



Supply chain trends and the potential impacts on Shippers and Carriers

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Areas of Discussion



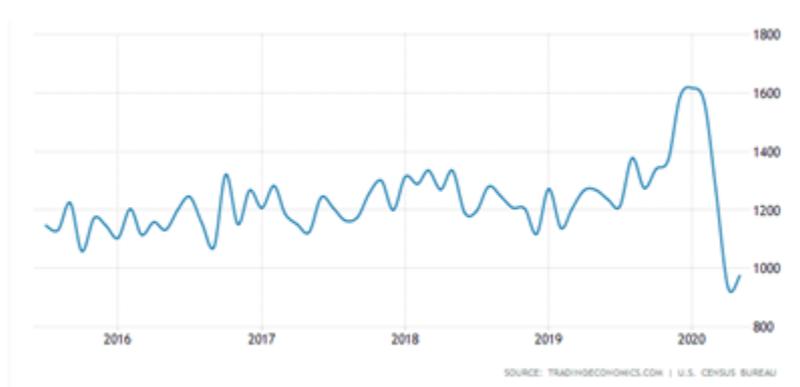
- Economic Trends
- Emerging Technology
- Transportation Security
- Driver Shortage

Economic Factors Influencing Rates

The below indicators help set overall demand and contracted rates

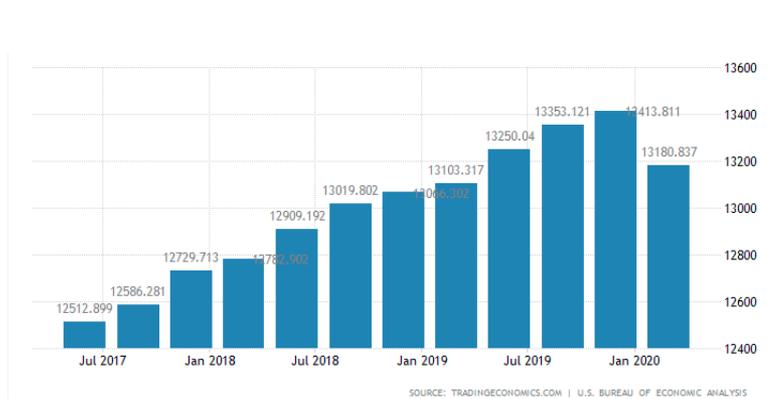


New Housing Starts – U.S.



<https://tradingeconomics.com/united-states/housing-starts>

Consumer Spending – U.S.



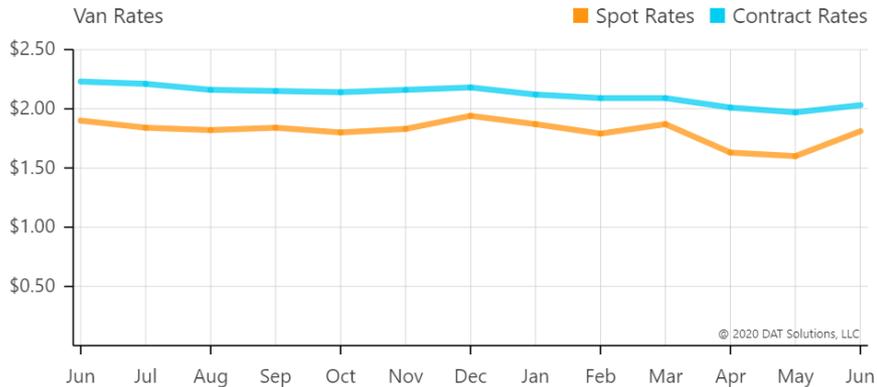
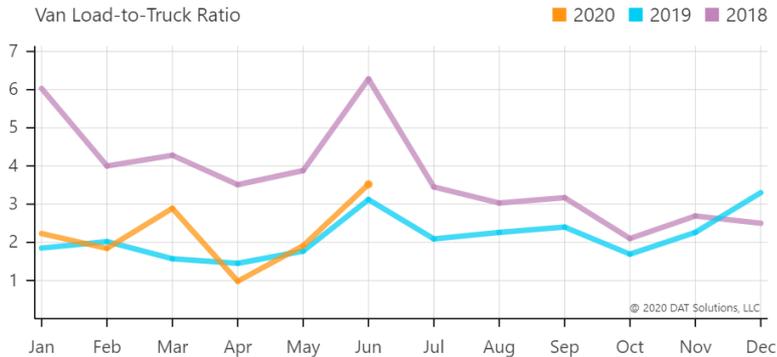
<https://tradingeconomics.com/united-states/consumer-spending>

Pre Covid we had historically low unemployment rates across North America

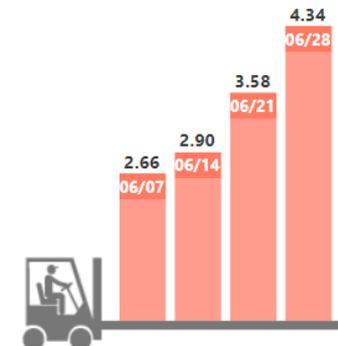
- US: 3.6%
- Canadian: 5.7%

One more factor impacting demand and rates is Inventory – but more on that in a moment

Capacity Trends



National Load-to-Truck Ratio



National Average Rates

USD



Source : [//www.dat.com/industry-trends/trendlines/van/national-rates](http://www.dat.com/industry-trends/trendlines/van/national-rates)

Inventory Levels



- Inventory levels and flow dictate a lot of the short-term demand for shipping. When interest rates are lower, the cost to hold inventory is lower and Just-in-time (JIT) delivery is not as cost effective.
- Warehouse space and access to rail lines are key contributors to competitiveness in low interest rate environments



Other factors that influence shipping rates and competitiveness



Other factors that influence competitiveness

- Geography
 - Proximity to end consumers
 - Proximity to other major markets (ideally 400 – 500 miles)
 - Proximity to the U.S. border
- Mode accessibility (OTR, Rail, Air, Ocean)
- Access to Warehousing Space or Distribution Centres
 - Heightened Awareness of Onshoring/Nearshoring
- Access to Labour

Emerging Technology



- Ecommerce
 - Being able to connect your customers 24/7 and offer them delivery solutions that meet their diverse needs
- Big Data
 - Capturing trends to look at what the next evolution of service needs to look like to remain competitive (e.g. home delivery services)
- Artificial Intelligence
 - Looking beyond automating functions, how do you enable decision making capability that evolves as more data inputs are captured (e.g. network optimization)
- Omni Channel Solutions
 - How do you reverse what you can offer customers to see how they want to manage all of the data they get from their various suppliers (e.g. ubiquitous tracking solutions)

Transportation Security – One of the top industry concerns for 2019/2020



Cargo Theft trends: <https://www.ttnews.com/articles/cargo-thefts-down-14-q2-food-beverages-most-targeted> – august 22, 2019

- CargoNet also noted a resurgence of “fictitious pickup activity,” when property is taken by people posing as pickup agents.
- CargoNet reported fictitious pickups dropped slightly in the second quarter but were still common. CargoNet recorded fictitious pickup thefts in California, Ontario, Quebec and Florida in the second quarter.
- Food and beverage products were the most stolen commodity of the second quarter and grew when compared with the second quarter of 2017 and the second quarter of 2018. In the food and beverage category, meat products and alcoholic and nonalcoholic beverages were the most commonly stolen goods.

Transportation Security – One of the top industry concerns for 2019/2020



Security concerns are now focusing on the truck electronics

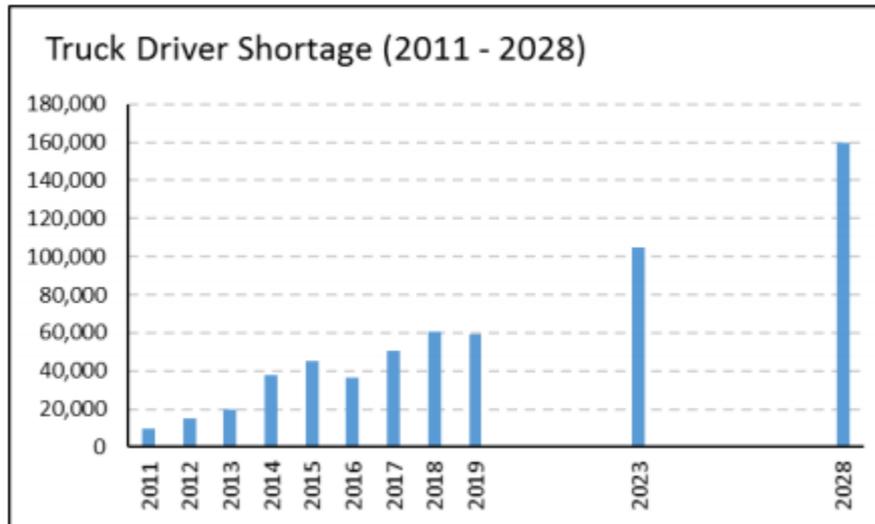
From: <https://www.ttnews.com/articles/could-truck-electronics-be-next-cybersecurity-threat>

- An attacker could conceivably “hide” a piece of malware or other corruption code in a USB drive. In one scenario, the hacker, using the J1939 bus as the connection path, could potentially plant malicious code in the ECM. Unbeknownst to the driver, when a thumb drive is inserted to download the ELD data for the inspecting officer, the malicious code could upload to the ECM. As the thumb drive goes from truck to truck collecting ELD data, the malicious code, if undetected, infects more and more ECMs.
- If the malware was such that it was timer-activated, it could shut down countless vehicles at the same time.
- In some instances, small fleets that have recently deployed ELDs “may be bringing a networked device into their operations for the first time with little or no means to administer it,” he said. “Small fleets that are using public cellular networks and public WiFi networks are the most vulnerable. They will be wholly dependent on their vendor.”

Driver Shortage



U.S. truck driver shortage will hover around 60,000 for 2019, but is expected to steadily worsen over the next 10 years



From:

TRUCK DRIVER SHORTAGE ANALYSIS 2019

Bob Costello Chief Economist & Senior Vice President American Trucking Associations

Alan Karickhoff Research Analyst American Trucking Associations

Published July 2019

Driver Shortage – Main Reasons



- Age – Median age of a truck driver is 46 (compared to 42 for all U.S. workers)
- Gender – Only 6.6% of truck drivers are female (20 years ago it was 4.5% – so not much growth)
- Lifestyle – it's a tough job that requires drivers to be away from home for a long period of time (so it's more than a job, it's a lifestyle (and it does not fit with everyone's desires).
- More Job Alternatives – With such low unemployment, there are many new jobs that were not always hiring that are alternatives for drivers, with a lot of them that come along with a lifestyle that fits.
- Regulations – New Regulations (like ELD) have a direct impact to the capacity of trucking, where it requires more trucks and drivers to move the same amount of freight.

Taken From: "TRUCK DRIVER SHORTAGE ANALYSIS 2019", Bob Costello Chief Economist & Senior Vice President American Trucking Associations and Alan Karickhoff Research Analyst American Trucking Associations, Published July 2019

Driver Shortage – Electronic Logging Devices (ELDs)



- ELD mandate in Canada starts June, 2021.
- It is estimated that even after the ramp up for the U.S. regulations, there are still over 15% of Canadian regulated trucks that are not ELD compliant