



Are Home Deliveries Increasing during the Pandemic? Update 8

Sorin Garber 3/8/2022

In this 8th quarterly edition of *Are Home Deliveries Increasing during the Pandemic?*, I am again providing the latest quarterly data on E-Commerce (retail) sales, development of warehouses and distribution centers for E-Commerce products, and the changes in employment of those handling, assembling, packaging, and delivering E-Commerce products.

I've been compiling and authoring quarterly updates to the [E-Commerce and Emerging Logistics Technology](#) report I prepared for PBOT since its completion in December 2019. And frankly I don't know what to research and write about anymore. The only evolving innovation that deserves attention is the way that cities are experimenting with different methods for accommodating e-commerce traffic, particularly at the curb. But I've already reported on that.

Do you have ideas for me?

I've continued to report on the growth and penetration of on-line retail sales by quarter, which has been particularly interesting during the pandemic, as well as the growth in development of local warehouse/flex space facilities, and statewide and regional E-commerce associated employment categories (i.e., warehouse/.storage workers, messengers/couriers) to accommodate this growth. (See following pages for 2019-2021 analyses.)

I've written about the:

- commodities that are purchased on-line, and the demographics of on-line consumers [E-Commerce and Emerging Logistics Technology Research Report \(portlandoregon.gov\)](#)
- means that on-line retailers have used to improve the on-line customer experience [0ec6cb_e06b4e26b261431ba37af70a6229a1ce.pdf \(filesusr.com\)](#)
- environmental impact of fast delivery and whether there's less impact with e-commerce than with in-store shopping [0ec6cb_d6faade54724edd8ae3e61f549d7397.pdf \(filesusr.com\)](#)

I've written about the logistical challenges of delivering specialized goods in small quantities to consumers representing every residential parcel in the community [0ec6cb_14a9e39487194e05bf70e9efa866cecd.pdf \(filesusr.com\)](#), as well as the:

- sustainable logistics practices being employed by shippers and carriers [0ec6cb_d6faaade54724edd8ae3e61f549d7397.pdf \(filesusr.com\)](#)
- different and emerging e-commerce transportation modes including cargo bikes, drones, and bots [0ec6cb_e06b4e26b261431ba37af70a6229a1ce.pdf \(filesusr.com\)](#)
- types of micro hubs and self-service delivery operations that are out there [Are Home Deliveries Increasing during the Pandemic? Update 2 | LinkedIn](#)
- impact of the global supply chain on E-commerce delivery [0ec6cb_14a9e39487194e05bf70e9efa866cecd.pdf \(filesusr.com\)](#)

I've surveyed carriers, shippers, and academics about the trends they are experiencing and expecting, and I've interviewed several cities that are experimenting with new methods for accommodating e-commerce traffic [E-Commerce and Emerging Logistics Technology Research Report \(portlandoregon.gov\)](#)

When I start my research each quarter I review Bureau of Commerce, Oregon Employment, and Colliers Industrial Market reports, as well as a wide variety of trade magazines, and academic journals and blogs. Lately, I'm not finding anything new.

While I wait for your ideas, I'm providing here my attest analyses of e-commerce sales, employment, and warehouse development during the fourth quarter 2021.

2021 Fourth Quarter and 2022 Year End E-Commerce Indicators

Once again, this past quarter showed:

- **E-Commerce Sales** – Grew by **45%** while in-store sales grew **17%** in comparison with the pre-pandemic year of 2019 (see Table 1).

An interesting change appeared in this year's 3rd and 4th quarters (found in Figure 1) – likely having to do with the increased number of vaccinated shoppers and the rise in shopper's comfort in shopping in stores – is the 14% to 15% increase in in-store sales from the 3rd and 4th quarters in 2020 to the 3rd and 4th quarters of 2021; which is one of the greatest quarterly increases for in-store sales on record.

Table 1. U.S. Retail Sales from 2015 to 2021 (in \$millions)

	2015	2016	2017	2018	2019	2020	2021
In Stores	\$4,355,510	\$4,440,876	\$4,629,973	\$4,832,078	\$4,869,041	\$4,835,541	\$5,717,885
Via E-commerce	\$342,788	\$395,870	\$454,093	\$529,810	\$601,531	\$789,946	\$872,727
Total	\$4,696,283	\$4,834,730	\$5,082,049	\$5,359,870	\$5,468,553	\$5,623,467	\$6,588,591
% E-commerce	7.0%	8.2%	8.9%	9.9%	11.0%	14.0%	13.2%

Source: Quarterly Retail E-Commerce Sales, US Dept of Commerce, <https://www2.census.gov/retail/releases/historical/ecomm/Z1q4.pdf>

Figure 1. Retail Sales – Wide Fluctuations in E-Commerce & In-Store Sales



Source: Quarterly Retail E-Commerce Sales, US Dept of Commerce, [21q4.pdf \(census.gov\)](#)

- E-Commerce Related Land Development.** As shown in Table 2, an additional 1.7 million square feet of industrial/manufacturing/warehouse development was added to the region in 2021, growing the total regional inventory to 254 million square feet of such space. Moreover, 12 million square feet is under construction; while a decline from the 2020 total of 16.8 million square feet, still an explosive increase. The overall vacancy rate declined from 4.9% to 4.0% from the third quarter of 2021 to the 4th quarter of 2021, which may have contributed, in part, to the 0.02 cent/square foot lease rate reduction.

Table 2. E-Commerce Facility Development in PDX Region

New Supply (in 1,000's of square feet)				
	1 st Qtr.	2 nd Qtr.	3 rd Qtr.	4 th Qtr.
2020	557	2,336	517	767
2021	1,302	314	90	37
Under construction (in 1,000's of square feet)				
	1 st Qtr.	2 nd Qtr.	3 rd Qtr.	4 th Qtr.
2020	6,272	3,785	3,830	2,932
2021	3,486	3,620	1,985	2,951
Vacancy Rate				
	1 st Qtr.	2 nd Qtr.	3 rd Qtr.	4 th Qtr.
2020	4.4%	4.2%	4.1%	4.8%
2021	5.1%	5.2%	4.9%	4.0%

Source: Portland Metro Industrial Report, Colliers International [21Q4 Portland Industrial Report 2822 \(3\).pdf](#)

- E-Commerce Employment** – As shown in Table 3, total statewide and regional private sector employment and retail jobs declined in 2021 from pre-pandemic levels, but relevant E-commerce delivery jobs (i.e., couriers, messengers, and warehouse and storage workers) showed continued increases both statewide and in the Portland/Vancouver region from 2019 to 2021. Courier and messenger jobs grew by the highest amount – 44.9% statewide and 42.1% in the region. Warehousing jobs also grew by dramatic levels including 40.7% growth statewide and 36.7% regionally from 2019 to 2021. Truck driver employment remained relatively constant which could reflect the national trend for unfilled truck driver jobs.

Table 3. Changes in Selected Employment Categories of Oregon and Portland Metropolitan Area, 2019 and 2021

	Oregon-Statewide			Portland / Vancouver Region		
	2019	2021	% Change	2019	2021	% Change
Private Sector Employment	1,655,800	1,588,500	(5.2%)	1,075,500	1,024,400	(4.8%)
Truck Drivers	18,958	19,200	1.3%	11,100	11,200	0.9%
Couriers & Messengers	10,558	15,300	44.9%	7,600	10,800	42.1%
Warehouse & Storage Workers	13,717	19,300	40.7%	9,000	12,300	36.7%
Retail	210,083	208,600	-0.7%	118,100	115,300	-2.4%

Source: Oregon Employment Department [Current Employment Estimates \(CES\) - QualityInfo](#)

What does this all mean?

As I have mentioned in each of my updates, there are few consistent trends about how E-commerce customers and suppliers are reacting to the pandemic that we can rely on, due to so many unprecedented global events dictating both product availability and customer confidence.

First and foremost is the contraction of the U.S. economy – which shrank 9.5% in the second quarter of 2020; the worst quarter decline ever – including the Great Depression when the economy shrank by 7.2% in one quarter¹. Further, the U.S. GDP shrank at an

¹ U.S. economy contracted at fastest quarterly rate on record from April to June as coronavirus walloped workers, businesses, Washington Post, Rachel Siegel and Andrew Van Dam, July 30, 2020, <https://www.washingtonpost.com/business/2020/07/30/gdp-q2-coronavirus/>

annual rate of 32.9%² in the second quarter, and the unemployment rate fluctuated between 11.1% and 14.7%³.

But then in the 1st quarter of 2021 we experienced an economic rebound with GDP increasing at an annual rate of 6.4%, and 4.3% in the 4th quarter of 2020 and the unemployment rate declined to 6.7%. Skeptics then might say: 'how much of this positive economic news is due to one-time stimulus payments to U.S. taxpayers?' And in the 4th quarter of 2021 we experienced the highest rate of inflation in 39 years!

Finally, we have near doubling costs of containers, a serious lack of needed employees, and a global pandemic, but retail sales are still through the roof.

In other words, we need to exercise caution when reviewing data and anecdotes about the changes in the retail sector during the pandemic before reaching conclusions about what the future will bring. Retailers have always innovated to outperform their competitors, and suppliers and carriers have always responded to their changing demands. We can be confident, however, that there are many more changes to come in the e-commerce delivery industry and what we ask of it

This is the eighth installment of updates to the study - [E-Commerce and Emerging Logistics Technology](#) - I prepared for the City of Portland, which also describes strategies employed by shippers and carriers throughout the U.S. and around the world to meet the fast-growing volume of ecommerce deliveries, and recommendations for how cities can work with industry to help manage the delivery traffic.

All of these updates are found on both my web site (www.sgapdx.com) and [LinkedIn site](#).



There is a wide range of data about ecommerce sales behaviors during the pandemic such as ecommerce sales by age group, ecommerce sales by commodity, ecommerce sales by company, and more.

If you are interested in learning more about these and other trends, or asking questions, or commenting on my answers, please contact me at sorin.garber@sgapdx.com

² *Gross Domestic Product, 1st Quarter 2021 (Advance Estimate) and Annual Update*, U.S. Department of Commerce, April 29, 2021, [Gross Domestic Product, First Quarter 2021 \(Advance Estimate\) | U.S. Bureau of Economic Analysis \(BEA\)](#)

³ *Unemployment Rates Seasonally Adjusted (USLAUS Tool)*, Quality Info. Org, <https://www.qualityinfo.org/ed>