

ONE HUNDRED FIFTEENTH CONGRESS  
**Congress of the United States**  
**House of Representatives**  
COMMITTEE ON ENERGY AND COMMERCE  
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**MEMORANDUM**

**March 5, 2018**

**To: Subcommittee on Digital Commerce and Consumer Protection Democratic Members and Staff**

**Fr: Committee on Energy and Commerce Democratic Staff**

**Re: Hearing on “Review of Emerging Tech’s Impact on Retail Operations and Logistics”**

On **Wednesday, March 7, at 10:00 a.m. in room 2123 of the Rayburn House Office Building**, the Subcommittee on Digital Commerce and Consumer Protection will hold a hearing titled “Review of Emerging Tech’s Impact on Retail Operations and Logistics.”

**I. BACKGROUND**

Over the past few years the retail industry has seen the rapid growth of e-commerce, which doubled from 2011 to 2016, to become a \$350 billion industry.<sup>1</sup> Growth in online retail sales is now outpacing offline growth by a factor of five.<sup>2</sup> At the same time, retail store closures were up more than 200 percent last year due in part to migration of sales online.<sup>3</sup>

To stay competitive, traditional retailers are changing their business models, increasing their online presence, and expanding their delivery services. In a recent survey of retailers, 78

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<sup>1</sup> *E-Commerce: Convenience Built on a Mountain of Cardboard*, New York Times (Feb. 16, 2016).

<sup>2</sup> *E-Commerce is Expected to Grow to 17% of US Retail Sales by 2022*, Digital Commerce 360 ([www.digitalcommerce360.com/2017/08/09/e-commerce-grow-17-us-retail-sales-2022/](http://www.digitalcommerce360.com/2017/08/09/e-commerce-grow-17-us-retail-sales-2022/)) (Aug. 9, 2017).

<sup>3</sup> *Store Closures Rocked Retail in 2017. Now 2018 is Set to Bring Another Round of Them*, CNBC (Dec. 26, 2017).

percent rated integrating e-commerce and in-store experiences as critical to their business.<sup>4</sup> Among larger businesses, the lines between traditional and online retailers are blurring. Walmart, for example, acquired the e-commerce startup Jet.com in 2016, while Amazon entered the traditional retail space with its physical bookstores and its 2017 acquisition of Whole Foods.<sup>5</sup>

The rise in e-commerce has led to big changes to the retail industry's supply chain, from one focused primarily on delivering products to store shelves to one that increasingly requires delivery to the consumer's front door.<sup>6</sup> Delivery vehicles are ubiquitous, with U.S. shipments for Amazon alone exceeding 1.2 billion in 2017—double the number from five years ago.<sup>7</sup> In addition, online consumers have become accustomed to nearly instant delivery. In a recent survey, 80 percent of shoppers between the ages of 18 and 24 expected same day shipping, and 61 percent wanted their packages within one to three hours of placing an order.<sup>8</sup> As they compete to deliver packages faster, cheaper, and more efficiently, retailers are turning to innovative technologies, integrating robotics and automation, and relying on big data analytics and algorithms to improve their supply chain.<sup>9</sup>

## II. EFFECT OF E-COMMERCE GROWTH

E-commerce is still evolving but some effects are already being seen. Consumers have expanded choice and instant gratification. Consumers appreciate timesaving options including fast delivery and in-store pick up for online orders.<sup>10</sup> As online retailers expand, however, they are collecting more personal information, raising new concerns about how that data will be

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<sup>4</sup> Zebra Technologies, *Reinventing Retail: 2017 Retail Vision Study* (Mar. 6, 2017) ([www.zebra.com/content/dam/zebra\\_new\\_ia/en-us/solutions-verticals/vertical-solutions/retail/brochures/retail-study-2017-en-global.pdf](http://www.zebra.com/content/dam/zebra_new_ia/en-us/solutions-verticals/vertical-solutions/retail/brochures/retail-study-2017-en-global.pdf)).

<sup>5</sup> *Walmart has Completed Its Acquisition of Jet.com*, *Fortune* (Sept. 20, 2016); Amazon, *Welcome to Amazon Books* ([www.amazon.com/b?node=13270229011](http://www.amazon.com/b?node=13270229011)) (accessed Mar. 1, 2018); *Amazon's Acquisition of Whole Foods is About Two Things: Data and Product*, *Forbes* (Aug. 2, 2017).

<sup>6</sup> *Online Shopping is Terrible for the Environment. It Doesn't Have to Be*, *Vox* (Dec. 21, 2017).

<sup>7</sup> *Today's Top Supply Chain and Logistics New from WSJ*, *Wall Street Journal* (Feb. 12, 2018); *Amazon Puzzles Over the Perfect Fit – In Boxes*, *Wall Street Journal* (Dec. 20, 2017).

<sup>8</sup> *The Growing Importance of Same Day Delivery for Online Consumers (Infographic)*, *Business 2 Community* ([www.business2community.com/infographics/growing-importance-day-delivery-online-consumers-infographic-02004439](http://www.business2community.com/infographics/growing-importance-day-delivery-online-consumers-infographic-02004439)) (Feb. 2, 2018).

<sup>9</sup> *Robots Gain Ground in Ecommerce Warehouses*, *Financial Times* (Jan. 30, 2018); *Predictive Analytics and Machine Learning AI in the Retail Supply Chain*, *Forbes* (Sept. 12, 2018).

<sup>10</sup> *The Power of Now: Marketing the trend of Instant Gratification*, *Yahoo Small Business*, ([smallbusiness.yahoo.com/advisor/power-now-marketing-trend-instant-gratification-175013514.html](http://smallbusiness.yahoo.com/advisor/power-now-marketing-trend-instant-gratification-175013514.html)) (accessed Mar. 2, 2018).

used.<sup>11</sup> Using algorithms to analyze that data also introduces the potential for bias, such as inequities in delivery service.<sup>12</sup> In addition, the new supply chain has shifted “last-mile” deliveries (the last leg from a distribution center to a package’s destination) from final destinations at stores located in centralized commercial districts to individual homes.<sup>13</sup> The resulting freight traffic in residential neighborhoods increases emissions, congestion, and wear on the infrastructure.<sup>14</sup> More shipments also produce more packaging waste.

For the workplace, e-commerce has allowed some sellers to reach more customers and increase merchandise choice.<sup>15</sup> However, in addition to witnessing several brick-and-mortar sellers closing, incumbent logistics companies may take a hit as larger online retailers such as Amazon expand into logistics and shipping, cutting into the businesses of carriers such as FedEx, UPS, and the U.S. Postal Service.<sup>16</sup> Workers also are faced with a shifting landscape. Some employees may find that these new jobs, such as work as a delivery person, have more flexible hours.<sup>17</sup> In addition, large distribution centers are creating jobs in recession hit areas. However, these jobs can be seasonal or part-time without many benefits.<sup>18</sup>

### III. WITNESSES

**Dan Sanker**  
CEO  
CaseStack

**Rob Taylor**  
CEO  
Convey

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<sup>11</sup> *Private Experts Alarmed as Amazon Moves into the Health Care Industry*, Washington Post (Jan. 30, 2018).

<sup>12</sup> *Amazon Doesn’t Consider the Race of Its Customers. Should It?*, Bloomberg (Apr. 21, 2017).

<sup>13</sup> See note 6.

<sup>14</sup> *Id.*

<sup>15</sup> *How to Beat 4 Big Challenges for Small E-Commerce Retailers*, Business News Daily (Dec. 19, 2017).

<sup>16</sup> *Amazon to Launch Delivery Service that Would Vie with FedEx, UPS*, Wall Street Journal (Feb. 9, 2018); *Shipping by Amazon May Cause over Half of Sellers to Switch*, Retail DIVE ([www.retaildive.com/news/shipping-by-amazon-may-cause-over-half-of-sellers-to-switch/517126/](http://www.retaildive.com/news/shipping-by-amazon-may-cause-over-half-of-sellers-to-switch/517126/)) (Feb. 15, 2018).

<sup>17</sup> *The Gig Economy; How to Get Your Side Hustle On*, Credit.com ([blog.credit.com/2018/03/the-gig-economy-how-to-get-your-side-hustle-on-181444/](http://blog.credit.com/2018/03/the-gig-economy-how-to-get-your-side-hustle-on-181444/)) (Mar. 1, 2018).

<sup>18</sup> *What Amazon Does to Poor Cities*, The Atlantic (Feb 1, 2018).

**Jonathon Johnson**

Board of Directors Member  
Overstock.com

**David Borris**

Executive Committee Member  
Main Street Alliance