



The Uberization of Freight? Perhaps – But It Will Be a Long Haul

The success of ride-sharing service Uber has led both business thinkers and hopeful venture capitalists to gleefully predict the “Uberization” of a whole host of industries, from healthcare to food delivery. One sector that many have hailed as a slam dunk for Uber-like disintermediation is the trucking industry. After all, trucking is essentially about getting cargo from point A to point B, just like the taxi industry. Based on this logic, a lot of money has already gone into startups seeking to replicate Uber’s success in this space. Indeed, Uber itself, with the recent launch of Uber Freight, has indicated that it believes it can use its model to transform the trucking industry.

But we believe the enthusiastic prognostications about the disruption of this market may be a bit hasty. The differences between taxis and trucking are far greater than they seem at first blush — and those very differences are what make the freight-hauling industry a poor candidate for Uberization, at least in the form that has transformed the taxi industry.

Conditions for Uberization

According to the disruption argument, the right technology platform would be able to replace the role of the dispatcher by automating the matching of shipments with trucks, much as taxi dispatchers have been sidelined by Uber. This disruption would be felt most acutely by brokers, whose sole purpose is matching shipments with trucks. These brokers can charge a fairly hefty markup fee for their services, so an automated platform potentially could have a significant impact on the overall cost of shipping.

But a number of conditions need to be present in order for an Uber-like model to be successful (see Figure 1). Let’s examine how each of these play out for the taxi versus the trucking industries.

Some of the conditions that make Uberization attractive are certainly present in the trucking industry:

Technology has the potential to make industry processes more efficient. When an industry is slow to embrace technology, it is often a sign that significant transformation can be achieved with the right innovations. Uber’s platform took the taxi industry by storm, replacing the inefficient phone-based dispatch system with an easy-to-use smartphone app that matched riders with nearby drivers. It also made the processing of payments both seamless and accurate.

The Uberization of Freight? Perhaps — But It Will Be a Long Haul was written by **Aaron Smith** and **Alan Lewis**, Managing Directors, and **Neil Menzies**, Manager, at L.E.K. Consulting. Aaron and Neil are based in San Francisco, and Alan is based in Boston.

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Figure 1
Trucking / Taxi industry (pre-Uber) comparison

	Trucking industry	Taxi industry (pre-Uber)
Technological unmet need	Widespread manual processes (e.g., physical load board and phone calls)	Manual matching of riders and drivers
Artificial supply constraints	Driver certification and regulatory approval restrict driver supply (current shortage of ~70,000), and the profession is seen as less desirable	Driver supply restricted by medallion permits despite having access to massive levels of usable capacity (consumer drivers)
Customer experience	User experience deficiencies primarily related to low-tech nature of business, including time to transact and lack of clear price transparency	Poor user experience includes lack of sanitation, low accountability to customers, high levels of fraud and low price transparency
Value of underlying asset	An average TL tractor-trailer can cost up to \$200-\$250K plus yearly maintenance	An average car can cost \$15-\$30K plus yearly maintenance
Ability to build network density	Difficult, as freight is moved across long distances, with need for backhaul to maintain profitability	Easier given the short average length of trip
Regulatory barriers	The regulations surrounding shipping and transportation are heavy, especially considering the value of the freight	There were and still are issues surrounding the ethics of uncertified drivers and vehicles transporting passengers
Strength of existing relationships	The shipper-broker dynamic is heavily relationship-based	People lacked attachment to any particular brand of cab
Homogeneity in customer need	Trucks with differing specifications are needed to serve the diverse array of freight in this potential marketplace (e.g., refrigerator/dry vans)	Standard car can meet most riders' needs

Attractiveness
 Low
 Mid
 High

Source: Forbes, Reuters, L.E.K. interviews and analysis

One reason the trucking industry appears ripe for a similar transformation is its relatively unsophisticated use of technology. Much of the matching of shippers with carriers is done via phone. The accompanying paperwork is voluminous, and generating it is people-intensive. There is certainly an opportunity for technology to streamline the entire process.

The value of underlying assets is high. Generally, the more expensive the asset, the more value there is to greater utilization. Part of the initial premise of Uber, which actually started with “black cars” (limousines and town cars), was that these were valuable assets that were underutilized. Airbnb is another example of increasing the utilization of a costly asset — people’s homes.

Trucks fit the bill as well. An average Class 8 truck can cost upward of \$200,000 plus yearly maintenance. Therefore, carriers want to use them as much as possible, and the role of the broker is especially important when it comes to the less-than-truckload (LTL) market in which a carrier transports goods from multiple

shippers. Could a technology platform handle the complex shipper-carrier matching process better than human brokers can?

However, some of the conditions suitable for Uberization are less present in trucking than they are in the case of taxis:

The customer experience is less than optimal. Think about what the taxi experience was like up until recently. You had to go out in the street to hail a cab (rain or shine!) or else phone the cab company and wait and hope for a cab to arrive. What’s more, cabs were often dirty, and in a strange city where you didn’t know your way around, cab drivers could rip you off because you had no idea upfront what the fare should be. Uber changed all that through its technology platform. It made the entire experience efficient and transparent, and generally cheaper to boot.

Shippers, however, don’t really have similar complaints — their experience with arranging shipments is not that bad. They simply

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call a broker who works on their behalf. They know the cost in advance and exactly what they will get for it. Of course, shippers would like to be able to pay less for shipping, but the customer experience itself is not crying out for change.

The market primarily consists of “one-off” transactions, rendering the relationship with intermediaries unimportant. The taxi industry is essentially defined by one-off transactions. The customer has no relationship with the cab company, and doesn't care which one is used. In such situations, technology has a relatively easy time stepping in and taking over the transaction — the Uber model. Uber also has capitalized on the fact that taxi companies offer no benefits to customers for repeat business (since companies have no way to track it).

This is hardly the situation with the trucking industry. Shippers are far from broker-agnostic: Their relationships with brokers can span many years. Arranging for transportation of freight is also much more complex than arranging for a taxi ride, and it calls for the expertise of brokers. Brokers are well-connected, know how the industry works, understand the subtle differences between carriers and can get good deals for loyal customers. They also do a lot more than process transactions — for example, providing short-term credit. All of this is much more difficult for an automated platform to replace, and making such a switch could seriously damage the shipper-broker relationship.

Finally, a number of Uberization-friendly conditions don't really exist for the trucking industry at all:

The product or service is relatively homogeneous. The Uber model works well when there is a high degree of similarity in the service from customer to customer. For example, a taxi ride is a taxi ride — a customer is ferried from point A to point B. The model works less well if people's needs are unique. For instance, if a customer wanted to bring along a bike, this would be a more complex problem for Uber to solve. But this is precisely the issue with trucking: It is a nonstandard product. There are different loads that may require different trailers — for example, something that needs to be refrigerated or something that won't fit in a trailer and needs a flatbed. There are also different times that certain types of trucks are allowed to be on the road. When it comes to LTL situations, things become even more complicated.

Supply is constrained, but idle alternative capacity can be activated. Each city limits the number of taxis allowed on its streets. Drivers with a Boston medallion can't pick up a rider in Cambridge, reducing their ability to move to areas where there is demand. Each city tightly controls the number of taxis that can operate within its boundaries. This makes it very hard to deal with demand spikes — for example, when a sports game gets out and

crowds of people are looking for transportation. However, Uber is able to “create” additional supply via the thousands of cars that are sitting idle in people's driveways, effectively removing the supply constraint.

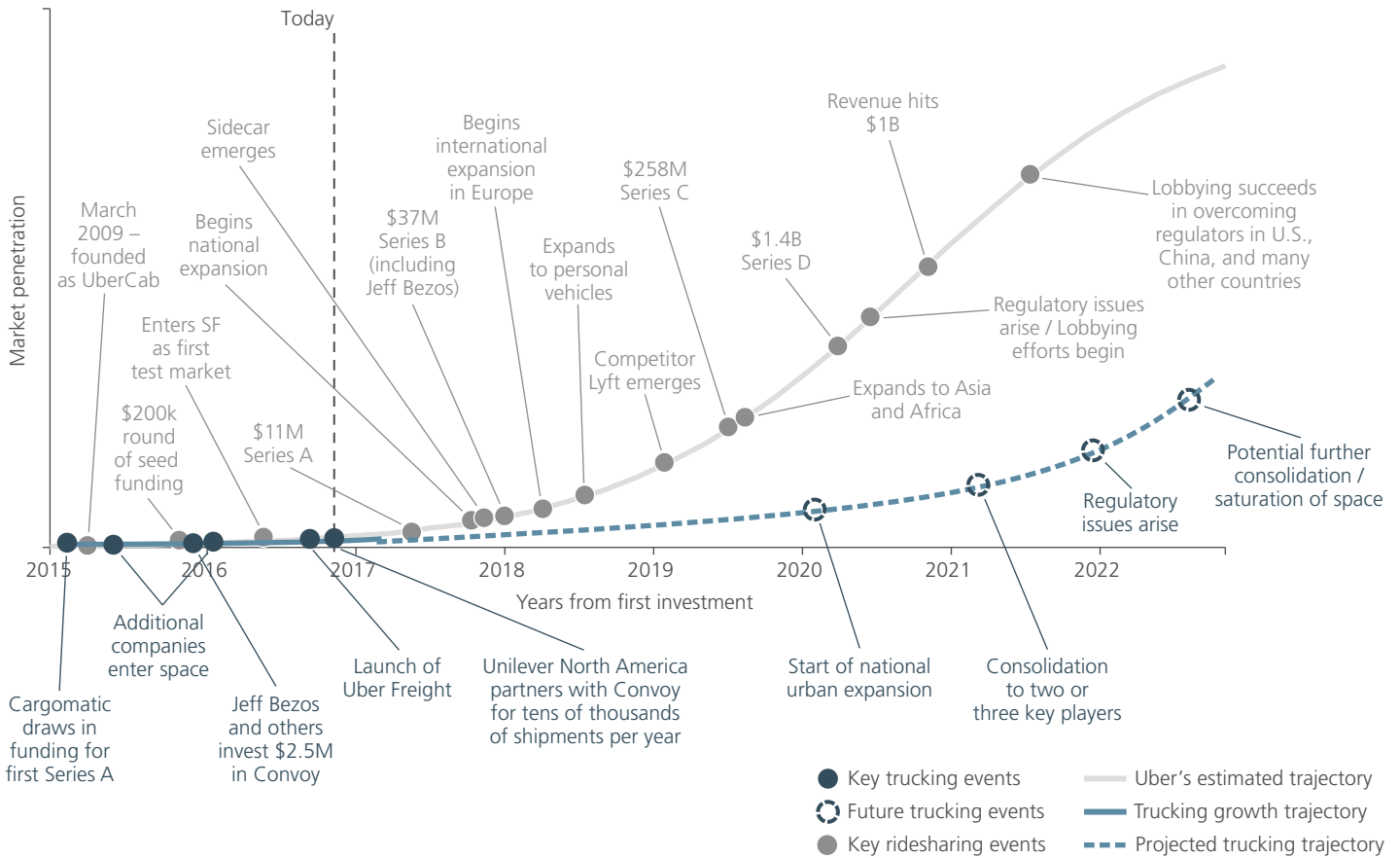
The same does not hold true in trucking. While there are no artificial limits on how many trucks can be on the road or where they can go, capacity in trucking is still fixed due to a shortage of specialized assets — namely, licensed trucks and drivers. Uber is able to “create” capacity by repurposing assets from other uses (namely, a regular car). But in the trucking industry, there simply aren't idle licensed trucks floating around that can be accessed, and marketplace technology can't really offer a solution here. Instead, the industry deals with demand spikes by varying pricing via a dynamic spot market — similar to how Uber addressed the problem through surge pricing.

Regulatory barriers are not insurmountable. Regulatory barriers can make it difficult for a technology platform to disrupt an industry. Uber certainly has faced opposition from industry incumbents who have tried to raise issues about the legality and ethics of uncertified drivers and vehicles transporting passengers. It needs to deal with these on a city-by-city basis. Another disrupter, Airbnb, has essentially lost its battle against regulatory restrictions in New York City.

However, the regulatory barriers facing the trucking industry are more challenging, primarily because they exist at the level of the individual driver. Training and certification requirements are significant for truck drivers, whereas in Uber's case, the average adult already has a license to drive a car. Additionally, the compliance requirements related to ensuring that drivers stay within mandated hours of service — and the upcoming enforcement of those regulations via electronic logging devices — are tougher to regulate using a marketplace mechanism.

There is a high concentration of buyers and sellers in a single location. There is a reason Uber works well in cities: There are a lot of people who need rides and a lot of people willing to provide them. In other words, Uber can establish sufficient critical mass within urban markets to allow its model to work (i.e., there is significant network density). It also can roll out this model one market at a time, because both supply and demand are localized. In the case of freight, the market is national: Trucks need to be driven across cities and states, meaning the industry needs a lot of people in multiple places. For a technology platform to take hold, companies would need to become part of the ecosystem simultaneously, with no opportunity to roll out the platform gradually as Uber has done.

Figure 2
Timetable for the Uberization of the trucking industry



Source: Crunchbase, Chicago Tribune, Bloomberg, Forbes, L.E.K. interviews and analysis

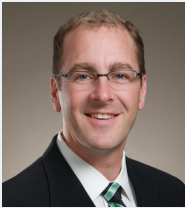
So what does the future hold?

Because so many of the conditions conducive to Uberization are not present in the freight industry, startup platforms have so far come up short (see sidebar). While there are certainly process inefficiencies that can be resolved through technology — from matching of shippers and carriers to routing and backhaul optimization — it is our view that disintermediation is the wrong way to go, especially in the more complex LTL space. On the contrary, we believe that technology platform companies are more likely to benefit from partnering with traditional brokers — at least in the medium term — as they work toward achieving appropriate scale and marketplace acceptance. Similarly, existing marketplace apps might consider an acquisition by a traditional broker to be a viable exit strategy.

Ultimately, Uberization of the trucking industry, will take considerably longer than it did for the taxi industry, and it probably will not achieve the same level of penetration (see Figure 2). Furthermore, it will most likely begin with the TL sector or in some “localized” part of the market, rather than the more complex LTL sector. This is because small and medium-size business shippers have reasons to use a broker that go beyond lower prices, including customer service, trust and access to a broader suite of offerings, all of which would limit the effectiveness of Uberization for LTL.

Layering a platform solution on top of an existing business model could enable existing brokers to become more efficient and less labor intensive, thereby lowering shipping prices. In the long run, larger brokers who can afford to implement the technology will be the likely winners in the race to Uberize the industry. Like Uber, they will essentially become software companies.

About the Authors



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