SPECIAL REPORT

TD Economics

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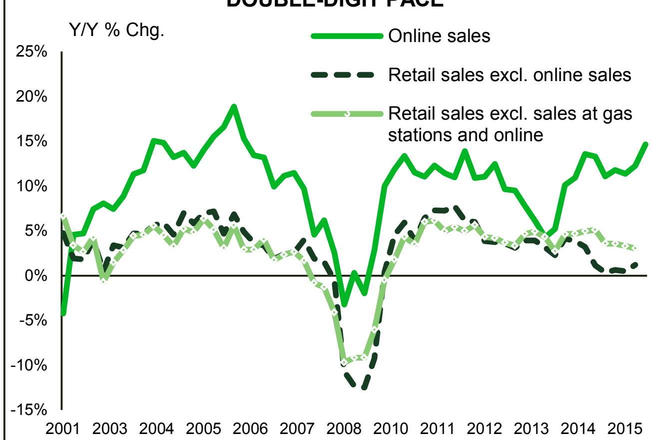
E-COMMERCE DISRUPTS TRADITIONAL RETAIL, BUT BRINGS OPPORTUNITIES ELSEWHERE

Highlights

- With U.S. household spending maintaining its strong momentum and earnings on an upswing, American businesses are once again knocking on the door of opportunity. Nowhere will the battle for growing customers' dollars be more intense than between brick and mortar and e-commerce stores.
- E-commerce still accounts for a small share of retail activity, however it's brisk pace of expansion and changing consumer preferences continues to challenge the traditional retailing model.
- As sales continue to migrate online, brick-and-mortar retailers are increasingly becoming "bricks-and-clicks". This is generating significant positive and negative spillovers for employment in related industries, commercial real estate markets and even government revenues.
- While the disruptive impact of e-commerce on traditional retailers will continue to be felt broadly across the U.S., the benefits will be more geographically concentrated.
- The Middle Atlantic states will benefit from expansion within the transportation and warehousing industry, increased focus on speedy delivery and rising demand for logistics real estate. Their advantage is proximity to large population centers, ample warehousing space and extensive transportation infrastructure.

With U.S. household spending maintaining its strong momentum and with wages and earnings on an upswing, American businesses are once again knocking on the door of opportunity. Nowhere will the battle for growing customers' dollars be more intense than between brick and mortar and e-commerce stores. Online sales continue to grow at a red-hot pace and increase their market share. However, increasingly the lines between on-line and brick and mortar stores are becoming blurred. Online retailers are starting to set up physical locations while many brick-and-mortar stores are becoming "bricks-and-clicks".

CHART 1: ONLINE SALES STILL GROWING AT DOUBLE-DIGIT PACE



Source: Census Bureau, TD Economics

This evolving competitive landscape will continue to have significant negative and positive spillover effects on employment in related industries, commercial real estate markets and even government revenues. The disruptive impact of e-commerce on traditional retailing model will continue to be felt broadly across the U.S., while the benefits will be more concentrated. One of

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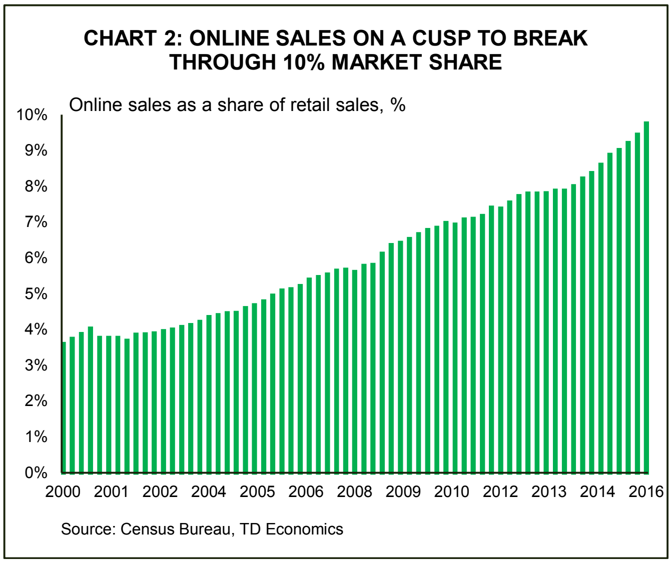
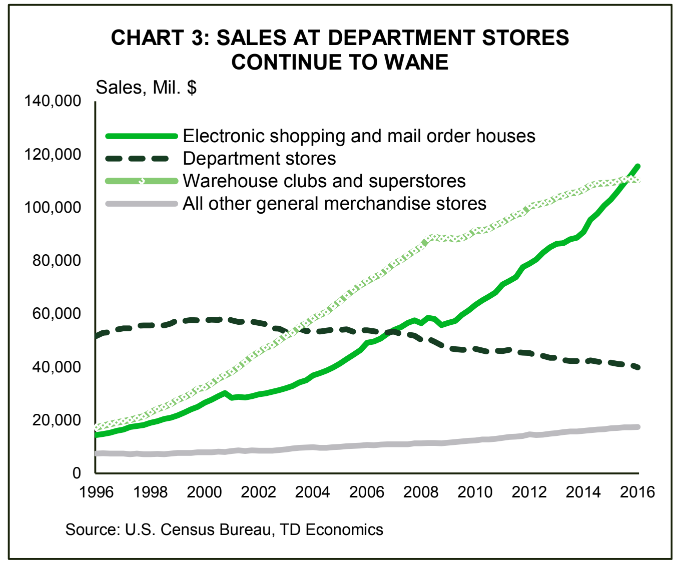




the beneficiaries of e-commerce expansion is the Middle Atlantic region, where large population centers, ample warehousing space and extensive transportation infrastructure have positioned it well to capitalize on the growth of e-commerce nationally.

Online sales continue to win consumers' hearts

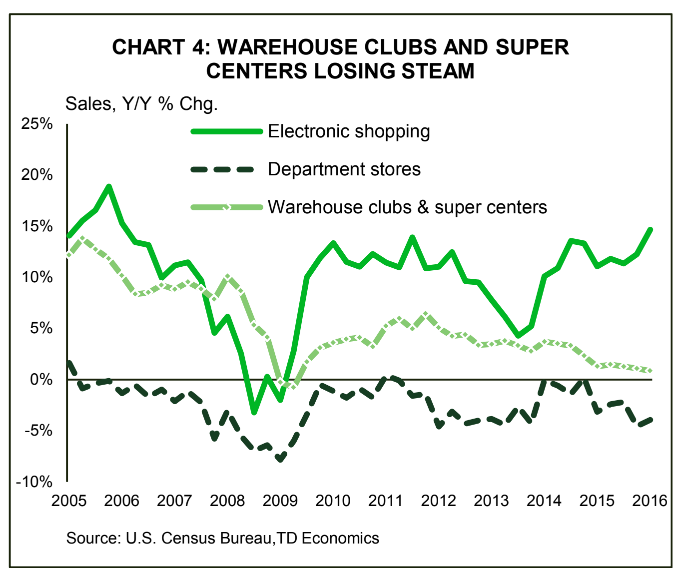
E-commerce represents a still small but briskly growing segment of retail activity. Online sales have been expanding at a double-digit pace, which is in sharp contrast to brick and mortar store sales which grew at sub-2% pace last year. Some of the recent weakness in nominal retail sales can be chalked up to low energy prices, which have lowered spending on gasoline. However, even after stripping out sales at gas stations, overall growth in store-based retail sales averaged around 4% over the last four years – about one-third of the pace of growth in electronic sales (Chart 1).

This outperformance of online versus traditional stores is not new, going back to the dot-com boom (Chart 1). Over the last decade, nominal sales at the brick-and-mortar stores increased by less than 20% - roughly on par with the rate of inflation. Meanwhile, the nominal value of online sales has more than doubled. Such rapid growth has led to the steady increase in the e-commerce share of the retail market which has doubled over the last ten years, with roughly one of every ten dollars now spent online (Chart 2).

The rise of the warehouse clubs and supercenters

Contrary to popular belief, not all brick-and-mortar retailers have struggled in the face of ever increasing online sales and changing consumer preferences. Weakness has been largely concentrated within traditional service-oriented department stores. Sales at department stores have been on a downward trend for the last sixteen years, contracting by 26% during the last 10 years alone (Chart 3). In contrast, the lower-cost model of general stores, known as warehouse clubs and supercenters[i], has surged in popularity. Sales at these stores gained more than 50% over the last decade, quickly overtaking department stores.

As a result, some of the earlier decline in department stores sales can be chalked up to the rise of warehouse clubs and supercenters, and not just e-commerce alone. Research has found a negative correlation between the rise of warehouse clubs & supercenters and the number of department stores, with one additional warehouse & supercenter estimated to lead to a 0.68 drop in the number



of department stores[1].

Despite its early success vis-à-vis online stores, the pace of expansion in the warehouse clubs & supercenters segment has been slowing as the sector matured, with sales growth decelerating to just 0.8% y/y in Q2 of 2016 (Chart 4). The segment has been overtaken by the online shopping in terms of its market share at the end of last year (Chart 3). This trend is only likely to intensify over the medium term. Online sales are expected to maintain their near-10% annual growth over the next two years. Meanwhile, even after the downward pressure from falling energy prices on gasoline sales eases [ii], the warehouse clubs & supercenters segment will likely see only moderate gains due to rising competition from online shopping and falling economies of scale. For example, large players such as Target and Walmart have been shifting their attention to smaller urban stores, which will likely put upward pressure on costs[2].

Commercial Real Estate: What's hot and what's not

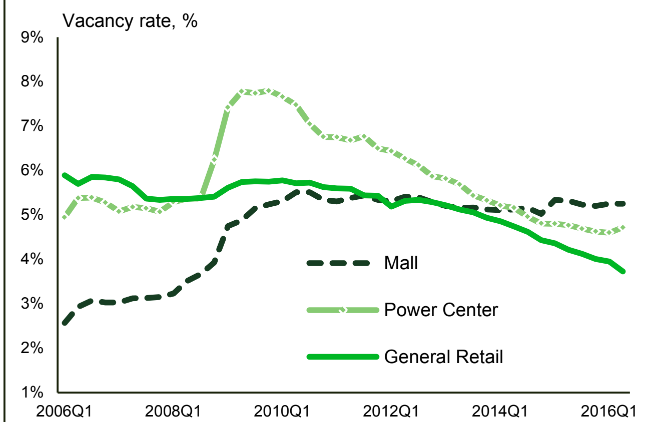
These trends are reshaping the landscape in the retail commercial real estate (CRE) market. In recent years there has been a significant tightening in market fundamentals, stemming from improving economic conditions. A recovery in consumer spending has boosted demand for retail space, leading to a substantial reduction in vacancies which recently hit an all-time low (Chart 5). Most retail segments experienced falling vacancy rates – a trend led by power centers. However, shopping malls fell short of this trend due to slipping sales at department stores. Shopping malls are the only subsector of retail where vacancy rates failed to improve during the recovery, while power center and general retail vacancies breached their pre-recession lows, and even fell below that of malls in contrast to the pre-recession years (Chart 6).

Despite improving fundamentals, the level of crucial activity measures remains well below that prior to the recession. Absorption and completions are averaging around 60% and 40% of their respective historical levels, reflecting a diminished appetite by brick-and-mortar retailers to expand. This is partially attributable to increased competition from the online segment (Chart 7).But, while the expansion of e-commerce has weighed on the retail CRE market, it has boosted demand for warehouses & distribution centers supporting the logistics CRE. Strong demand has led to a logistics building boom, with total stock in the segment rising by 8% during the recovery – more than triple the

CHART 5: RETAIL VACANCY RATE IS AT ALL TIME LOW

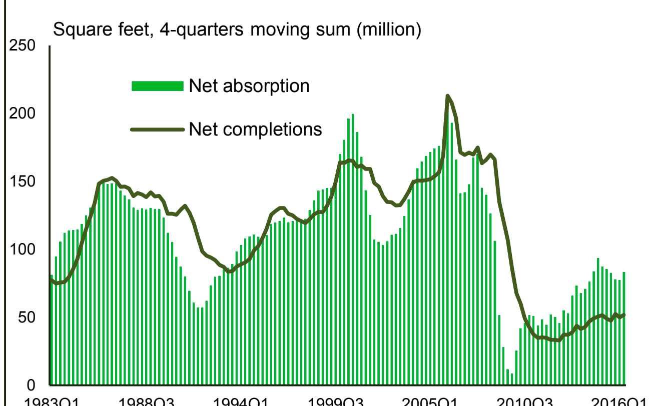
Source: CoreLogic, TD Economics

CHART 6: MALL VACANCY REMAINS ELEVATED

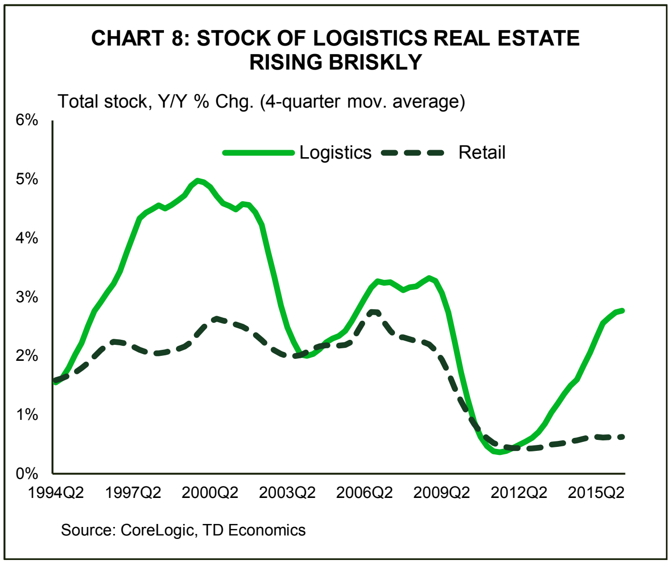


Source: CoreLogic, TD Economics

CHART 7: DEMAND AND SUPPLY OF RETAIL SPACE IS LOW RELATIVE TO HISTORY



Source: CoreLogic, TD Economics

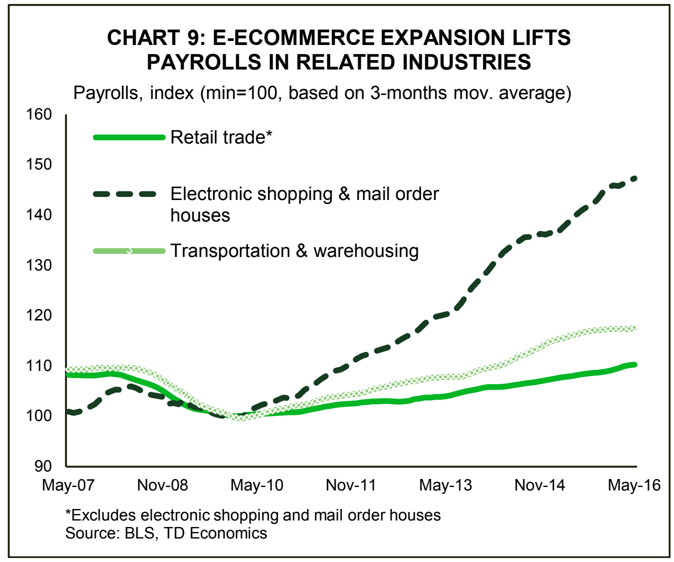


growth of its retail counterpart (Chart 8). Despite the rush of new supply, demand from online retailers and shipping companies has more than kept up, pushing the logistics vacancy rate down to a level not seen since the tech boom of the late-nineties. Investors have been taking notice of this trend, with shares of real-estate investment trusts (REITs) that own industrial space rising 17.3% this year, compared to 6% for all equity REITs.[3]

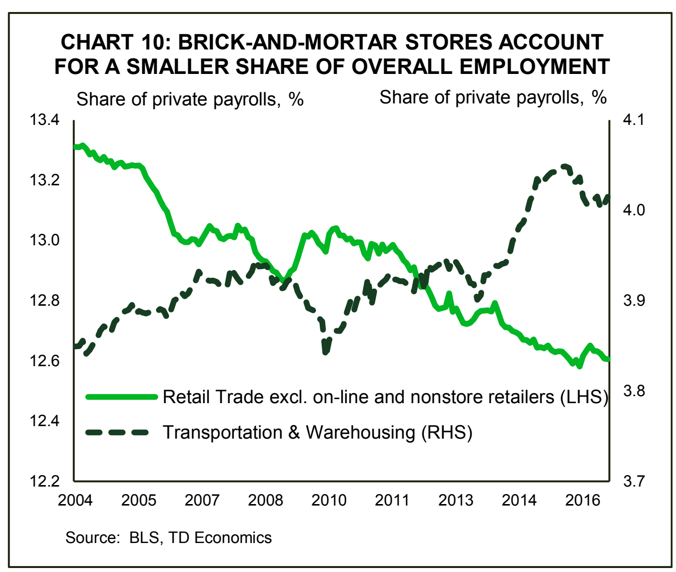
Over the next two years, the pace of new logistics construction will moderate slightly; but both supply and demand will continue to rise on the back of projected brisk demand from online retailers as well as the reconfiguration of traditional supply chains to accommodate e-commerce. Brick-and-mortar retailers increasingly offer onmichannel shopping experiences, with opportunities to shop both in store and online – a process that will continue to drive demand for distribution space from traditional retailors. The supply of retail stock will also continue to increase, albeit modestly, but fundamentals will remain healthy with low vacancy rates supported by robust consumer spending. An unexpected lift to demand may also come from online retailers, who have recently started expanding offline by opening brick-and-mortar locations. Amazon opened its first physical store in Seattle last year and has plans to open bookstores in Chicago, Portland, New York and San Diego. All told, the division between offline and online retailing will continue to become increasingly blurry.

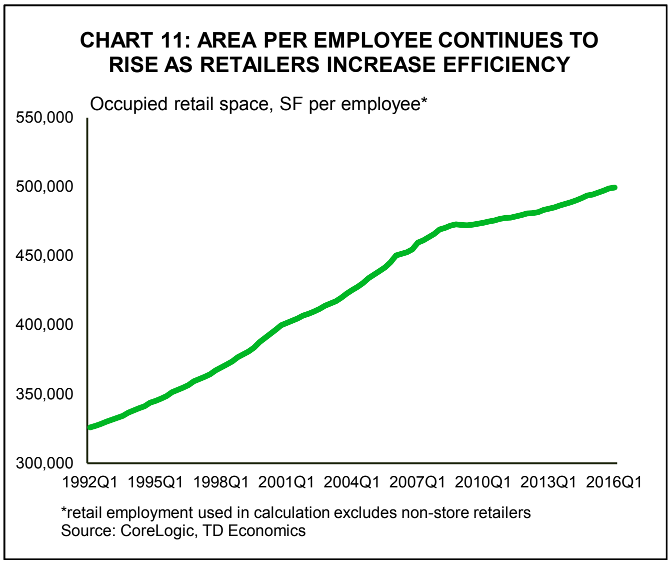
Implications for payrolls

Rising online sales have been a boon to transportation and warehousing payrolls. Transportation employment has



climbed 15% since the recession, and jobs in warehousing & storage have grown by nearly 40%. While the transportation & warehousing industry still accounts for a relatively small fraction of private sector jobs, it had been on a steady upward climb (Chart 9). Not surprisingly, payrolls of online stores and mail-order houses have also surged, gaining 50% during the recovery. At the same time, payrolls at brick-and-mortar stores have gained just 10% since the trough, and while they have surpassed their pre-recession peak, they continued to shrink as a share of overall employment. This is largely a result of intensifying competition from online retailers and the rise of large-format warehouse clubs & supercenters, that have necessitated greater efficiencies (Chart 10). One of the ways to achieve this was by increasing the square footage per employee (Chart 11) and by making



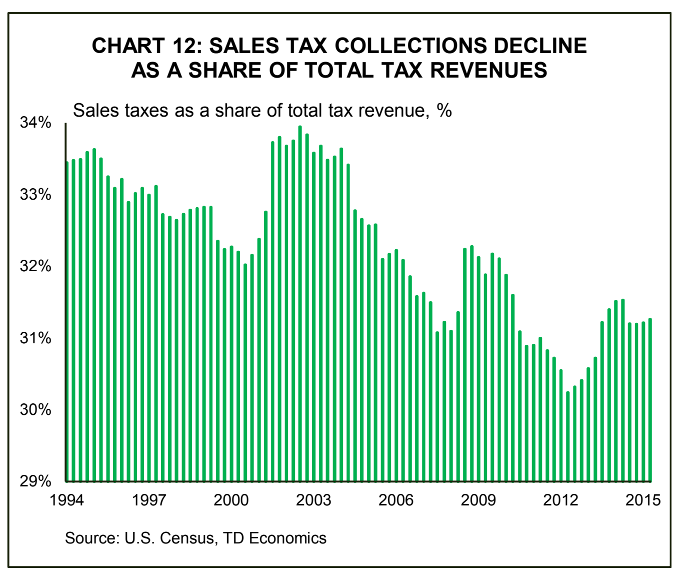


employees more efficient. Much of the transformation has occurred prior to the recession, with average retail area per employee rising by over 25% during the 1998-2008 period. While slowing somewhat, the trend continued in the recession's aftermath, rising by another 10% over the last ten years. As such, this tendency towards reduced labor-intensity has tempered employment growth in traditional retail. Had square footage per employee remained at its 2008 level, retail payrolls would be 1 million higher than their current levels.

Going forward the pressure on retail payrolls is likely to ease. Firstly, there's a limit by how much retailers can increase area per employee without compromising shopping experience. Secondly, consumers are increasingly seeking to have the best of both online and offline shopping worlds and favor retailers which offer a seamless omnichannel experience. A survey by Deloitte[5] has found that 69% of respondents looked at products online for their holiday shopping, but then purchased them at a physical store. While 52% of respondents indicated that they would look at a product in store but then purchase it online. In-store pickups are also rising in popularity, allowing buyers to buy items from the comfort of their home and get them in a timely way while saving money on shipping. This means that in order to stay competitive traditional retailers will need to continue to invest in technology and to improve their supply chains, and not just restrain their payroll growth. Meanwhile, more online retailers will likely consider opening physical store locations and continue to look for other ways to shorten their delivery times. This could add to cost pressures and erode some competitive advantages which they have traditionally enjoyed.

E-commerce poses a challenge for tax collections

Increased government regulation is another factor which could weigh on profit margins of online retailers going forward, with policy makers increasingly looking for ways to tax online purchases. In addition to disrupting the commercial real estate and labor markets, the expansion of online shopping is also impacting state and local government revenues, which often face a shrinking sales tax base as consumers migrate online. As a share of overall collections, sales tax revenue declined from about 34% in early 2000s to about 31% most recently (Chart 12). While the rise of online shopping isn't the only culprit, with increased consumption of services (which are taxed less broadly) and the introduction of numerous tax exemptions and tax holidays also contributing to the erosion of sales tax base, losses from uncollected online sales taxes can be substantial as we have shown previously. This is particularly the case for states that rely heavily on sales tax as a revenue source, including: Florida, Washington, Texas, Tennessee, Nevada and South Dakota. Existing laws prohibit states from collecting taxes from out-of-state online retailers who to do not have an in-state presence, or "nexus", to collect taxes. However, given the lack of federal rules pertaining to online taxation, some states have taken to redefining what constitutes as "nexus". Since 2008, a number of states enacted or proposed legislation that would allow them to tax out-of-state retailers based on the so-called "click-through nexus" or "Amazon law",



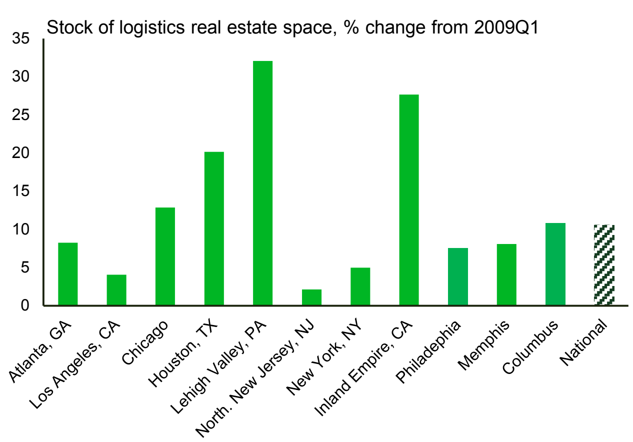
which considers that an out-of-state or international retailer has in-state presence if it has a business relationship with an in-state business or an affiliate that helps to facilitate sales in that state. Additionally, some states are expanding their definition of "nexus" to the presence in the state of a related subsidiary or a utilization of a third party distribution center. Even the use of the same trademarks by an in-state business and the internet retailer can be enough to require the internet retailer to collect and remit taxes to the state. This year alone, 42 bills regarding the sales tax "nexus" were introduced in 16 states and enacted into law in four (Louisiana, Oklahoma, South Dakota, and Washington). As an example, these moves have necessitated that Amazon collects and remits taxes in 28 states currently – nearly triple that in 2013. Additionally, most major "brick-and-click" retailers – those that sell goods both online and in a physical store – are also generally collecting the sales tax on online purchases. The data on how much revenue these measures are generating is scarce, but there is little doubt that ability to tax online purchases will become increasingly important for government finances in the coming years, as the volume of online sales continues to rise. As such, there is a pressing need for broad legislative action by Congress that could deal with the current patchwork of state laws, eliminate uncertainty in the industry and reduce tax law complexity for small businesses.

Middle Atlantic is well positioned to benefit

While the disruptive and largely negative impact of rising e-commerce on traditional "brick-and-mortar" retail has been felt broadly across the nation, the benefits of rising online trade appear more concentrated. Several key areas, which are located near large population centers and have wide transportation linkages are emerging as key distribution hubs for online and omnichannel retailers.

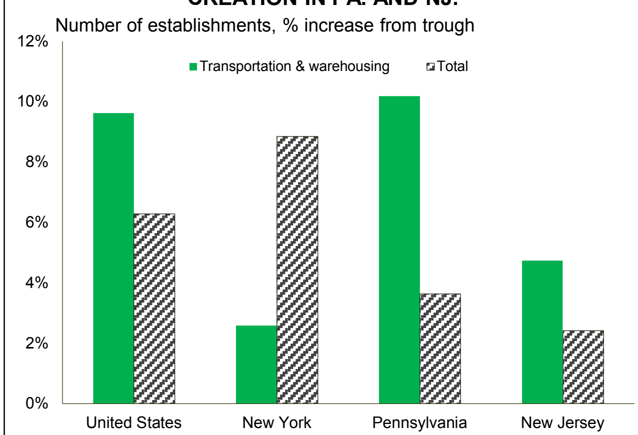
One of these areas is the Mid-Atlantic region, which has high population density, large metropolitan areas, access to ports and an expansive ground transportation network. With about half of the U.S. population located within a day's drive, developers and retailers are flocking to set up fulfillment and distribution centers. Nowhere has demand for logistics real estate been stronger recently than in Lehigh Valley and parts of central Pennsylvania along the Interstate-78/Interstate-81 corridor. Online retailer Zulily, European retailer Primark, Stitch Fix, Hudson's Bay Company, Walmart and Amazon are some of the area's latest major tenants. Amazon has been rapidly increasing its footprint across the state, and recently announced it will open another distribution center in Lehigh Valley, adding to the 13 warehouses and distribution centers it already operates in Pennsylvania. These facilities occupy about nine million square feet – second only to California, which has triple the population of Pennsylvania. A decision by the shipping company FedEx Ground to build its largest parcel distribution facility in Lehigh Valley is another testament to the region's rising significance as an e-commerce distribution hub. As a result, since the first quarter of 2009 the total stock of logistics real estate in Lehigh Valley has increased by over 30% – outpacing all other major markets in the U.S. (Chart 13). Central and South Jersey are also reaping

CHART 13: CONSTRUCTION OF LOGISTICS REAL ESTATE SURGES IN LEHIGH VALLEY



Source: CoStar, TD Econonomics

CHART 14: LOGISTICS SECTOR BOOSTS FIRM-CREATION IN PA. AND NJ.



Source: BLS, TD Economics

benefits from logistics expansion in the region, with five Amazon fulfillment centers currently operating and another two in the pipeline.

Thanks to its brisk expansion, the industry has provided a much-needed lifeline to local labor markets, particularly in Pennsylvania and New Jersey – both which have struggled with a slow recovery. In addition to giving a lift to construction activity and jobs during the initial development, e-commerce distribution centers also spur hiring in transportation and warehousing sector. The boost to payrolls from increased hiring in transportation and warehousing was particularly pronounced in Pa., where it generated 13% of all new jobs during the recovery – nearly three times its share of total employment. The sector also punched above its weight in N.Y. and N.J., churning out nearly 15% of all new jobs – double its share. The rapid expansion has also encouraged firm creation in the region, with the number of transportation and warehousing establishments in Pa. up over 10% since the trough, outpacing the national metric, even as overall firm creation in the state has been lagging (Chart 14).

Bottom Line

Given that they still account for a relatively small market share, online sales have plenty of room to grow. And grow they shall, advancing at a near 10% pace over the next two years. This ongoing expansion of e-commerce will continue to manifest in strong demand for logistics real estate and boost distribution and warehousing payrolls, particularly in areas which are located close to population centers, have expansive transportation network and offer an ample supply of labor and land, such as the Middle Atlantic region.

However, as lines between online and offline retailers become increasingly blurry, expansion of e-commerce will be less disruptive for traditional retailers, as long as they successfully harness the power of online sales. The drag on retail employment should diminish going forward as it will become harder for traditional retailers to continue scaling down the number of employees per square foot without impacting the quality of real-life shopping experience. At the same time, online retailers have been focusing more on offline expansion, which should also give a lift to both retail employment and spur additional demand for retail space. Increased government regulation, such as the introduction of sales tax on online purchases, will further level the playing field across the two sectors.

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5. Rod Sides and Susan K. Hogan "Deloitte's 2015 holiday survey". http://dupress.deloitte.com/dup-us-en/industry/retail-distribution/holiday-retail-sales-consumer-survey.html

Notes

i. The NAICS manual defines warehouse clubs and superscentes industry (NAICS 45291) as "establishments … engaged in retailing a general line of groceries in combination with general line of groceries in combination with general lines of new merchandise, such as apparel, furniture, and appliances."

ii. Some of the recent weakness in sales at warehouse clubs & supercenters can be attributed to a decline in gasoline sales, which are not disaggregated. However, that does not alter the overall declining trend in sales growth.

iii. Power centers are defined as a shopping center with a category-dominant anchors, including discount department stores, off-price stores, wholesale clubs, with only a few small tenants.