used as a tool for retailers to respond to localized demand and manage the inventory of its stores.



**Figure 25: Best Buy Prices for Canon Powershot ELPH 330S**



**Figure 26: Best Buy Prices for Philips Clock Radio**

Figures 25 and 26 display the prices on two items sold by Best Buy online and at a retail outlet in State College, PA for an identical period of time in the fall of 2013. In Figure 25, prices for the Canon camera are consistently lower online than in the store. However, for the Philips clock radio in Figure 26, prices are consistently higher online than in the store. While the physical retail outlet involves higher overhead and operating costs than the website, this does not seem to be reflected in Best Buy's pricing scheme for the Philip's clock radio. In the case of Best Buy, the prices offered online are not tailored to the specific location of the buyer while the price offered in-store is sensitive to local demand. This means that the price offered online can be viewed almost as a control in that it reflects the aggregate demand for these particular products generated across the entire country. While demand for the camera is higher, demand for the clock radio is clearly lower in State College than the US as a whole. Since the State College Best Buy is aware of the prices listed on Best Buy's corporate retail website (bestbuy.com), it is

likely that setting the clock radio price well below the online price was an attempt to clear excess clock radio inventory. Figure 26 shows that as the inventory of clock radios at the State College Best Buy is reduced, the price gradually begins to return to the price offered online.

For customers, the ability to seamlessly browse items online and in-store offered by click and mortar retailers greatly enhances the shopping experience. Using smartphones, consumers are able to scan a price tag in a store and instantly find a lower price online. This “scan and scam” process, known as “showrooming,” is beginning to be embraced by in-store retailers as a fundamental part of the click-and-mortar shopping experience (Pratt 2012). Rather than banning the use of smartphones in stores, many retailers, including Sears, Macy’s, and Staples encourage their customers to complement in-store shopping with an online research component. Sears, for example has created smartphone and tablet apps that allow customers to manage their shopping lists, access product reviews, and compare prices of items offered in their stores. The Sears plan, known as “integrated retail” involves placing hundreds of tablet computers in its stores for use by customers and store representatives and allowing the pickup and exchange of items purchased on Sears’ website to occur in-store.

Many experts believe that in order to prevent physical retail spaces from becoming showrooms for the online marketplace, retailers must embrace technology. Greg Girard, an analyst for IDC Retail Insights argues for an “omnichannel” approach in which in-store and online retail are completely integrated. The omnichannel approach taken by Sears differs from Best Buy’s “multichannel” approach in that Best Buy’s online and physical retail outlets operate separately and offer different prices while Sears’

online and physical retail outlets can be seen as extensions of one another (Pratt 2012). Omnichannel retail has risen as a result of a way of adapting to the shopping habits of the modern connected consumer. While many retailers strive to improve the integration of their online and in-store outlets, IT consultant Cathy Hotka believes that “True omnichannel is rare” (Pratt 2012). This is primarily due to the enormous cost associated with implementing omnichannel retail. The Nordstrom department store chain, for example, announced a plan in 2012 to improve its digital capabilities that is expected to cost over 1 billion dollars.



**Figure 27: Nordstrom Locations in the US**

It is not a coincidence that Sears and Nordstrom are leading the charge for omnichannel retail. As Figure 27, above, shows, Nordstrom heavily targets the suburban markets. Nordstrom stores are often located in malls and shopping centers that require travel effort on the part of consumers. As discussed in Chapter 5, consumers in suburban

markets use online shopping the most. To combat this, retailers such as Sears and Nordstrom are striving to improve the convenience of their retail locations and are doing so by implementing an omnichannel system of retail.

Most modern click-and-mortar retail falls under the category of multichannel retailing. While multichannel retailing offers some of the benefits associated with in-store and online retail it does not provide the same level of shopping experience provided by integrated omnichannel retailing. Modern consumers have thoroughly embraced technology as a part of the shopping experience and retailers must embrace this trend if they are to avoid having physical retail space become showrooms for the online marketplace.

## Chapter 8 Distribution

Connecting consumers with the products they desire is the fundamental purpose of the retail trade. For both online and in-store retailers, providing this connection between manufacturers and consumers is a critical part of the business. This chapter explains the general process of distribution, analyzes the impact geography has on distribution in terms of regional availability of goods, and examines the unique relationship between retailers and manufacturers.

Distribution is a term used to describe the sequence of events beginning with the completion of a good by a manufacturer and ending with a customer receiving it. In the context of geographies of production and consumption, distribution is the process by which goods are articulated from producing regions to consumers. Local collection centers compile particular goods from the producing regions (Berry 1967, p. 2). Local distribution centers assemble goods from various collection points for distribution among stores in a particular region. For retailers to maximize profits, the process of distribution has to be as efficient and inexpensive as possible. This requires balancing factors of punctuality and cost, which are almost always inversely related. For example, shipping a product using overnight air is much quicker, but also much more expensive than shipping the same product using ground transport. In-store retailers have the additional challenge of determining how much of a product to keep in stock at the physical retail outlet as in-store shoppers are generally interested in walking out of the store with the products they purchase. While online retailers are not responsible for keeping physical products for their customers to browse, they have the challenge of delivering products

directly to customers. Transporting individual products to individual customers is more expensive than shipping large loads of goods to stores due to the economies of scale associated with the larger operation. The cost per item of shipping 1,000 units of a good to a store using a tractor trailer is much lower than shipping one unit to a customer using a mail truck. Overall, the challenges to producing an efficient distribution system are different for in-store and online retailers.

For in-store retailers, finding and maintaining an optimal level of stock is key to maximizing profit. Put simply by *Entrepreneur Magazine* writer Mike Sowinski: “You always want enough stock on hand so customers can buy whatever they want whenever they want” (Sowinski 2013). However, carrying too much inventory, or “overstocking” can result in higher warehousing costs and property taxes. In-store retailers often manage inventory based on the length of time they believe it will take to sell out of their entire stock. A typical store selling non-perishable goods usually carries a 30 to 60 day inventory, depending on the amount of showcase and warehouse space available. However, every category of retail has a different average “shelf-life” of its products. Grocery stores may move the bulk of their inventory within a few days while jewelry stores may have products that sit on display for years. The average shelf-life for products in each category of retail is recorded by a trade association, and many retailers set their inventory and prices to produce a shelf-life slightly shorter than the industry average.

For online retailers, the cost of shipping is an important factor for prospective customers and contributes to the quality of shopping experience online retailers provide. Digital goods that can be transmitted and downloaded over the internet have virtually no distribution cost. However, for physical goods that are ordered online and delivered to

customers, the cost associated with shipping and handling has been shown to have a great deal of sway over consumers. According to a study by For-See Results of customers of the top 40 online retailers, 41 percent of customers made their holiday shopping decisions based on the availability of free shipping while 79 percent of respondents claimed that the availability of free shipping caused them to choose one retailer over others (Wolf 2007). “Free shipping” means the online retailer assumes the cost associated with transporting a product to the customer. Free shipping is an effective strategy when it attracts enough customers to offset the cost of the promotion. Compared to other promotions, free shipping is less likely to be immediately matched by competitors because it often goes undetected by shopbots.

Most online retailers maintain inventories similar to their in-store counterparts. The largest online retailers such as Amazon or Overstock maintain vast regional distribution warehouses where goods bought online are loaded onto trucks to be delivered to customers. However, the vast majority of online retailers operate either out of a physical storefront or a single warehouse location. For these retailers the high cost of sending their products across the country can cause some products to be available only in certain regions. This holds especially true for online grocery retailers such as Peapod that serve only particular metropolitan areas.



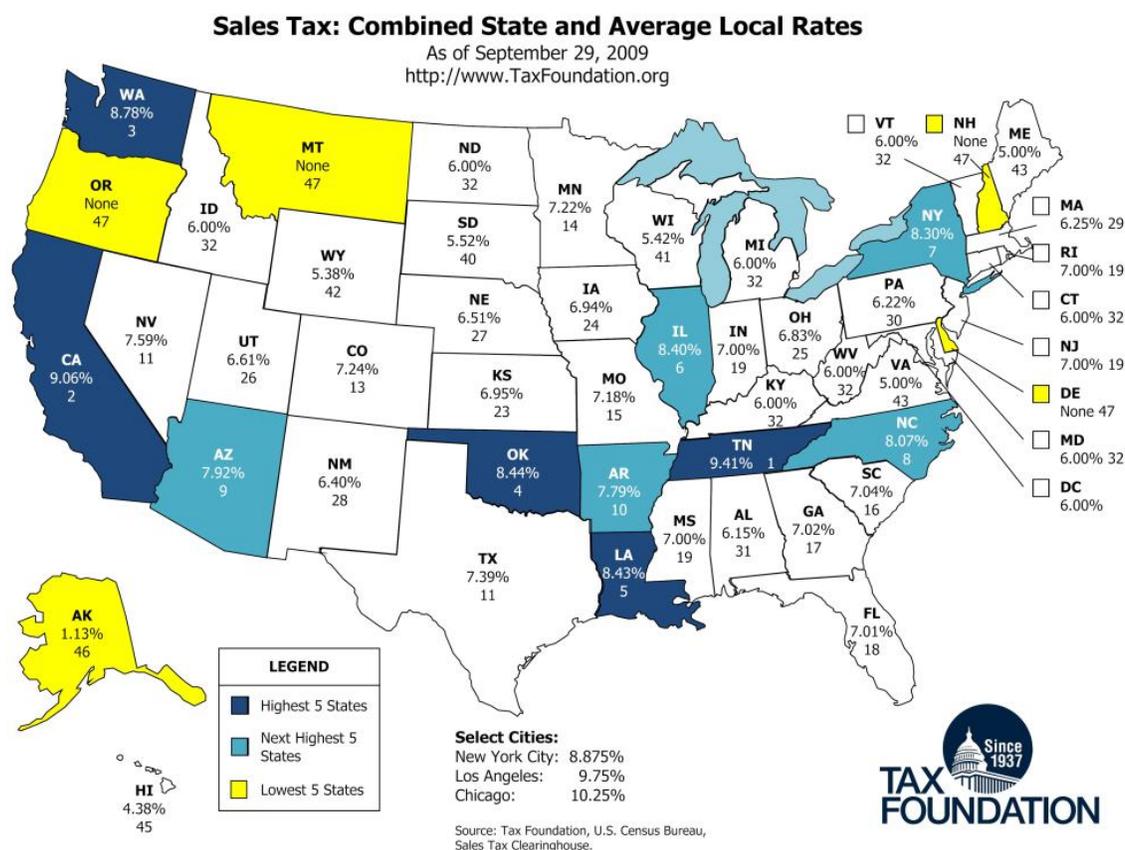
**Figure 28: Grocery Distribution Centers Weighted by Warehouse Space**

Figure 28, above, shows grocery distribution centers in the US, weighted by the amount of warehouse space available. The largest dots in Figure 28 represent local collection centers. While some are located close to major urban areas, such as Atlanta and Los Angeles, the largest collection center is located in the small town of Troy, Ohio.

While wholesale distributors play an important role in retail, they do not actually produce any goods. This role in the retail process falls on the manufacturer. The relationship between manufacturers and retailers is a constant tug of war over which party dictates the pricing of goods. Historically, manufacturers have had the upper hand in this battle, but recently, with the rise of large-scale in-store retailers such as Walmart and online retail giants such as Amazon, retailers are beginning to use their massive

customer bases to dictate the prices at which goods are produced and sold. Consider that in 2007, Walmart's sales revenue was 4.5 times more than its largest supplier, Proctor & Gamble (Dawar & Stornelli 2013). In situations like this, the manufacturer is so dependent on Walmart's customer base that the retailer is able to dictate the price at which goods are to be produced in order to control their own profit margins. Retailers have the ultimate say in how products are displayed and marketed on their shelves and on their websites, and as retailers grow larger, manufacturers lose influence in how their products are sold to the general public. The large customer bases that retailers are able to cultivate make "private-label" products commercially viable. Private-label products are produced directly for a retailer and tend to be less expensive than the brand-name competition produced by manufacturers. Although large retailers maintain an advantage over manufacturers, the current system does not ideally fit their needs. According to a study by MIT Sloan School of Management, retailers have a difficult time turning manufacturer promotions into profits and often fail to establish fruitful long-term relationships with suppliers and manufacturers (Dawar & Stornelli 2013). As retailers grow in size, the power they wield over manufacturers will continue to increase. However, in order to maximize profits, retailers will use their market power to establish stronger relationships with manufacturers.

## Chapter 9 Sales Tax

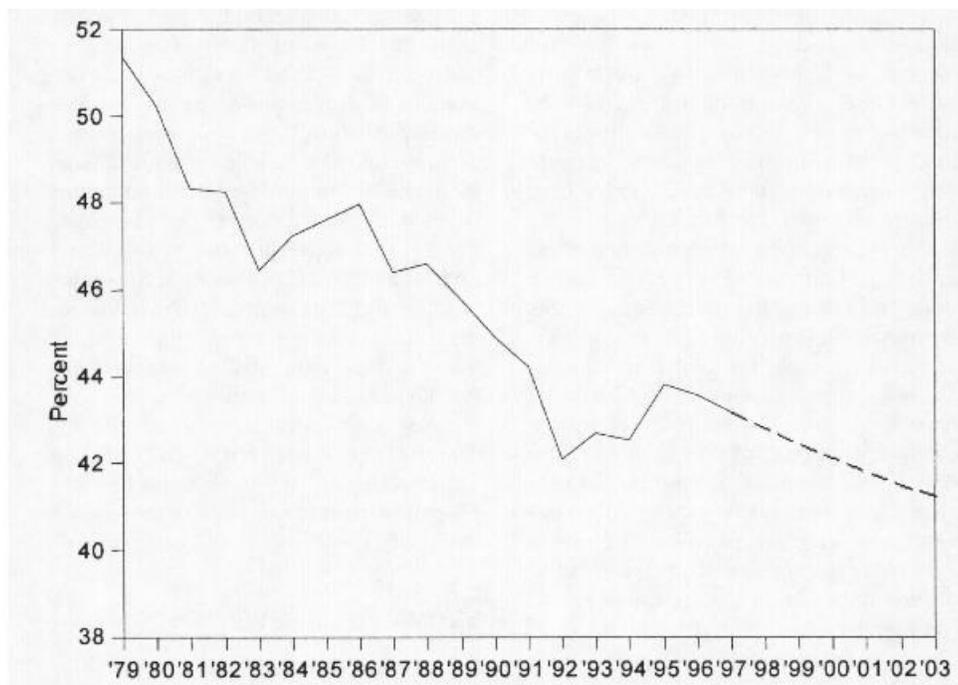


**Figure 29: Sales Tax in Each US State**

Figure 29, above, displays the sales tax rates for every US state. The states with the five lowest sales tax rates are highlighted in yellow, the states with the five highest rates are highlighted in dark blue, and the states with the next five highest are highlighted in teal. All but four US states levy sales tax on retail goods sold within their borders (Barnes 2013). Typically sales tax is levied on retailers as a percentage of the sale price. Retailers pass the tax on to their customers by adding this percentage to the price of their goods. While this percentage varies across states, for many states, sales tax represents an important source of funding for the state budget. However, it is difficult for state

governments to track online purchases made by their residents, making these transactions difficult to tax. As the proportion of sales made online continues to rise relative to sales made in-store, the amount of purchases states are able to tax is declining causing the tax base to decrease. The result is an intense debate between states and online retailers over issues of online privacy, state jurisdiction, and adapting the tax code.

The general consensus among tax experts is that the decline in tax revenue due to increased e-commerce thus far has been minimal. However, many states are concerned over projections that indicate massive losses in tax revenue as online retail continues to grow. There is a very wide range of predictions on just how much the tax base will be affected by online retail, but what is certain is that the sales tax base is declining and has been for many years even before the creation of the online marketplace. For example, in the average state, the sales tax base equaled 51.4 percent of the state's personal income in 1979, but had fallen to 42.8 percent in 1998 (Bruce & Fox 2000). Usually, the sales tax base rises and falls in connection with periods of economic growth and recession, but this overall decline has been isolated by tax experts Donald Bruce and William Fox as indicative of a downward trend over time. Figure 30 below shows the decline in the sales tax base since 1979. Notice the decline following the beginning of online shopping in 1994.



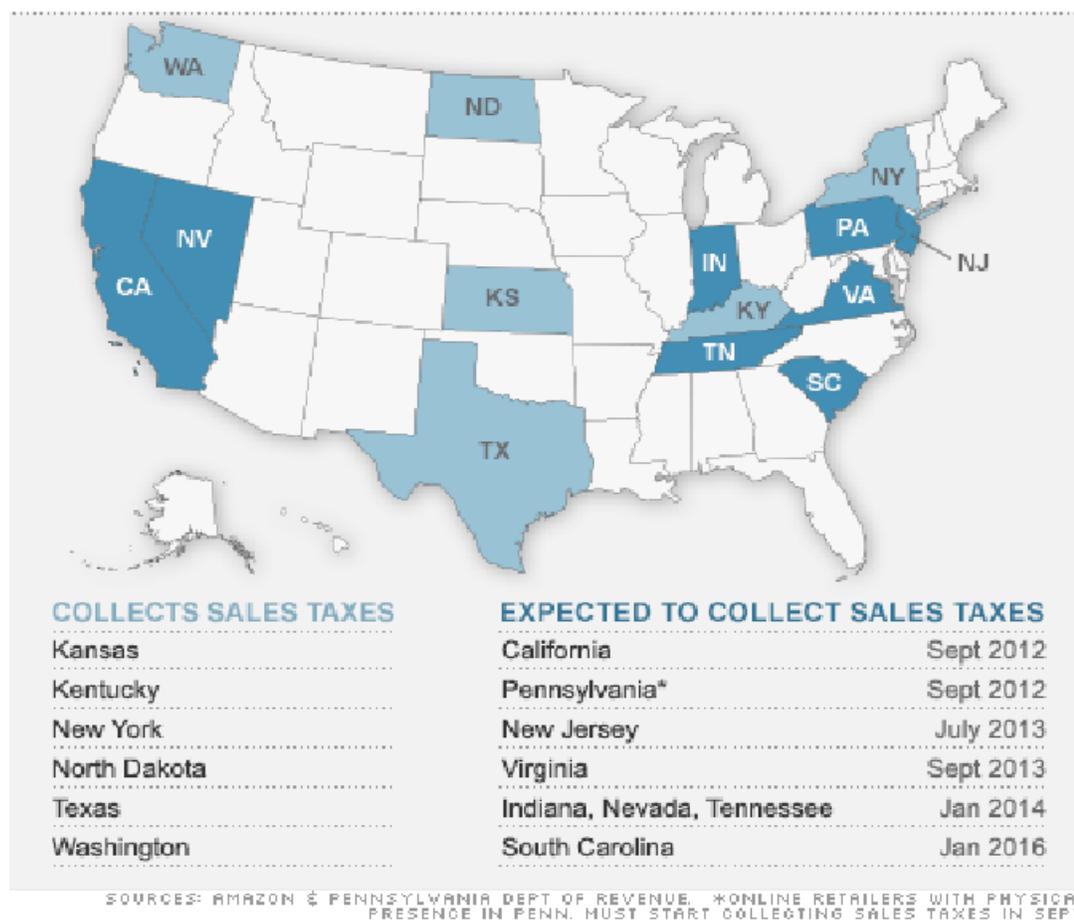
**Figure 30: Decline in the Sales Tax Base 1979-2003**

According to Bruce and Fox, the tax base is declining for three main reasons, the rise of remote sales, an increase in the consumption of services, and expansion of the number of legislated tax exemptions (Bruce & Fox 2000). The first reason given by Bruce and Fox, the rise of remote sales, encompasses the decline in the tax base caused by the growth of online commerce. However, the second reason, the gradual shift in consumption from consumer goods to services which can be difficult to tax, is highlighted by Bruce and Fox as the most important cause of the declining tax base. States have responded to this by increasing tax rates across the board and are beginning to explore ways to more effectively tax online commerce and services.

Assessing sales tax on online transactions raises a variety of legal issues. First of all, states lack the jurisdiction to charge sales tax in other states (Barnes 2013). This

means that a customer who purchases a product from an online retailer that operates in a different state do not have to pay sales tax on the purchase. Online retailers are not required to pay sales tax in states in which they do not maintain a physical presence. The result is that in states that charge sales tax, the customers are supposed to remit the required tax to the state voluntarily. However, as the states cannot monitor online transactions, very few customers actually pay the tax.

The Marketplace Fairness Act of 2013 is designed to require online retailers to pay tax on all transactions, including those that occur in states where they have no physical presence (Barnes 2013). This bill passed the Senate in February of 2013 but seems unlikely to pass the House as many representatives fear the political ramifications of raising taxes on their constituents. In December of 2013, the Supreme Court declined to hear a case that raised the issue of forcing online retailers to collect sales tax. The Supreme Court argued that this is a subject to be dealt with by Congress, effectively increasing the pressure on The Marketplace Fairness Act and heightening tensions between states and online retailers.



**Figure 31: States in Which Amazon Collects Sales Tax**

In order to avoid conflict with state governments, Amazon.com collects sales tax in 20 states shown in Figure 31, above, including Virginia, California and Texas (Luhby 2012). However, Amazon is also a vocal supporter of the Marketplace Fairness Act. The future of the sales tax issue appears to rest squarely on Congress and the progress of the Marketplace Fairness Act towards becoming a law.

## Chapter 10 Future of Retail

The future of retail promises to bring about increased cooperation and coordination between online and in-store outlets. The greatest change in the future will be the role of the physical retail space. While the in-store retail sector continues to grow by using large stores selling a wide array of products, smaller stores will need to adapt to competition from the surging e-commerce sector. The primary driving force behind the evolution of retail is the modern connected consumer with retailers working to provide a shopping experience compatible with digital technology. This chapter identifies some of the ways online and in-store retailers are adapting to the connected consumer.

The economic census data referenced earlier suggests that large warehouse-style retailers are the most financially successful brick-and-mortar operations. Big-box retailers, such as Walmart, Costco, and Target that sell a wide array of items represent the best in-store competition to the online marketplace. First of all, large retailers are able to offer competitive prices to those found online, with no additional charge for shipping. Second of all, the wide selection of products creates a one-stop shopping experience that rivals the convenience of shopping online. The prevalence of big-box stores will continue to grow due to continued suburbanization and exurbanization in the US, displayed in the figures below.

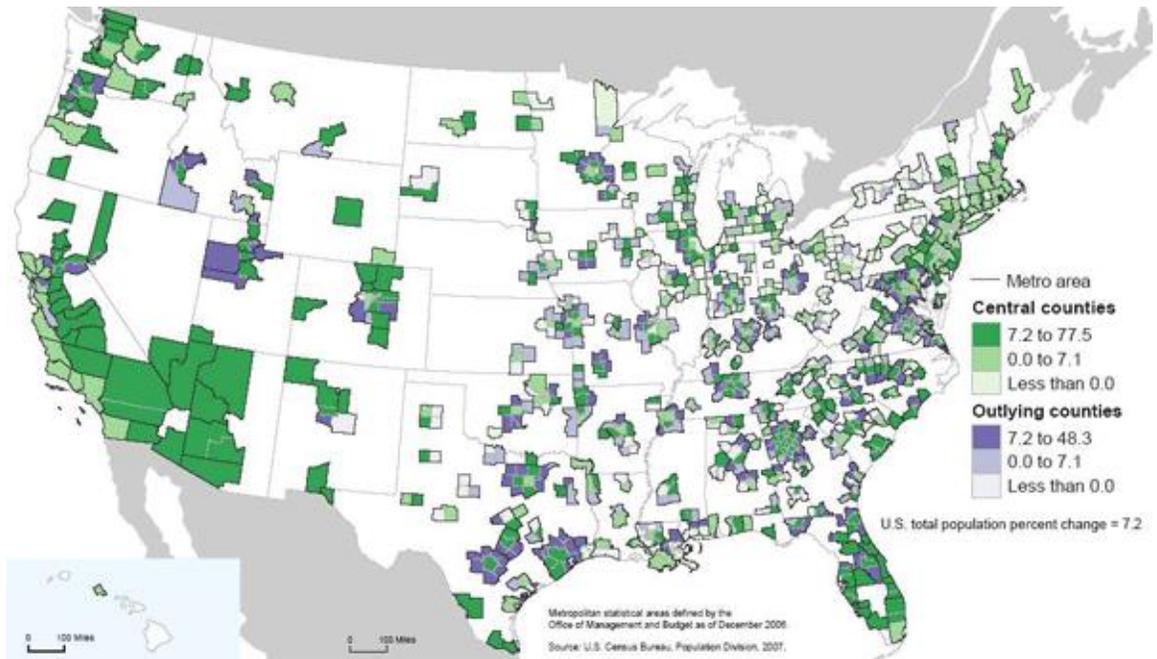
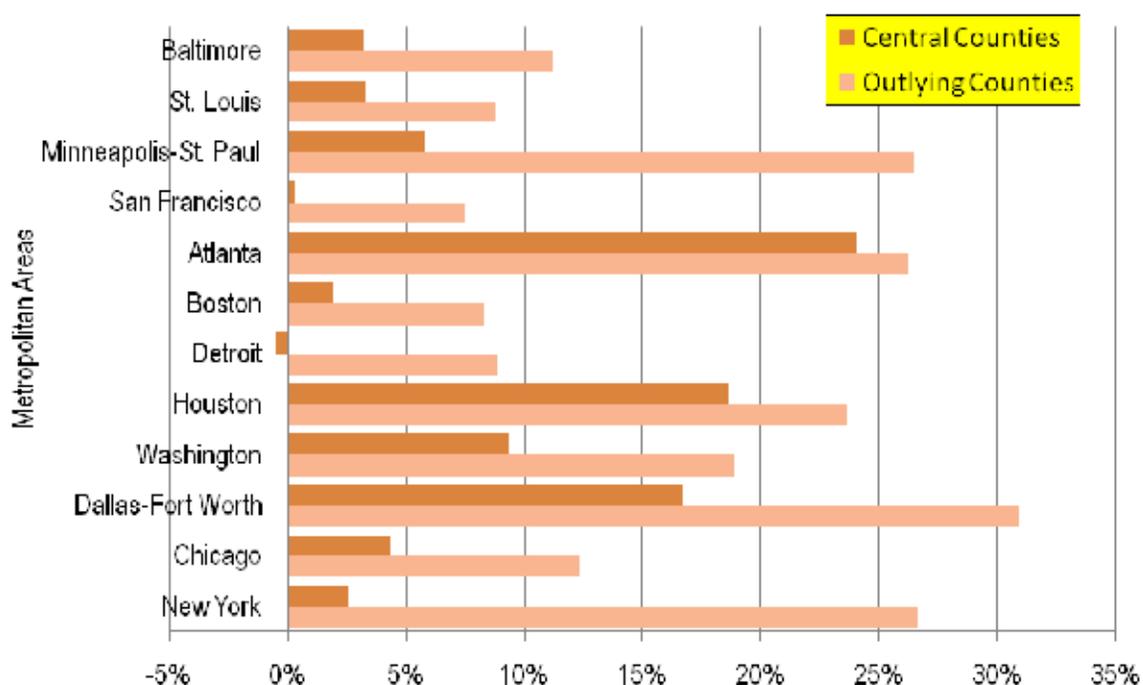


Figure 32: Population Growth in Central and Outlying Counties of MSAs

## Change in Population: 2000-2007 CENTRAL COUNTIES & OUTLYING COUNTIES



**Figure 33: Change in Population for Central and Outlying Counties 2000-2007**

Figures 32 and 33 illustrate the rapid growth of outlying counties compared to central counties from 2000 to 2007. While many central counties are growing in population, most population growth in metropolitan counties is occurring in the outlying, suburban areas (Cox 2009). Since suburban consumers are shown to prefer online shopping and big-box retail, the figures above indicate that revenue for online and big-box retailers will increase in the coming years if the trend continues.

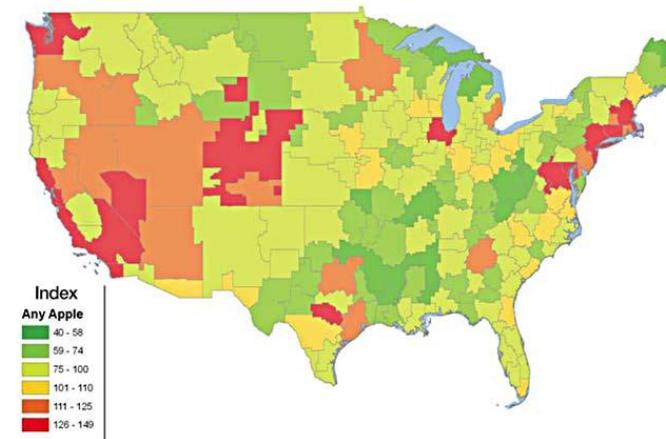
Stores that are smaller or more specialized, especially those in suburban and rural areas, will need to restructure their business plans in order to adapt to competition from online and big-box. Modern consumers demand a level of convenience from their

shopping experiences that smaller brick-and-mortar retailers are unfit to deliver. However, some retailers are discovering new ways to combine the convenience of the internet with the appeal of a physical retail site. For example, in South Korea, the grocery chain Tesco has created a virtual wall in the subway that allows consumers to choose their groceries during their commute with the option of delivery direct to the customer (Geddes 2011). In the UK, fashion designer and retailer Burberry invites its most loyal customers to partake in a digital shopping experience at the start of each fashion season (Geddes 2011). Large monitors around the store display catwalks and customers are invited to purchase items they like on tablet computers placed around the store. This is an example of a retailer embracing showrooming as a facilitator of sales instead of as a detriment.

In-store retailers that embrace showrooming will be less vulnerable to online competition. However, embracing showrooming means abandoning the brick and mortar model and adopting a click and mortar strategy instead. Attempting to prevent consumers from using online shopping is fighting a losing battle. Instead, in-store retailers are beginning to use physical retail sites as a means of encouraging consumers to purchase goods found on their own websites. Some retailers, such as Apple, use retail sites as a means of enhancing their brand image. Apple Stores are designed to be eye-catching and exude a high-tech and sophisticated aura. Not only are Apple Stores the most productive retail sites in terms of revenue per square foot by a wide margin, they are designed to associate the Apple brand with a sleek modern feel. According to *Fortune Magazine*, Apple Stores generate \$4,032 per square foot of retail space, nearly twice the \$2,666 per square foot generated by the second most productive retailer by square foot, high-end fashion retailer Tiffany's (Hornby 2008).



**Figure 34: US Apple Retail Locations 2008**



**Figure 35: Apple Brand Loyalty in the US**

Figures 34 and 35, above, illustrate Apple's success at using retail locations to build brand loyalty. Apple Stores are located only in highly populated areas, both in urban and suburban settings. In Figure 35, the red regions indicate the 16 regions of the US where Apple products are owned by the highest percentage of the population. Across these 16 regions, anywhere from 27.1% to 32.2% of the population own an Apple product according to a 2010 Experian study (Allen 2010). Note the positive correlation between the high concentration of Apple Stores and brand loyalty in the Los Angeles, Chicago, and Houston metro areas as well as in the northeastern US as a whole. Apple

attracts suburban customers to its stores by locating them close to retail points of focus such as large shopping centers, and by establishing them as destinations of interest with modern styling.

Other in-store retailers are competing with online retailers by reducing inventory and increasing the range of products they sell. According to Deloitte research, although 28% of consumers like to see a product in a store before they buy it, only 9% are interested in seeing the entire range of options for a single item in a store (Geddes 2011).

Therefore, in order to offer levels of convenience that are competitive with online and large warehouse-style retailers, smaller stores can expand the range of products they sell while reducing inventory and selling fewer variations of a single item.

Physical retailers are increasingly using technology to empower salespeople in the store. One of the biggest advantages of in-store retail over online retail is the presence of salespeople to provide customers with information valuable to a consumer's purchasing decision. Retailers such as Sears and Nordstrom arm salespeople with tablet computers in order to answer any questions consumers have regarding products. This strategy relaxes the consumer impulse to compare products online.

Many in-store retailers will struggle to compete with the online marketplace and large warehouse-style retailers, resulting in widespread store closings. For the first time in a decade, because of store closures, retail floor space decreased in 2010 (Geddes 2011). What this means is that in many areas, prime retail locations are becoming available and rental rates on retail sites are decreasing. As physical retailers scramble to integrate online sales with their business, online retailers may begin to take advantage of the abundance of less expensive store sites and establish a physical presence.

Establishing physical stores will allow online retailers to build brand loyalty and recognition with face-to-face contact with customers and offer more direct product to customer delivery. This will give online retailers an advantage over the stiff competition they face.

Online retailers must brace themselves for competition from startup e-retailers and the increased online presence of traditionally brick-and-mortar retailers. Aside from establishing physical retail sites, online retailers can address competition by increasing and improving the use of customer tracking technology. In the coming years, the amount of information online retailers gather on their consumers will soar. Technology in data collection is improving at a rapid rate and many online retailers are already reaping the benefits. As mentioned in Chapter 6, such technology allows online retailers to target customers with products they are likely to buy, and charge different prices depending on the geographic locations of the customer.

Online retailers are also experimenting with more efficient methods of distribution. Some of the largest online retailers, such as Amazon, are planning to service their own deliveries. With the increasing number of online purchases, operating delivery trucks becomes feasible for online retailers. This would allow online retailers to lower the high costs associated with shipping goods using a third-party courier company. It would also allow online retailers to offer more information to customers regarding the means and timing of product deliveries, thereby increasing brand trust.

Overall, in the future it will no longer be possible to address online and in-store retail as separate businesses. As counties surrounding urban centers grow in population, retailers will need to address the preferences of suburban consumers. Companies have

already begun to understand the benefits of combining online and in-store retail channels.

In the coming years, physical stores and the online marketplace will work in concert to match customers with products more quickly and conveniently than ever before.

Additionally, smaller retailers in suburban and rural locations will be threatened by the growing dominance of big-box stores in these regions, as well as the growing popularity of online retail among these consumers.

## Chapter 11 Conclusion and Future Study

Ten years from now, the typical retail experience will be far different than it is today. Whether the changes will be positive or negative is a truly subjective matter. Much of the future of retail is dependent on demographic trends within the American population. In future research, it would be interesting to examine the consumer behavior of the aging population compared to younger Americans who have grown up in the age of digital technology. Differences found between these two groups could foreshadow changes in the composition and approach of retailers as the median age of America is projected to rise.

Further research could also be done to determine the impact of declining retail sales in suburban areas on the local economy. It would be interesting to compare small, privately owned retailers and big-box stores in terms of impact on the community. It is likely that this economic impact depends on population, with urban, suburban, and rural communities experiencing different effects from the establishment of big-box stores.

Big-box retail would be something worthy of study in and of itself. Big-box stores are responsible for altering the entire business of retail by outperforming traditional department store retailers. The shift of suburban customers from shopping in department stores to shopping in establishments such as Costco and Walmart is an interesting transition that may have implications for the future of retail.

A major shortcoming of this thesis is that little information is given to predict new types of retail that may emerge in the future. While completely new forms of retail may be impossible to foreshadow, it is very likely that companies will respond to the digital

era in ways completely unaddressed in this thesis. Future study is necessary to identify trends in retail that are beginning to emerge but have yet to be adopted on a wide scale.

Further research could also be used to identify regional trends in retail. A running assumption throughout this thesis is that the shopping habits of consumers varies across urban, suburban, and rural setting, yet is consistent in terms of geographic region of the country. However, there may be variations in consumer behavior across regions that have nothing to do with local population. For example, consumer behavior in the southeast is likely not identical to behavior in the northwest. There may be cultural, historical, or even climatic factors that affect consumer behavior which this thesis did not examine.

Another factor worthy of further examination is the effects of rising fuel costs on delivery methods. Current delivery pricing models based on gas priced at roughly \$3 a gallon will become inaccurate as gas prices continue to rise. This may affect ways in which online retailers offer free shipping. Alternatively, high fuel costs could leave consumers unwilling to drive to further market centers, thereby increasing online sales revenue. Furthermore, the development of 3D printing technology could allow for solid products bought online to be delivered directly to consumers.

Finally, the growing trend of “locavore” consumers could be further discussed. Locavores obtain all of their food from within 100 miles of their homes (Maiser 2007). This is seen as an environmentally conscious alternative to large supermarkets and big-box food retail. As this movement gains popularity, it is possible that locavores will begin to gather all of their consumer products from local sources, thus threatening the wholesale distribution model discussed in Chapter 8.

Hopefully this thesis has provided a better understanding of the mechanisms involved in retail. The aim of this thesis is to approach the retail trade from both an economic and geographic perspective. This is done by identifying ways in which retailers interact with customers in urban, suburban and rural markets, as well as identifying ways in which retailers compete with each other. The predictions for the future of retail are derived from extensive research in demographic changes predicted for America as well as the evolution in digital technology. While the future is far from certain, this thesis provides an educated guess as to how the landscape of retail will change moving forward.

## Appendix A

### Sources for Figures

Figure 1: Image from Peapod Facebook Page.

Figure 2: Image from *The Atlantic Cities Online* (Badger 2013).

Figure 3: Image from the Center for Disease Control and Prevention.

<[http://www.cdc.gov/nchs/data\\_access/urban\\_rural.htm](http://www.cdc.gov/nchs/data_access/urban_rural.htm)>

Figure 4: Image from ComScore and Curve Media.

<<http://www.curvve.com/services/e-commerce/>>

Figures 5-6: Images from Jeff Jordan.

<<http://jeff.a16z.com/2013/10/25/so-you-want-to-compete-against-amazon/>>.

Figures 7-11: Data from US Economic Census.

Figure 12: Image from FirstInn.com.

Figures 13-14: Images from Halie Borden and Anthem Marketing Solutions (Borden 2013).

Figure 15: Image from CamelCamelCamel.com.

Figure 16: Image from vitamindwiki.com.

Figure 17: Image from the Chicago Federal Reserve Blogs:

<[http://midwest.chicagofedblogs.org/archives/2007/02/the\\_auto\\_region\\_1.html](http://midwest.chicagofedblogs.org/archives/2007/02/the_auto_region_1.html)>

Figure 18: Image from NewLeftReview.org.

Figures 19-21: Images from (Berry 1967).

Figures 22-23: Images from the Institute for Local Self Reliance:

[<http://www.ilsr.org/retail-maps-graphs/>](http://www.ilsr.org/retail-maps-graphs/)

Figure 24: Image from US Department of Energy.

Figures 25-26: Data compiled by Thaddeus Lopatka.

Figure 27: Image from Chloe Slovak:

[<nordstromfinalproject.blogspot.com>](http://nordstromfinalproject.blogspot.com)

Figure 28: Image from MWPVL Consulting:

[<http://www.mwpvl.com/html/grocery\\_distribution\\_network.html>](http://www.mwpvl.com/html/grocery_distribution_network.html)

Figure 29: Image from Tax Foundation.

Figure 30: Image from (Bruce & Fox 2000).

Figure 31: Image from (Luhby 2012).

Figures 32-33: Images from (Cox 2009).

Figure 34: Image from (Hornby 2008).

Figure 35: Image from (Allen 2010).

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## ACADEMIC VITAE

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### EDUCATION

Bachelor of Science  
*Pennsylvania State University*

Expected Date of  
Graduation: May  
2014

- Majors: Economics, Geography (Human Geography Option)
- Minor: History
- Related Course Work: Training in ArcGIS, STATA, SPSS, and Minitab

### HONORS

- Member of the Penn State Schreyer Honors College (Fall 2010-Present)
- Member of the Gamma Theta Upsilon Honors Fraternity for the Department of Geography (Spring 2013-Present)
- Recipient of the Ronald W. Roskens Scholastic Achievement Award from Sigma Tau Gamma Fraternity (Spring 2013)
- Recipient of the G.D. Richardson and Kathy LeSauce Scholarship from the Department of Geography (Spring 2013)

### ABILITIES

#### Communication

- Led a guided study session for students as a teacher's assistant for Professor Daniel Goldstein's Introduction to Econometrics (Econ 106) class (Spring 2011)
- Serving as a teacher's assistant for Professor Joris Pinske's Game Theory (Econ 402) class (Spring 2014)

## Leadership

- Served as Historian for Sigma Tau Gamma Fraternity (Spring 2012-Fall 2012)
- Served as Homecoming Chair for Sigma Tau Gamma Fraternity (Spring 2013-Fall 2013)
- Serving as Web Coordinator for Gamma Theta Upsilon Geography Honors Fraternity (Fall 2013-)

## EXPERIENCE

Undergraduate Researcher <i>Center for the Study of Auctions, Procurements, and Competition; Penn State University Department of Economics</i>	September 2013 to Present
Employee <i>College 9 Movie Theater</i>	May 2010 to August 2013
GIS Analyst <i>Geospatial Data Corporation</i>	August 2012 to December 2012