

ONE HUNDRED FIFTEENTH CONGRESS  
**Congress of the United States**  
**House of Representatives**  
COMMITTEE ON ENERGY AND COMMERCE  
2125 RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515-6115

Majority (202) 225-2927  
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**MEMORANDUM**

**May 19, 2017**

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

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

**Re: Hearing on “Disrupter Series: Delivering to Consumers”**

On **Tuesday, May 23, 2017, at 10:15 a.m. in room 2322 of the Rayburn House Office Building**, the Subcommittee on Digital Commerce and Consumer Protection will hold a hearing titled “Disrupter Series: Delivering to Consumers.”

In recent years, delivery service providers have expressed interest in deploying automated devices that can make deliveries, including robots, drones, and autonomous vehicles.<sup>1</sup> These devices may be used to deliver food, consumer packages, personal mail, wholesale orders, and other items.<sup>2</sup> Some companies plan for their employees and automated delivery devices to work in concert, while others are building devices that operate autonomously.<sup>3</sup>

The United States Postal Service, logistics companies such as UPS and FedEx, retailers such as Amazon and Walmart, and individual technology companies are all exploring the use of automated delivery.<sup>4</sup> Starship Technologies, which makes small self-driving delivery robots, is

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<sup>1</sup> Stanford Value Chain Innovation Initiative and United States Postal Service Office of Inspector General, *Technological Disruption and Innovation in Last-Mile Delivery* (Jul. 2016).

<sup>2</sup> *Id.*

<sup>3</sup> *UPS Drivers May Tag Team Deliveries with Drones*, CNN (Feb. 21, 2017); *Watch Amazon’s Prime Air Make its First Public U.S. Drone Delivery*, Recode (Mar. 24, 2017).

<sup>4</sup> See note 1.

running pilot programs in California and Washington, D.C.<sup>5</sup> In 2017, Amazon completed its first public demonstration of autonomous drone delivery in the U.S.<sup>6</sup> Current Federal Aviation Administration rules, however, do not allow commercial drones to fly out of the operator's line of sight, over people, or at night.<sup>7</sup>

## I. EFFECTS OF AUTOMATION ON JOBS

Making detailed predictions about future job growth due to new technologies such as automated delivery is extremely difficult.<sup>8</sup> Experts generally agree that automation will create new jobs in highly-skilled and creative industries.<sup>9</sup> In contrast, low-skilled jobs (such as delivery couriers) may continue to be affected by automation, which can lower wages for some of these jobs and eliminates others entirely.<sup>10</sup> While only six percent of college-educated workers have jobs considered "highly-automatable," 44 percent of Americans without a high school diploma hold such jobs.<sup>11</sup>

More than one million people are currently employed as delivery couriers in the U.S.<sup>12</sup> An additional 364,000 people work as self-employed drivers for gig economy positions that include delivery services such as UberEats.<sup>13</sup> The Council of Economic Advisers estimates that the jobs of 20 to 60 percent of delivery drivers and 90 to 100 percent of self-employed drivers

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<sup>5</sup> *'Keep an Eye Out': San Carlos Becomes Third City in Nation to Offer Delivery Robots*, NBC Bay Area (Apr. 25, 2017).

<sup>6</sup> *Watch Amazon's Prime Air Make its First Public U.S. Drone Delivery*, Recode (Mar. 24, 2017).

<sup>7</sup> *Amazon's Dream of Drone Package Delivery Can Be Real In 'Less Than Five Years'*, Newsweek (Jun. 29, 2016).

<sup>8</sup> Executive Office of the President, *Artificial Intelligence, Automation, and the Economy* (Dec. 2016).

<sup>9</sup> *Id.*

<sup>10</sup> *Id.*

<sup>11</sup> *Id.*

<sup>12</sup> Bureau of Labor Statistics, Occupational Employment and Wages, May 2016, 53-3033 Light Truck or Delivery Services Drivers ([www.bls.gov/oes/current/oes533033.htm](http://www.bls.gov/oes/current/oes533033.htm)) (accessed May 16, 2017); Bureau of Labor Statistics, Occupational Employment and Wages, May 2016, 43-5021 Couriers and Messengers ([www.bls.gov/oes/current/oes435021.htm](http://www.bls.gov/oes/current/oes435021.htm)) (accessed May 16, 2017); Bureau of Labor Statistics, Occupational Employment and Wages, May 2016, 53-3031 Driver/Sales Workers ([www.bls.gov/oes/current/oes533031.htm](http://www.bls.gov/oes/current/oes533031.htm)) (accessed May 16, 2017).

<sup>13</sup> See note 8.

are threatened by automation.<sup>14</sup> The jobs of up to 1.7 million heavy and tractor-trailer truck drivers, who are not counted as delivery couriers, are also at risk.<sup>15</sup>

In a 2016 report, the Obama Administration recommended prioritizing initiatives that support workers affected by automation, including job retraining and apprenticeships, expanding access to STEM education, unemployment insurance, the Earned Income Tax Credit and Child Tax Credit, and raising the minimum wage.<sup>16</sup>

## **II. WITNESSES**

### **Dr. Harry Holzer, Ph.D.**

John LaFarge Jr. SJ Professor of Public Policy  
McCourt School of Public Policy at Georgetown University

### **Brian Wynne**

President and CEO  
Association for Unmanned Vehicle Systems International

### **Bastian Lehmann**

Founder and CEO  
Postmates

### **Shyam Chidamber**

Chief Evangelist  
Flirtey

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

<sup>15</sup> *Id.*

<sup>16</sup> *Id.*