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Special Commentary

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The Changing Face of Retail Sales

Executive Summary

One of the more recent trends within retail sales has been the sizable growth in nonstore retail sales. As of the most recent Census report on monthly retail sales, nonstore retail sales rose 8.1 percent over last year's levels, far exceeding the growth rate for the other categories within retail sales. One of the key components of nonstore retail sales is online sales, or e-commerce, which has played an increasing role in driving overall sales activity in recent years. The surge in online sales coincides with the ability to purchase and comparison-shop through mobile technologies, which has resulted in a rather dramatic change in the face of retail sales.

In this report we present evidence of the continual rise in importance of e-commerce to overall retail sales and shed light on how the migration from traditional brick-and-mortar retail to e-commerce has reshaped the retail space, including economic activity, commercial real estate and even employment. Our analysis suggests that not only is there a clear shift in the composition of retail sales toward greater e-commerce over the past decade, but that this shift is having spillover effects on other areas of the economy. While we do not predict the demise of traditional brick-and-mortar retailers, the advent of new technologies will continue to put pressure on traditional retailers as they are forced to compete with their online counterparts. The net result of evolving technologies and a shift in consumer tastes and preferences represents the changing face of retail sales.

Key Driver of Retail Activity: The Shift to Online Purchases

After a dramatic decline during the Great Recession, retail sales growth has fluctuated near historical norms since 2010. From 2010 through June of this year, retail sales have averaged moderate year-over-year gains of around 5 percent. After a disappointing reading in January of this year, total retail sales have displayed consistent momentum over the past several months, helping to support overall economic activity. More favorable economic conditions along with job gains helped to support the sustained growth in retail sales over the past several months (Figure 1). Even with sustained gains in retail activity, there has been a notable shift in the composition of total sales activity.

Since the economic recovery began in mid-2009, much of the gain in retail sales has been supported by consistent growth in nonstore sales.

Since the economic recovery began in mid-2009, much of the gain in retail sales has been supported by consistent growth in nonstore sales compared to in-store retail sales. The Census Bureau's monthly retail trade report indicated that nonstore retail sales posted an impressive double digit growth rate of 8.1 percent in June on a year-over-year basis. Since the early 1990s, nonstore retail sales growth rates have been consistently above the rate of overall retail sales, reflecting nonstore retail's bright contribution to the retail space (Figure 2).[1] This steady gain in nonstore retail reflects consumer's movement from traditional brick-and-mortar retailers to their online counterparts.

[1] **The only exception occurred in the wake of the dot com bubble burst that occurred in 2001.**

Figure 1

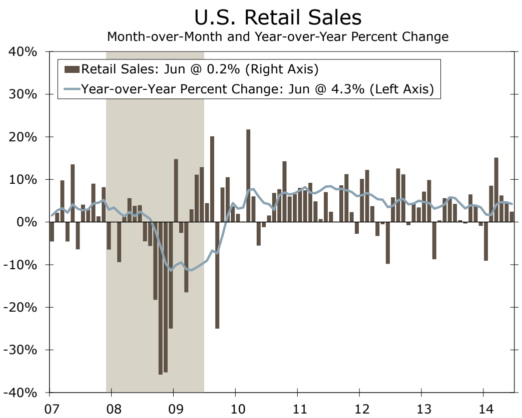
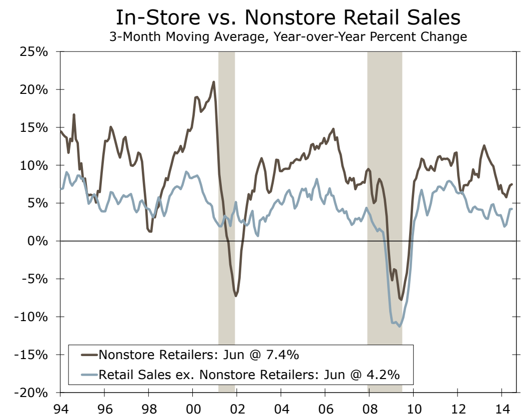


Figure 2



Source: U.S. Department of Commerce and Wells Fargo Securities, LLC

Online retailers are one of the largest components of non-store retail sales and are defined as a retail outlet that has at least 50 percent or more of its business online. Examples include Amazon and eBay. A broader measure of online retail activity, defined as e-commerce, encompasses online retailer transactions as well as traditional retailers that also have an online presence such as Walmart or Best Buy. Thus, to understand the effects of e-commerce on overall retail sales, we will use the broader measure of e-commerce sales for our analysis.

The share of e-commerce as a percentage of overall retail sales has grown at a rapid pace.

As the economy emerged from the recession, the significance of stronger e-commerce growth became apparent. In Q1 2010, total retail sales increased a modest 6.3 percent year-over-year, compared to a 14.3 percent gain in e-commerce sales. This pattern has continued in subsequent years and, in the Census Bureau's first-quarter 2014 release, e-commerce surged 15.0 percent year-over-year, while overall retail sales ticked up just 2.4 percent. In addition, the share of e-commerce as a percentage of overall retail sales has grown at a rapid pace, rising to 6.2 percent at present from 0.8 percent in 2000 (Figure 3). This positive trend is anticipated to continue. New technologies have helped to attract buyers to the online shopping market. The Boston Consulting Group estimates that total online retail sales should rise to roughly 7.1 percent of total retail sales by 2016.[2] As shown in Figure 4, the growth of total sales of e-commerce has been rising at a much higher pace since 2002 compared to growth of overall retail sales, again reflecting the growing importance of e-commerce's influence on total retail activity.

Figure 3

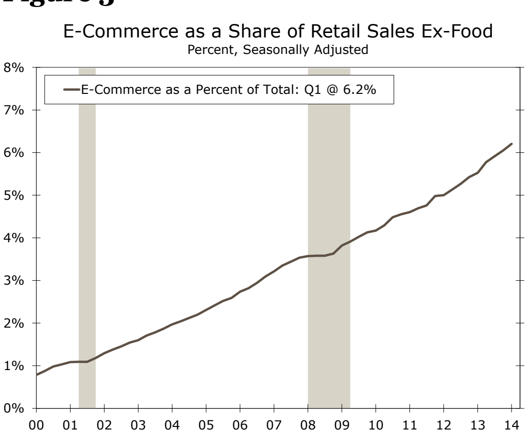
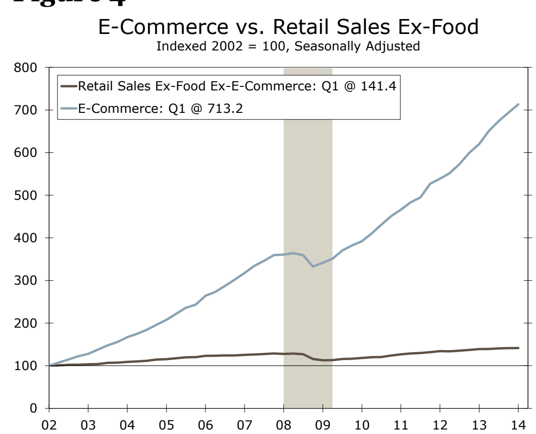


Figure 4



Source: U.S. Department of Commerce and Wells Fargo Securities, LLC

[2] The Boston Consulting Group (2012). *The Connected World: The Internet Economy in the G-20.*

Although the recent economic recovery has contributed to these upward gains, the driving force behind the discrepancy of total retail sales and e-commerce sales growth has been the proliferation of new technologies. The increasing adoption of smartphones and tablets, as well as the rising number of Internet users, has been crucial for accelerating e-commerce development. The number of U.S. households with a computer surged 27.9 percentage points from 51.0 percent in 2000 to 78.9 percent in 2012 (the most recent data available).[3]

In addition, consumers have also become progressively more tech-savvy since the technology boom and, as a result, their tastes and preferences have evolved. Many individuals now prefer the user-benefits of using technology to make online purchases. For example, one reason buyers may decide to purchase online is timeliness; with high-speed search engines now allowing consumers to search through thousands of store inventories in seconds, the hours spent browsing at a shopping mall are saved.

E-commerce has additionally benefited from the rise of online downloads for items such as videos, music and books as individuals gravitate toward these electronic products as opposed to physical goods. Technologies such as e-readers and iPods have allowed buyers to substitute online digital products for in-store products. Furthermore, consumers have also found e-commerce to be a cheaper and more efficient platform for these purchases.

Another trend that has come about in recent years has been an increase in price comparison shopping through the use of mobile technologies. A 2013 survey by Forrester Consulting found that 75 percent of consumers would be swayed to purchase a product online, rather than in-store, if free shipping were available.[4] Many customers now browse shopping malls and online retailers to compare products and then purchase the product at the best price. The recent surge in online purchases for goods and services has contributed significantly to the rise of e-commerce, as well as to the slower sales at physical brick-and-mortar stores. For example, data from the Census Bureau's Annual Retail Trade Survey reported that book store retailers have experienced negative sales growth year-over-year from 2008 through 2012 (the most recent data available). As technology continues to influence buyer purchasing, the growth of e-commerce will further establish competitive prices and may continue to erode the practicality of physical retail outlets.

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While it is unlikely that technology will ever completely replace the traditional shopping mall, competition from the Internet has emerged as one of the greatest challenges facing brick-and-mortar stores today. E-commerce sales are expected to continue to accelerate at a healthy rate in the coming years and should continue to affect the composition of future retail sales.

The Role of Online Retailing across Retail Categories

Online-only retailers, or retailers where the bulk of their business is generated through online traffic, have accounted for most of the sizable e-commerce growth within retail sales. In the monthly Retail Trade report, these online retailers are captured in a category of sales known as nonstore retailers. While this segment also includes categories such as vending machines and catalog orders, the dominance of online retailers has reshaped this retail sales category. In 1998, e-commerce sales accounted for less than five percent of total nonstore retail sales; over the past 14 years, that figure has climbed to nearly 50 percent (Figure 5).[5] We expect this composition change for nonstore retail sales to continue in the years ahead as places such as "mail order houses" become increasingly obsolete with the growth in online commerce, and the growing reach of Internet users.[6]

[3] U.S. Census Bureau. (2014). Current Population Survey, Select Years.
[4] Forrester Consulting (2014). *Customer Desires vs. Retailer Capabilities: Minding The Omni-Channel Commerce Gap.*
[5] Establishments in the Nonstore Retailers sector include mail-order houses, vending machine operators, home delivery sales, door-to-door sales, party plan sales, electronic shopping, and sales through portable stalls (e.g., street vendors, except food). Establishments engaged in the direct sale (i.e., nonstore) of products, such as home heating oil dealers and newspaper delivery are included in this subsector.
[6] For this analysis, we focused on the three specific industries and one subsector, as these were the industries that provided the most consistent historical data.

Figure 5

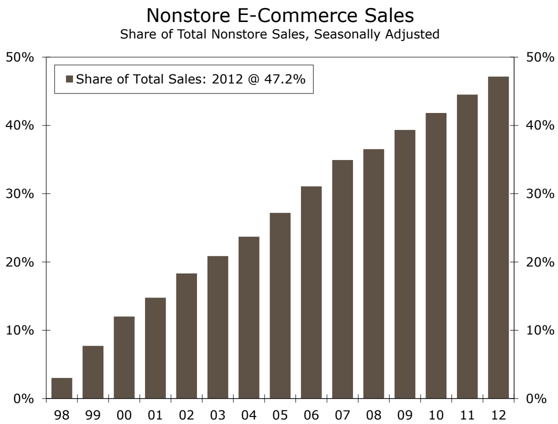
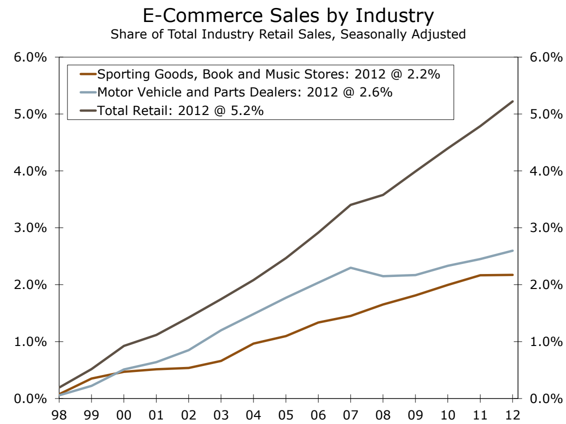


Figure 6



Source: U.S. Department of Commerce and Wells Fargo Securities, LLC

Besides the rapid growth in online retailers, traditional brick-and-mortar retailers are increasing their online presence to drive sales growth. Looking at e-commerce growth by sector, more business is being done over the Internet for all types of retail sales. Figure 6 shows e-commerce growth in sporting goods, book and music stores along with motor vehicle and parts sales. As indicated, the upward trend has been rather steady over this time period; however, the percentage of total e-commerce sales for both of these types of goods remains low relative to overall e-commerce sales, suggesting that in-store shopping still plays a dominant role among these retailers.

E-Commerce and the Rest of the Economy

So far we have analyzed the role of e-commerce within the confines of overall retail sales. However, the impact of e-commerce stretches beyond just the retail market. The continued rise in e-commerce has spillover effects on other areas of the economy including business investment, commercial real estate, inflation and the labor market.

As of 2002, e-commerce sales directly accounted for just 0.4 percent of GDP, as of 2013, e-commerce sales climbed to 1.6 percent of GDP.

As of 2002, e-commerce sales directly accounted for just 0.4 percent of GDP, as of 2013, e-commerce sales climbed to 1.6 percent of GDP.[7] Meanwhile, the overall share of total retail sales declined to 27.0 percent of GDP from 28.5 percent over the same time period. But the indirect effects of e-commerce have also been seen in business investment in the form of information equipment investment and investment in software. Since 2002, investment in information processing has climbed steadily, averaging 5.6 percent. At the same time, business investment in software has also experienced rapid growth, averaging 4.9 percent. These steady gains closely correlate with the run-up in e-commerce sales activity. While it is difficult to make any direct causal relationships between the two, it is likely that some of the improvement in business investment in these areas is tied to the proliferation of online retailers and the expansion into e-commerce from traditional retailers. Another byproduct of these capital investments is the efficiency gains brought about by investment in new technology. A study by the Federal Reserve Bank of Kansas cited several studies that point to increases in productivity through the use of e-commerce.[8] Such productivity gains are the result of reduced inputs such as labor required to complete sales.

Another key way in which e-commerce has influenced the broader economy has been observed in the commercial real estate market. As our prior research points out, there has been a clear trend over the past few years of a migration away from retail commercial real estate and an increase in

[7] To calculate e-commerce as a percent of GDP, total nominal e-commerce sales from the Census Bureau was divided by nominal GDP for each time period.
[8] Willis, J.L. (2004). *What Impact Will E-Commerce Have on the U.S. Economy?* Federal Reserve Bank of Kansas City.

demand for industrial and warehouse space.[9] The rapid growth in e-commerce has forced brick-and-mortar retailers to downsize floor plans and open fewer stores, a trend we expect to persist. While the shift away from traditional retail outlets has served as a headwind to retail commercial real estate, the trend has helped to perpetuate absorption and new construction in the warehouse and industrial segment. As shown in Figure 10, there has been a dramatic decline in the industrial vacancy rate relative to retail vacancy rates, which can be attributed in part to the shift toward greater e-commerce and the subsequent demand for mega distribution centers.[10]

Figure 9

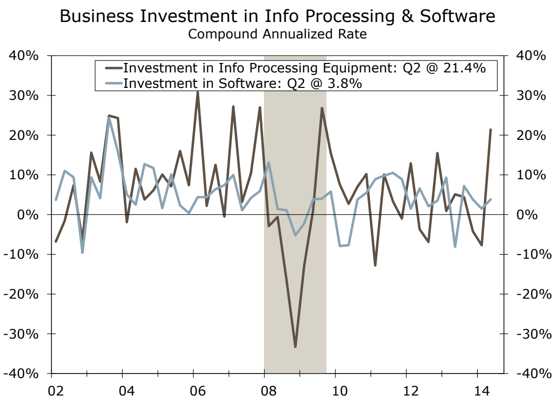
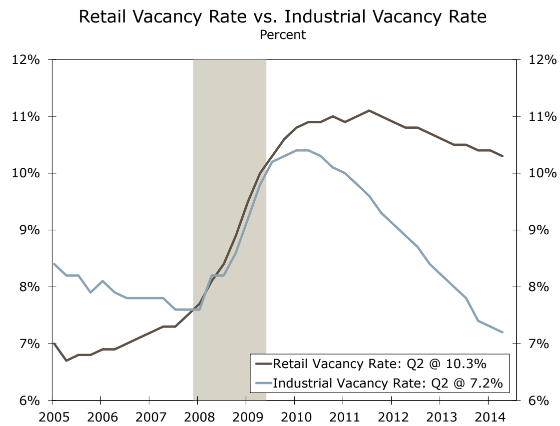


Figure 10



Source: U.S. Department of Commerce, PPR, REIS, Inc and Wells Fargo Securities, LLC

There is also some evidence to suggest that the migration to e-commerce may have an effect, in the short-run, on inflation.

There is also some evidence to suggest that the migration to e-commerce may have an effect, in the short-run, on inflation. The different, often lower, cost structure of e-commerce allows for greater cost saving over traditional brick-and-mortar operations.[11] Besides the lower costs of doing business, the technology employed in e-commerce retailers can respond faster to changing economic conditions. Yet another way in which e-commerce may affect prices in the short-run is through the use of price-comparison shopping. New mobile technologies have opened the door to comparison shopping, in some cases while consumers are visiting a traditional brick-and-mortar retailer. This comparison has opened the door to greater price competition between online and traditional retailers that may, in turn, help to keep consumer prices in check.

Employment Implications of E-Commerce: The Death of a Salesman?

Given the wide range of skill sets that go into online or e-commerce sales, it is difficult to accurately measure the impact that growth in e-commerce has had on the labor market. However, it is possible to get some sense of the longer-run employment trend by looking at the retail subsector of "electronic shopping and mail-order houses" within nonstore retailers, as it captures online retailers, which account for the largest share of the category.

To further develop our analysis of e-commerce on employment, we have chosen an additional sector, department stores, to compare and contrast the changing employment composition between traditional and online retailers. Employment within the electronic shopping sector rose more than 30 percent from 2002 to 2013, and, as of 2013, employed nearly 294,000 individuals. In contrast, department stores reduced their workforce over the same time period by almost 300,000 positions. Almost 63 percent of all those that lost their department store jobs were workers that were involved in sales or related activities. Even among online retailers, sales positions have been reduced. The number of sales and related activities positions declined for electronic shopping retailers by 4,200 positions, reflecting the overall softer pace of consumer spending activity experienced in the wake of the recession.

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[9] **Khan, A. R. and Zachary, B. (2014).** ***Retail Commercial Real Estate Improves, but Unevenly.***
[10] **Thorpe, K et al. (2013).** ***E-Commerce Imperative 2013.*** **Commercial Real Estate Services.**
[11] **Willis, J.L. (2004).** ***What Impact Will E-Commerce Have on the U.S. Economy?*** **Federal Reserve Bank of Kansas City.**

Another interesting aspect of comparing traditional department stores with electronic shopping is the very different composition of employment for each of these types of retailers. As can be seen in Figures 11 and 12, there is a significant difference in the number of sales & related occupations between electronic shopping and department stores. From the 2002 pie-charts, we see that employment in "sales and related activities" accounted for only 16 percent of electronic shopping employment as opposed to 62 percent for department stores. Meanwhile, the largest employment occupation percentage for electronic shopping was in the "office and administrative support" positions, which accounted for 52 percent of all employees in 2002. Conversely, for department stores, administration occupations accounted for only 25 percent of employment in 2002.

Figure 11

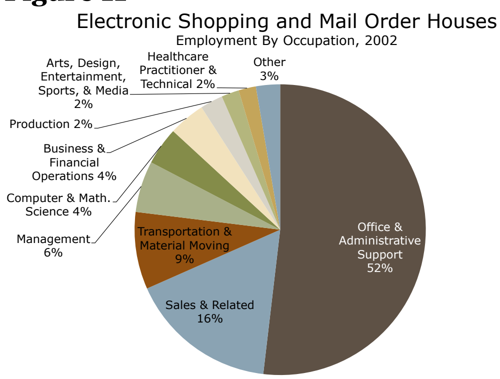


Figure 12

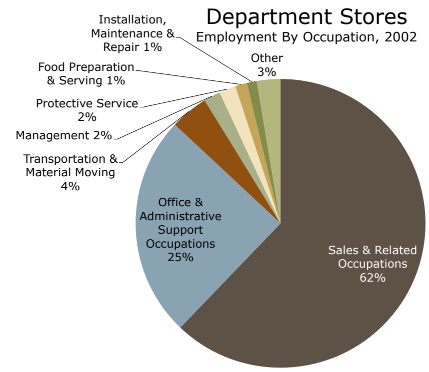


Figure 11

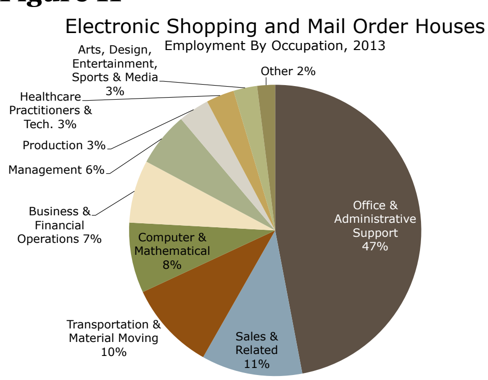
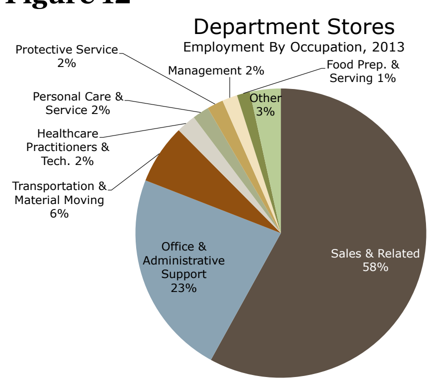


Figure 12



Source: U.S. Department of Labor and Wells Fargo Securities, LLC

The biggest change that occurred in the electronic shopping sector between 2002 and 2013 was the doubling of the participation of "computer and mathematical" occupations.

Today, the composition has become even more diverse for both retail categories; however, more pronounced diversification of employment types can be seen for electronic shopping. From the 2013 pie-charts (Figures 13 and 14), we can see that sales occupations have come down considerably as a percentage of total employment for the electronic shopping. That is, sales occupations have shrunk to only 11 percent of total employment in the electronic shopping sector while administration occupations have fallen to 47 percent. The biggest change that occurred in the electronic shopping sector between 2002 and 2013, other than sales occupations, was the doubling of the participation of "computer and mathematical" occupations, which increased to 8 percent from 4 percent. This growth trend should continue as the technical complexity of online retail sales continues. In contrast, sales occupations for department stores fell to 58 percent of department store employment in 2013 from 62 percent in 2002. Administration occupations also declined for traditional retailers to 23 percent in 2013 from 25 percent, while "transportation and material moving" occupations rose to 6 percent from 4 percent.

Given the changing composition of employment within the electronic shopping sector along with its increasing importance within the retail space, there are several implications for retail employment growth. First, while we do not expect to see "the death of the salesman," there are clear signs that these positions are becoming much scarcer. Second, the increasing importance of e-commerce implies that a much different skill set will be required for the retail employees of tomorrow. Positions such as data analysis and consumer insight specialists that study e-commerce transactions across product types will continue to become more commonplace. Furthermore, these positions will require a higher degree of training and technical competency than in the past, which will also contribute to the changing face of retail.

Conclusion: Structural Changes Continue in the Retail Space*

While we do not predict the demise of traditional brick and mortar retailers, the advent of new technologies will continue to put pressure on them as they are forced to compete with their online counterparts. E-commerce sales now account for a large and growing share of total retail sales activity with both online-only and traditional retailers taking part in e-commerce. The net result of evolving technologies, along with a shift in consumer tastes and preferences, represents the changing face of retail sales. This paradigm shift also has broader implications for the economy as a whole as the evolving technologies lead to greater business investment and higher skill requirements for the retail sector employees of the future. The face of retail will continue to change the way in which retailers operate, but it will also continue to change the way in which the retail sector overall influences the economy as a whole.

E-commerce sales now account for a large and growing share of total retail sales.

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