

# IS E-COMMERCE ENVIRONMENTALLY SUSTAINABLE?

March 2017



## Is E-commerce Environmentally Sustainable?

E-commerce has more than doubled its percentage of total retail sales over the past decade, rising to 8.0% in 2016 (US Census Bureau). Thus, an increasing number of researchers are working to understand the environmental impacts of online sales. In fact, a study from the MIT Center for Transportation & Logistics has raised questions regarding the environmental sustainability of internet sales.

The study analyzed carbon footprints of online and traditional shopping methods, taking into account factors such as packaging, transportation (ground/air deliveries), and energy consumption. Ultimately, researchers found online shopping to be generally more sustainable than traditional retail. There are occasions, however, in which traditional shopping can be the “greener” approach. For example, the common practice of showrooming – visiting a store or stores in order to examine a product before buying it online – might be beneficial for price-conscious consumers; however, it can be costly for the environment.

Showrooming utilizes three of the largest drivers of carbon emissions within the shopping process: 1) consumer transportation (such as driving from store to store), 2) packaging for delivery, and 3) the use of expedited airfreight shipping. In effect, many of today’s online shoppers have a higher carbon footprint in large part because e-commerce retailers typically provide free expedited shipping while also offering a no-cost return policy, which necessitates repackaging/reshipping the product. While online shopping is convenient, efficient, and practical, it can also become an environmental burden under certain conditions.

Why is this important? Conditions are in place for e-commerce to flourish over the next decade, particularly as more Millennials emerge into the workforce. At the same time, investors, governments, and consumers are becoming increasingly aware of ESG (environmental, social and governance) issues. These two forces could lead to a more sustainable online sales industry in which retailers not only deliver high-quality products at a competitive price and in a timely manner, but also with a reduced impact to the environment.

## CREDITS & DISCLOSURES



**Dr. Will McIntosh**  
Global Head of Research  
Phone: 210-641-8416  
Email: Will.Mcintosh@usrealco.com



**John Kirk, CAIA, CCIM**  
Senior Associate, Research  
Phone: 210-690-6715  
Email: John.Kirk@usrealco.com



**Mark Fitzgerald, CFA, CAIA**  
Director, Research  
Phone: 210-690-6706  
Email: Mark.Fitzgerald@usrealco.com



**Ellie Newman**  
Rotational Analyst, Research  
Phone: 210-641-8442  
Email: Ellie.Newman@usrealco.com

These materials represent the opinions and recommendations of the author(s) and are subject to change without notice. USAA Real Estate Company, its affiliates and personnel may provide market commentary or advice that differs from the recommendations contained herein. Certain information has been obtained from sources and third parties. USAA Real Estate Company does not guarantee the accuracy or completeness of these materials or accept liability for loss from their use. USAA Real Estate Company and its affiliates may make investment decisions that are inconsistent with the recommendations or views expressed herein.

The opinions and recommendations herein do not take into account the individual circumstances or objectives of any investor and are not intended as recommendations of particular investments or strategies to particular investors. No determination has been made regarding the suitability of any investments or strategies for particular investors.

Research team staff may make or participate in investment decisions that vary from these recommendations and views and may receive compensation based on the overall performance of the USAA Real Estate Company or its affiliates or certain investment funds or products. USAA Real Estate Company and/or its affiliates or clients may be buying, selling, or holding significant positions in investments referred to in this report.