



Collaborative Transportation – The Antidote to Freight Market Volatility

Introduction

As one of the largest and most critical industries to the health of the U.S. economy, long-haul trucking, with its outdated approaches, is due for a much-needed overhaul. Trucks are an essential part of our day-to-day, but for the most part, we take them for granted. In an era where e-commerce is growing faster than we can predict, the industry's challenges are becoming more and more apparent.

So what exactly are these challenges and what do they mean for the future of long-haul trucking?

1. Lack of transparency:

There is very little active collaboration among the key participants in the long-haul trucking market. A climate where carriers, shippers, and brokers don't communicate with each other, leads to a lack of transparency and difficulty in finding common ground.

2. Changing trucking regulations:

Many trucking regulations have changed between 2016-2019, creating additional complexities in the space. The most impactful of these extensive changes is the ELD mandate. With the implementation of this mandate, carriers reported decreased productivity and increased costs of regulatory compliance ([source](#)).





3. Rising costs:

A tight labor market has led to higher driver-based costs in the industry. In order to retain drivers, trucking companies have consistently needed to raise wages paid and increase benefits provided to keep truckers happy and on the road. That, in addition to the ever-fluctuating cost of fuel, leads trucking industry costs to be volatile.

4. Demand Volatility:

Above market dynamics, coupled with macro-economic shifts, global events and the COVID-19 pandemic, international trade dynamics, and regulatory changes have created a freight marketplace that is extremely volatile in terms of freight to be moved (demand) and carrier capacity availability (supply).

5. Freight Rate Volatility:

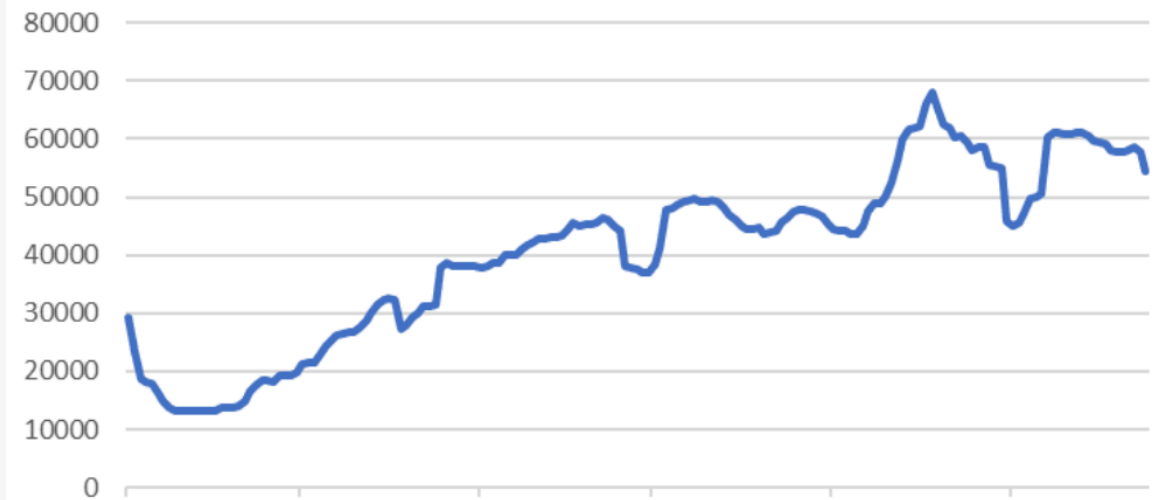
Freight is more complex than just a simple demand and supply equation, and the dynamics of any freight lane within any given day causes the rates to swing dramatically from hour-to-hour, day-to-day, week-to-week. Shippers, digital brokers, and carriers often perpetuate volatility with dynamic pricing approaches; as market demand goes up in certain lanes, carriers move their equipment to those lanes where they are likely to get higher prices, which creates capacity scarcity in other lanes and causes prices to rise.

Deep Dive into Volatility

To get an idea of the volatility, let's review data published in 2020 by DAT, showing one representation of volume for dry vans. Clearly, the pendulum swing has become much more frequent, driven by a variety of factors, such as:

- ELD regulations that came into play in 2017/2018 led to constraints on carriers and drivers, in addition to driver demographic changes and a driver shortage.
- US and China trade dynamics led to a trade war in 2019, along with tariffs and incentives, which were put in place to drive offshoring, onshoring, or reshoring decisions.
- COVID-19 created major disruptions in the economy, and extreme spikes in the supply and demand of consumer goods that resulted in significant freight volatility.
- Growth of e-commerce, impacted greatly by increasing customer demand for home delivery during the COVID-19 pandemic. E-commerce shows no signs of slowing down and will continue to have a tremendous impact on the freight marketplace as consumers continue to demand faster delivery times.

7 Day Rolling Average - Spot Market Volume 2020



Published by DAT



Shipping Realities

Though volatility will cause capacity needs to vary among shippers, there are three traits that all shippers, regardless of industry, share when it comes to capacity needs:

- Shippers are always looking for reliable, high quality capacity
- Dependable access to capacity when and where they need it
- Capacity must be cost-effective, preferably with predictable pricing to adhere to their transportation budgets

The need for reliable, consistent, and cost-effective capacity has led to a rise in new digital freight models. According to a recent [report from Gartner](#), the digitized freight network (DFN) is the most common freight model for road transportation. These DFNs provide an alternative to traditional brokers, load boards, and the spot market, which remain time-consuming and collect information from carriers and shippers, but don't support true collaboration. They are helpful to companies looking for real-time available capacity during a crunch, but don't adequately address the aforementioned need for reliable, consistent, and cost-effective capacity.

The Rise of Private and Dedicated Fleets

To locate reliable, consistent, and effective capacity, companies are increasingly turning to contracted relationships over transactional, opportunistic freight agreements. This trend has led to a rise in the use of private and dedicated fleets.

As of this writing, according to the American Trucking Association, 53.3% of all fleets in the United States are private, for a total of about 620,000. Studies also show that the average truck count for a dedicated fleet versus one-way truckload is growing, and will likely continue to do so for the next few years, as presented in Exhibit 1.

We're also seeing that an expanding network of locations, distribution centers, e-commerce fulfilment centers, and close-to-consumer fulfilment centers is driving demand up in the short to mid-haul market. This trend is furthering the adoption of private and/or dedicated fleets as manufacturers and retailers alike struggle to rapidly get goods into their consumers' hands or on a retail shelf. The need to ensure product availability shows no signs of slowing down, which means that the need for more short-to-mid-haul routes will continue to grow.

Exhibit 1

Carrier	Average Truck Count		
	2017	2018	% Change
Marten	1,837	1,613	-12.2%
Schneider	7,930	7,651	-3.5%
Swift	9,419	7,484	-20.5%
U.S.Xpress	3,788	3,562	-6.0%
Universal Truckload Services	1,950	1,787	-8.4%
Werner	3,484	3,345	-4.0%
Total	28,408	25,422	-10.4%
	Weighted / Simple Average		-9.1%
Carrier	Dedicated Truckload		
	2017	2018	% Change
Marten	847	1,088	28.5%
Schneider	3,930	3,917	-0.3%
Swift	3,089	3,058	-1.0%
U.S.Xpress	2,440	2,701	10.7%
Universal Truckload Services	960	1,038	8.1%
Werner	3,822	4,277	11.9%
Total	15,088	16,079	6.6%
	Weighted / Simple Average		9.6%



Private and Dedicated Fleets - Side by Side

Private and dedicated fleets are very similar, but do have a difference.

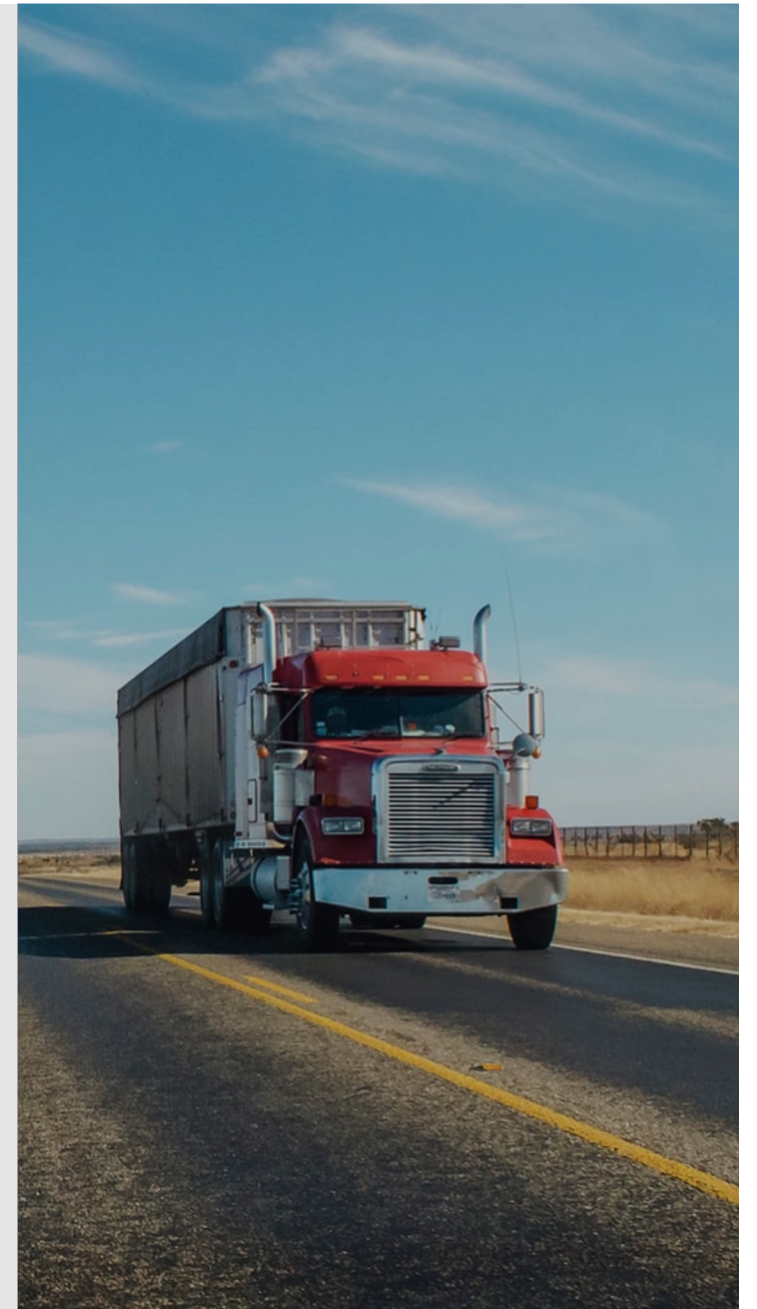
- A private fleet is a trucking operation run by a business whose primary purpose is not trucking, take Coca-Cola, for example. Coca-Cola is a soft-drink manufacturer, but their operation is so large they run their own trucking company to distribute their beverages throughout the country.
- A dedicated fleet is run by a company whose sole purpose is trucking. It is generally operated by a carrier or logistics provider that owns or leases a set of tractors, trailers, and drivers. These resources are assigned exclusively for shipping operations serving a set of facilities or lanes in a set transportation network, that are then hired by a shipper.

To better understand why shippers are trending towards private and dedicated fleets, it's important to take a look at the benefits both provide, which outlines just how similar both models truly are.

Private Fleet	Dedicated Fleet
Guaranteed Capacity: You control your fleet, which means you have control over capacity.	Guaranteed Capacity: Dedicated transportation provides capacity when you need it without the capital investment in equipment and drivers.
Fleet Customization: You can shape your fleet based on current needs while also planning and implementing changes for the future of the company.	Equipment Access: A dedicated fleet will have a variety of equipment available to suit shipper needs as they arise.
Driver Loyalty: Working with a private fleet often means drivers have a better quality of life, which means they stick around for the long-haul.	Reliable Operations: With no other freight loaded on the truck, shipments are delivered on time with consistency.
Better Customer Service: With drivers that are imbued with the company philosophy, they provide better customer service when out on the road interacting with your customers.	Scheduling Control: You'll be the priority, so you don't have to navigate conflicting contracts that affect your schedule.
Flexibility: If a last-minute shipment request comes in, a private fleet has a better chance of getting it out in time.	Predictable Budgeting: For the duration of your contract, the only pricing differentiation will be caused by fuel prices, the rest is predetermined.

Private and Dedicated Fleets Struggle with Empty Backhaul Miles and Underutilization

The use of private and dedicated fleets is helping to address the need for reliable, consistent and cost-effective capacity, but the model isn't perfect. We've established that working with a private or dedicated fleet grants shippers access to reliable and predictable capacity, but it comes with significant up-front costs and other challenges — underutilization, empty backhaul miles, and lack of flexibility. As more and more shippers turn to private or dedicated fleets, we're seeing more and more empty backhaul miles, which translates to significant lost opportunity.





Past approaches have been unsuccessful to increase Private and Dedicated Fleet utilization and backhaul revenues

Driving an empty truck on a return trip not only results in lost revenue, it also makes it difficult for shippers to achieve the sustainability goals many of them have set. Some fleets do attempt to use a variety of resources to locate backhaul loads to create revenue and cover operational costs, but they aren't always successful. Others don't even attempt to look for backhaul opportunities because the act of finding them, contracting them, and then managing it all can be too cumbersome and time-consuming. For most private and dedicated fleets, finding an appropriate backhaul lane to fit their needs can seem like more trouble than it's worth. The concept of utilizing truck space on the return journey to recoup costs isn't a new one, but the reason it hasn't worked in the past is because of common logistical challenges:

- Shaping and sourcing demand for available supply in specific shipping lanes
- Collaborating outside of existing relationships
- Honoring existing financial and contractual relationships
- Lack of transparency within the industry



Beyond Private and Dedicated Fleets, One-way Transportation has its share of inefficiencies:

- Shippers want reliable partners in order to meet their service level agreement (SLA).
- To do so, they go through bidding, and sign long-term contracts in an attempt to guarantee reliability.
- Then, at some point, market volatility leads to higher spot market prices, which means:
 - Carriers move their trucks to the spot market—rejecting shipper loads even when they have long-term contract-based partnerships.
 - Shippers are forced to send their loads to the spot market and to work with unknown partners, which means they cannot rely on the service levels they thought they would get with their long-term carrier partners.
 - Shippers end up paying higher prices, which means they exceed their budget.
 - When the reverse occurs, and there's a spot market crash, carriers simply start accepting more of the shippers' loads against contracts—to the point that shippers don't get the benefit of low spot pricing (because they are not set up to chase prices, they originally signed long-term contracts to get stable prices and service), but they have no choice but to pay those higher prices.

A Vision for the Future

What if shippers could get dependable one-way capacity, lower costs, and sustainable relationships? Imagine having the benefits of a dedicated fleet with the flexibility of one-way carriage, without the fixed cost and underutilization associated with dedicated fleets.

What if the empty legs in shippers' dedicated or private fleets become available capacity for other shippers to generate revenue to offset the costs of those fleets?

What if carriers could get fully loaded miles and guaranteed minimums, without any risk, and with access to the growing ecosystem demand?

A new digital freight model - the Collaborative Transportation Platform - is making it all possible.

Collaborative Transportation Platform

According to Gartner, Collaborative Transportation Platforms “are focused around connecting multiple shippers through their platform to strategically drive efficiencies through reduction of empty miles or higher usage of backhauls based on insights into shippers’ orders and freight rate.”

Collaborative Transportation Platforms help shippers and carriers keep their trucks full by identifying and connecting them with shippers seeking regular capacity in their specific freight lanes, without the need for dynamic pricing.

SemiCab is currently the only vendor in North America to be categorized by Gartner as a Collaborative Transportation Platform.

SemiCab—A New Approach

SemiCab is a Collaborative Transportation Platform that utilizes Predictive Optimization™ technology to create Virtual Dedicated Capacity. This model provides all the benefits of dedicated capacity for one-way carriage—quality, service levels, stable pricing—with the flexibility of a one-way lane-based model. It also drives monetization of empty legs in shippers' dedicated and private fleets to offset the cost of such fleets. SemiCab's Predictive Optimization™ algorithm aggregates one-way loads across shippers in the ecosystem and creates virtual dedicated capacity for that demand, sourced from high-quality carriers and shippers' private/dedicated fleets. SemiCab enables shippers to access highly efficient, reliable and stable capacity at predictable prices.

SemiCab—At Work

1. By connecting to an existing enterprise TMS where loads are being generated, we feed the load data to our machine learning model to predict future loads by lane and by domiciles.
2. We aggregate demand across all shippers', brokers', and 3PLs' one-way loads—both current and predicted; similarly, we aggregate supply across all one-way carriers, as well as the dedicated and private fleets operating within our platform.
3. We deploy our unique predictive and continuous optimization on that supply and demand to create highly efficient capacity, benefitting both shippers and carriers.

SemiCab—Results

When a shipper, carrier, or broker joins the SemiCab ecosystem, they gain transparency into the network, and realize the benefits of higher efficiencies, predictable prices, and lower risk.

SemiCab Value

- Shippers achieve higher private/dedicated fleet utilization - up from 50% to 75%-80%, resulting in higher backhaul revenues
- Shippers, 3PLs, and brokers get access to highly efficient one-way capacity resulting in 4-6% in annual freight cost savings
- Carriers increase revenue by as much as 10% as empty miles are monetized and they become more efficient
- As empty miles are eliminated and trucks are better utilized, the industry's carbon footprint is reduced

SemiCab's Collaborative Transportation Platform – A Differentiated Model

With SemiCab, everyone benefits—shippers pay less while having access to reliable capacity, carriers are more profitable, our carbon footprint is reduced, and trust is built across the entire transportation network. The SemiCab business model is different from all digital freight models currently in the market. It provides enhanced efficiency with a focus on equity for all participants, be they shippers, drivers, or carriers.

We unite supply and demand on a single platform, and provide all users the same visibility into loads. All members of the SemiCab ecosystem can bring in demand and supply, which allows the platform to increase the efficiency of the network as a whole. This provides equal footing between all parties involved.

SemiCab is the Collaborative Transportation Platform designed to create next generation efficiencies in transportation through virtual dedicated capacity. This is a future worth getting behind. [Join us.](#)

