



The Future of Long-Haul Trucking Has Arrived

A look at the long-haul trucking industry's greatest challenges and solutions to addressing them



Contents

- Market Overview
- Market History
- Market Challenges
- A Survey of Current of Efforts to Address the Challenges
- The Future: SemiCab's Digital Freight Ecosystem



US spending on over-the-road trucking is over \$700 billion

More than \$600 billion of that is spent on FTL (full truckload) shipping

TRUCKING IS ONE OF THE
LARGEST INDUSTRIES IN THE U.S.

71%

Of the U.S. freight by weight is moved by trucks.

297.6 Billion

Miles are driven annually by all registered trucks in the U.S.

3.5 Million

People work as truck drivers, by far the most common job in America.

Market Overview

The trucking industry consists of three key roles - Shippers, Carriers and Brokers. Understanding them will help to highlight inefficiencies and opportunities within the market.





Shippers

Shippers create the shipping demand. These are the companies that need products moved. They can be manufacturers, wholesalers, and retailers like Target, Walmart, and Nike, as well as Logistics Service Providers (3PLs). 11.49 billion tons of freight (primary shipments only) were transported by trucks in 2018.

Source: https://www.trucking.org/News_and_Information_Reports_Industry_Data.aspx



Carriers

Carriers supply the demand. These can be large carriers with their own fleets for hire, independent contractors, or owner/operator truck drivers. There are more than 3.5 million truck drivers and most of these drivers and trucks are associated with one of the almost 900,000 carriers in America. 91.3% of carriers have fewer than 6 trucks in their fleet, and 97.4% operate fewer than 20 trucks, resulting in a uniquely fragmented carrier market.

Source: https://www.trucking.org/News_and_Information_Reports_Industry_Data.aspx



Brokers

Brokers act as intermediaries between shippers and carriers. They ensure products are moved as needed by matching loads (demand) with drivers (supply). There are more than 15000 active licensed brokers registered in the US. The US freight brokerage market is fragmented in nature with the presence of large regional players, global players, and small-to-medium sized local players.

Source - <https://www.freightwaves.com/news/when-freight-brokerage-revenues-plateau-and-what-to-do-about-it>

Market History and Recent Trends

Semi-trucks are a common sight today, but there was a time when it was rare to see a large truck on the road.



Early 1900s

The first trucks were introduced in the early 1900s. These trucks faced many obstacles – paved roads were few and far between, and trucks traveling then had solid rubber tires. This made trips very rough and slow. It took a whole month for a truck to drive across the US!



During WW I

Truck use expanded during World War I. The military relied on trucks extensively, and manufacturers improved engineering to make vehicles appropriate for combat. Many advancements were passed down to trucks being used for freight transportation.



1910-1930...

Trucking began to achieve a significant foothold after the war as the number of paved roads increased. From 1910 to 1930, the number of trucks on the road increased by about 320,000.



1930-1940...

As the trucking industry grew, it became more regulated. The hours of service (HOS) regulation was introduced in 1938 and the Motor Carrier Act was introduced in 1935.



1950-1960...

Trucking continued to grow when the Interstate Highway System was created in the 1950s and 1960s. The new system allowed big trucks to travel at higher speeds across the country.

2018 saw record-setting levels of freight-hauling demand and driver pay, as tonnage levels reached a 20-year high.

Market History and Recent Trends (continued)



1960-1980...

Trucking achieved national attention during the 1960s and 70s as songs and movies about truck driving became hits. Truck drivers participated in widespread strikes against the rising cost of fuel during the energy crises of 1973 and 1979. The industry was drastically deregulated by the Motor Carrier Act of 1980.



1990s

At the end of the 20th Century, trucking began to dominate the freight industry as "big-box stores," such as Walmart and Target, began to boom. The growth of these stores dramatically impacted the flow of goods being transported.



Early 2000s

The Federal Motor Carrier Safety Administration (FMCSA) published the final electronic logging device rule, or ELD Mandate, in December 2015. ELDs are now used to electronically record a driver's Record of Duty Status (RODS) and ensure compliance with Hours of Service (HOS) requirements. This became a mandate in December of 2017.



2015-2018...

2018 saw record-setting levels of freight-hauling demand and driver pay as tonnage levels reached a 20-year high. Through November 2018, the total freight hauled by for-hire truck drivers was 7.2% more than the first 11 months of 2017.



2019-2020

The American Trucking Association (ATA) estimates that the industry is currently short more than 50,000 drivers, which continues to stress the industry and drive up prices.

Market Challenges

Even as one of the country's largest and most lucrative industries, long-haul trucking faces many challenges. What are these challenges and what do they mean for the future of long-haul trucking?

Highly fragmented market

There is close to no collaboration in the long-haul trucking marketplace. 90% of carriers have fewer than 6 trucks in their fleet, and 50% of carriers are owner/operators. And the fragmentation doesn't stop there, it extends to brokers as well. In fact, freight brokerage is the most fragmented part of the trucking industry, with the top 20 brokers accounting for less than 4% of total revenue.

Lack of transparency

To optimize their own business objectives, the three key players in this market tend to work in isolation. A perceived lack of common interest leads to low collaboration and mistrust among carriers, shippers, and brokers. Lack of technology facilitating network-wide collaboration leads to an industry where the key participants often don't proactively communicate, leading to a continued cycle of isolation.

Limited use of technology

The shipping industry has seen very little innovation over the years. While the last few years have seen some platform-wide efforts, they have been restrictive in their vision and largely focused on matching loads with drivers. Carriers, brokers, and shippers still use manual communication methods as their main way of interacting, which is slow, inefficient, and difficult to track. In fact, 67% of shippers still rely on paper records.

Market Challenges (continued)

Rising costs

Driver-based costs are the main factor contributing to rising costs in the trucking 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 unpredictable and often volatile.

Environmental concerns

The long-haul trucking industry is responsible for pumping 300 million metric tons of CO₂ into the environment in the US alone. According to the Environmental Defense Fund, trucking, along with air and water-based transport, accounts for 16% of all corporate greenhouse gas emissions. Considering many of the miles leading to this pollution are empty, making a change is crucial, now more than ever.

Changing trucking regulations

Many trucking regulations have changed between 2018-2019, creating operational and compliance challenges. The most impactful one being the ELD mandate. With the implementation of the ELD, small truck carriers reported decreased productivity, leading larger carriers to worry they would suffer the same fate. HOS regulations place additional strain in an industry already saddled with extreme fragmentation, cyclic business volatility, and a general mistrust among participants.

What does it all mean?

The fragmented state and historically volatile nature of trucking means the industry has invested mostly on short-term and inefficient solutions.



Efforts to-date to address market challenges

The industry has spent most of its efforts on short-term survival and profitability struggles, instead of investing in technology and solutions for long-term growth and advancement. Limited attempts to create solutions for the industry have focused singularly on one segment or the other, ignoring the real issues such as, industry-wide inefficiency, lack of collaboration, and zero transparency.

Digitization of legacy approaches

Few attempts have been made to utilize current technology, but they have been primarily focused on market-price based automated matching of individual point-to-point spot loads, not on network efficiency. Companies like Transfix, Convoy, and UberFreight primarily find carriers for spot loads not fulfilled by shippers' contracted carriers. While they do provide visibility for individual loads managed through their solutions, they typically do not have visibility to all loads, truck locations, and driver availability—minimal requirements needed to optimize the entire network.

Siloed approaches

While several providers have discussed or attempted to apply optimization techniques in the trucking industry since the 1950s, relatively little progress has been made. This is due to the complex nature of the industry and its fragmented state. Many efforts have focused on optimizing specific verticals of the industry—shippers, carriers, and brokers. But no one has been able to attain the holy grail of creating a platform that creates transparency across the entire industry.

Clearly, the industry is due for a much-needed overhaul.

The way ahead: Collaboration and Value-sharing

Even with varying business objectives, carriers, shippers, and brokers can all benefit from working together. The industry needs to connect around an ecosystem that unifies the discrete elements of the shipping process. SemiCab is that ecosystem.

By identifying and tackling the challenges outlined earlier, the SemiCab platform facilitates communication, enables collaboration, and brings transparency to the industry.

Shippers benefit from increased capacity and lower costs, and carriers and drivers experience reduced risk and guaranteed profitability. And the impact will reach far beyond the network itself.



The way ahead: Opportunity



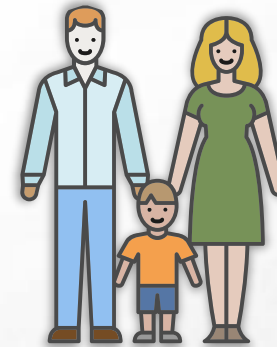
The Economy

Reducing empty miles by half will create \$50B of new economic opportunity.



The Environment

Converting empty miles to loaded miles will create additional capacity to meet the growing demand without the need to add more trucks and tons of CO₂ to the environment.



The Society

More than 3.5 million people work as truck drivers. The SemiCab optimization model allows carriers and drivers to specify the amount of time they want to be on the road to get them home when they need to be there—vastly improving the quality of life for millions of drivers and their families.

THE SEMICAB PLATFORM

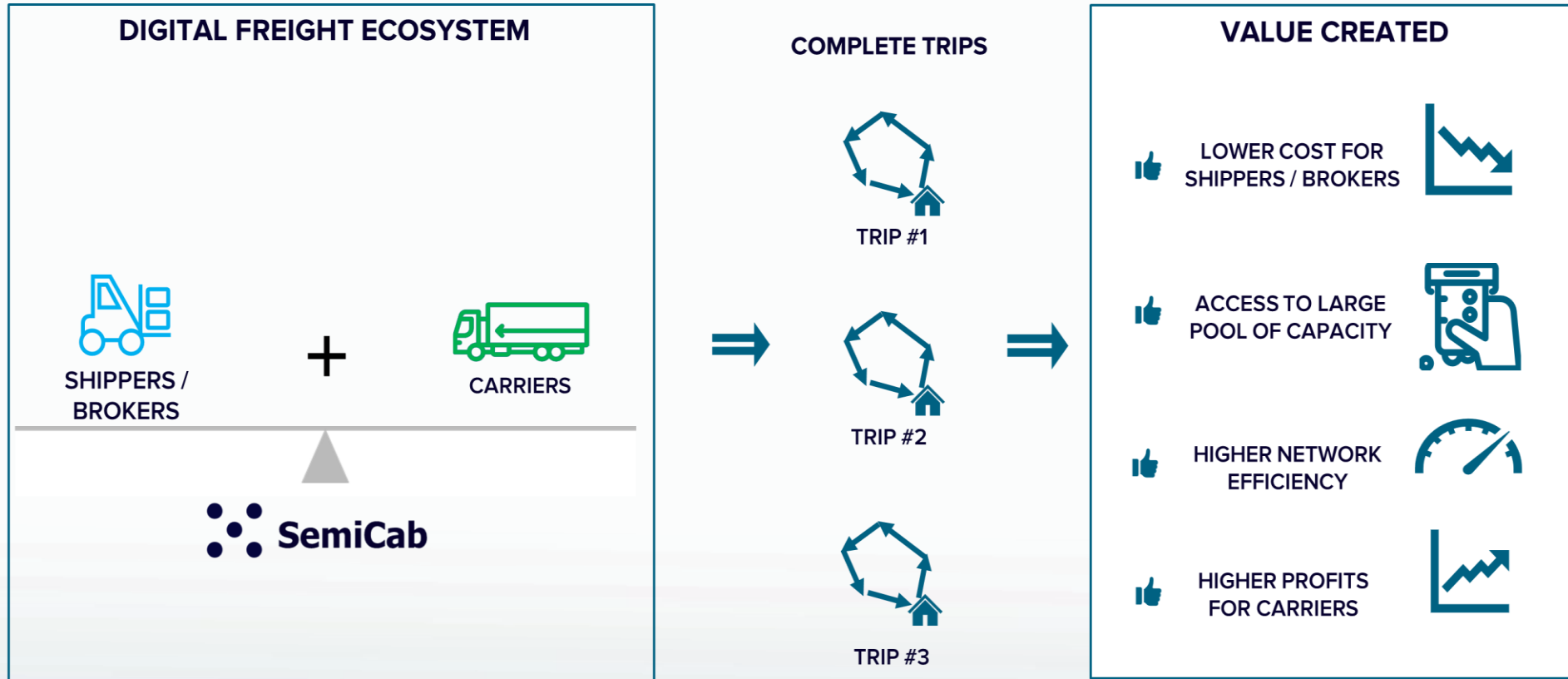
Shippers, carriers, and drivers on the SemiCab platform are effortlessly eliminating empty miles and sharing the value created.

The result?

Increased capacity and lower costs for one, reduced risk and greater profitability for others.



SemiCab Overview



THE SEMICAB PLATFORM

Our platform does the heavy lifting, so you don't have to.

SemiCab Overview (continued)

- A digital ecosystem of shippers, brokers and carriers
- Creates net new value in the network by eliminating empty miles
- Value sharing so everyone wins
- Natively enables collaboration, transparency, and visibility
- Pre-built Integrations with industry leading shipper and carrier TMSs as well as ELD providers



Moving. Forward. Together for the long haul

After a massive uptick in the market, the trucking industry is once again experiencing a cool down. There isn't a clear explanation for the current slowdown, but one contributing factor can be linked to the fact that when demand was high, trucking companies decided to purchase new trucks and hire new drivers in anticipation of profits to come. Supply is now catching up to demand, prices are leveling out, and these costly investments are proving hard to pay off.

The vicious cycle continues. The time to act is now. Converting empty miles to loaded miles is an approach that will create a stable healthy market that yields value for all.



A nighttime photograph of a city skyline, likely New York City, featuring several prominent skyscrapers. The Empire State Building is visible on the left, illuminated with warm lights. To its right is a tall, dark building with a bright blue-lit top section. Further right is another skyscraper with a distinctive spire, and on the far right, a building with a white, illuminated top. The sky is a deep twilight blue, and the city lights create a vibrant contrast against the dark background.

Join the revolution at:
www.SemiCab.com