

DIGITAL MARKETPLACES IN THE ROAD FREIGHT/TRUCKING SECTOR

ADDRESSING INEFFICIENCY

As has been outlined in earlier Ti Market Insights, disruption can occur in a sector where the incumbent players are failing to develop solutions to address industry inefficiency. In the road freight sector 'inefficiency' can be measured in terms of underutilized capacity i.e. empty running, although the industry also faces other challenges including:

- Levels of fragmentation
- Lack of collaboration between carriers
- Commoditization of products
- Lack of insight into prices and capacity
- Often low quality services
- Lack of investment in technology
- Manual and slow reacting processes
- Paper documentation
- Lack of real-time tracking and supply chain visibility
- Bureaucracy and regulation

In Europe and Asia, the problems are exacerbated by the numerous individual markets which exist with a diverse range of regulations, cultures and languages to overcome. This is even the case on an intra-country basis in markets such as India and China, where efforts to integrate local, city and regional markets are on-going.

Numerous new technology platforms have entered the road freight/trucking market, each promising to address many of the problems out-lined above. However, their fundamental aim is to better match supply with demand, leading to fuller trucks for carriers and better rates for shippers. The merit of this premise and an analysis of the sector as a whole is discussed in more detail below.

TYPES OF DIGITAL MARKETPLACES

The taxonomy of the sector can be outlined as follows:

1. 'e-Forwarders', 'digital' or 'virtual forwarders' actively intermediate the process and take on execution and pricing risk. These can be categorised as:
 - 'Captives'
DHL's Saloodo; Drive4Schenker / Schenkereasy; UPS's Coyote.
 - 'Non-captives' or independents
Europe: e.g. Instafreight, Freighthub, Loadfox, Convargo, Cargonexx, Colo21, Frachtraum, Ontruck

US: e.g. UberFreight, FreightOS, FlexPort, Ontruck, Convoy, CargoMatic, Transfix, TruckerPath, 10-4 Systems, FreightGuru, Loadsmart

Asia: e.g. Blackbuck (India), Huochebang (recently merged with Yunmanman) (China)

2. 'Load Boards' or 'marketplaces' provide an exchange between shippers and carriers but do not take responsibility for the successful execution of the transaction: e.g. TimoCom, Cargoclix, DAT, Truckstop.com, Some focus on 'shipper to carrier' relationships, helping locate available capacity in the market, for instance on specific routes. Others help carriers collaborate amongst themselves ('carrier to carrier'). LoadFox, Haulage Exchange and Teleroute are examples of the latter. Many of these exchanges have been around for decades and are now developing additional services such as 'digital warehousing'.
3. Tender platforms provide for longer term relationships between carrier and shipper. These include: Transporeon (TIContract), Logistitrade, Tendereasy and Jaggaer (acquired Bravosolution in 2017 – a more general 'spend management' platform). In addition, they are able to provide value added solutions, helping balance carriers' networks. Several of the enterprise shippers also have sites to push work directly into the market.
4. Data Connectors / Aggregators. These provide standardized connections between many market participants for purposes of pricing, freight allocation, visibility and/or payments: FourKites, project44, Sixfold, Transporeon, Xeneta.
5. Traditional freight forwarders, such as Kuehne + Nagel, are also targeting this market in the customer portal/quoting engine area.

'Quality' is seen as an important distinction between e-Forwarders and freight exchanges. An argument employed by the former is that trust is essential to the process and that a forwarder is critical to ensuring the successful completion of the transaction, and especially the control of the security and stability of the carrier carrying the goods, which is generally quite loose in the open access platforms. With growing fraud in the networks these controls are essential for big shippers to feel comfortable in the process. Many restrict use of open access freight platforms to move their goods due to bad experiences.

In other words, the 'relationship' is essential to the offering of the forwarder both in terms of customers and carriers. Customers develop trust with companies and individuals who hold responsibility should anything go wrong. Relationships are important for carriers too. They will trust a forwarder and build long term partnerships to ensure consistent volumes at sustainable prices in return for a commitment to quality. Forwarders allow the off-loading of responsibility to get the freight moved where the exchanges do not.

Although load matching platforms may check the credentials of the carriers using their platforms, ultimately the risk is borne by the shipper who may or may not have had any prior contact with the carrier.

As can be seen from the cross section of e-Forwarders and freight exchanges highlighted above, there are many options available for both shippers and carriers. The categorization above

differentiates the players in terms of their varying business models. However, many platforms also differentiate themselves by:

- Geography. As discussed in more detail below, Germany is the biggest road freight market in Europe and this has spawned the development of several large exchanges which have then expanded into other countries across Europe.
- International/national/local volumes. Whereas some platforms have specialised in cross border movements (e.g. FreightEx – now Coyote) others are targeting local freight needs. An example of the latter is Ontruck which focuses on more localized movements of pallets.
- Commodities. Transporeon has created a community of carriers and shippers specialising in the bulk sector, especially steel.

CHARGING MODELS

A subscription model is often used by the marketplaces to generate revenue. For example, although Euro Freight Exchange (efe) offers users the opportunity to post cargos or trucks on its exchange for free, they charge for more value adding services, such as adding regular routes, advertising or use of their transport management system. Premium membership is only €29 a month, indicating that freight exchanges need to be very competitive to acquire both loads and trucks for their platforms.

e-Forwarders employ a more traditional form of revenue generation: buying and selling capacity via their platforms and retaining a margin. They can also perform many of the usual value adding freight forwarding tasks such as document origination. Although it may be considered that digitization would remove the necessity of human interaction, this is not necessarily the case. An attribute of some of the successful platforms involves a strong sales process and account management team. This helps to keep the rates they charge higher than the market average whilst ensuring long term partnerships with the carriers at lower input costs.

DIGITAL MARKETPLACES AND BROKERAGE

One of the big issues for many road freight marketplaces is that there is little to differentiate them from each other. Traditional 'freight exchanges' have undertaken load matching for some time and dominate the market in terms of scale. E-forwarders offer a different type of service, maintaining responsibility for the customer relationship, but lack the presence of the marketplaces.

Whether e-forwarder or marketplace, in order to be successful, these businesses need to maintain both an effective service and a large supply of capacity (carriers). However, as competition commoditises the basic load-matching service they provide, shippers risk low quality service and carriers risk low rates – it can become a race to the bottom based on price. As such carriers may only use such mechanisms when there is insufficient work, leading to service problems when the markets are busy.

Network effects, or demand side economies of scale, are critical to success in these platforms. Network effects occur when a service becomes more valuable to its users as more people adopt it,

creating barriers to entry for rivals, and barriers to exit for users. Eventually, this can allow a single firm to dominate the market. This may be one of the reasons for the lack of traction as many of the new ideas are in smaller companies without the scale to test the model fully or the efficiency gain required to get cost per transaction down.

The successful companies building on the marketplace concept will integrate a range of technologies (including mobile) for their customers, not just a technological layer. Moreover, they will establish a strategic lock-in with both carriers and shippers by effectively serving the needs of both parties. Whilst the potential advantages of a digital brokerage service are relatively clear to shippers (lower costs, flexible capacity, assets on-demand), many companies operating in this field have failed to articulate clear benefits to carriers, which has weakened their offering. The benefit to shippers needs to be based on cheaper prices from efficiency gain rather than pushing price down for carriers through competition.

In this 'chicken or egg' dilemma, other businesses have established scale by focussing on providing useful services to carriers first, before subsequently introducing brokerage operations for shippers. Notably, the US start up Trucker Path has gained traction amongst owner-operators by providing them with parking, navigation and financing services. Similar methods have been applied by companies in India and China.

LEADING DIGITAL MARKETPLACE START-UPS

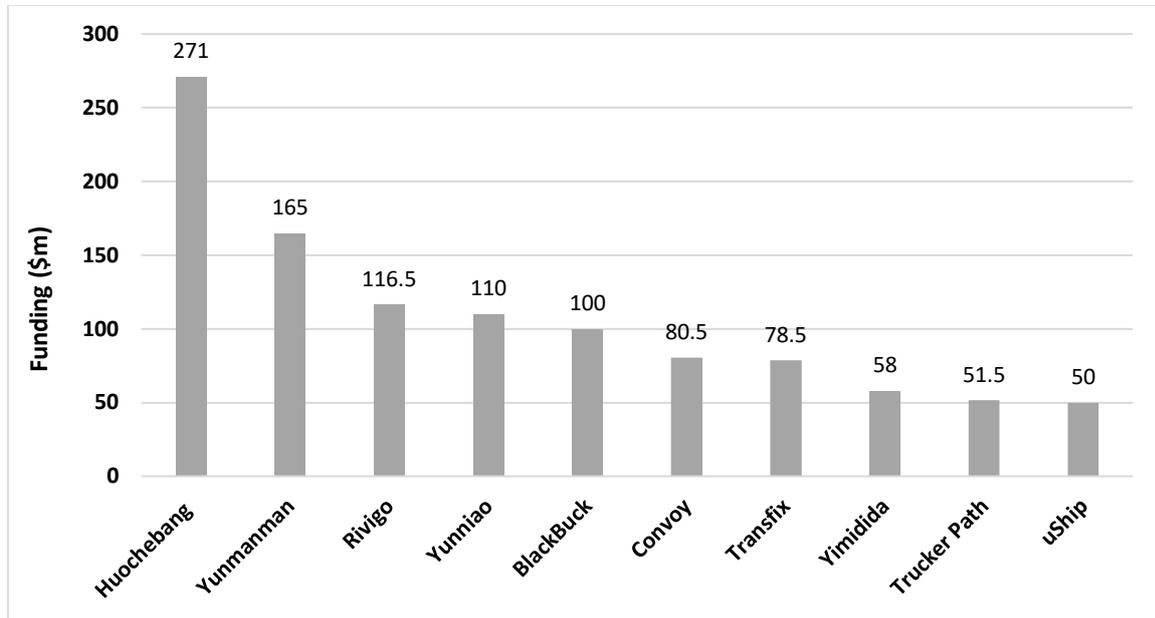
Investment has poured into the sector over the past five years. According to consultancy, BCG, Venture Capital Funds invested \$3.3billion in digital logistics start-ups between 2012 and 2017 of which, it says, a significant proportion went to road freight marketplaces¹.

In Europe the market has come to be dominated by German platforms although it is noticeable across the region as a whole that there have been relatively low levels of funding compared to similar companies operating in the US and Asia.

The large proportion of German start-ups operating in the road freight brokerage space is largely a product of the country's market size. Germany possesses the largest road freight market in Europe by some distance (particularly for international freight), and as such, this overall scale makes it attractive. This is also evidenced by the market share of the top German firms operating in the European market (e.g. DHL, Schenker, Kuehne + Nagel, Rhenus, Dachser).

But why the funding disparity compared with other regions? With the exception of Ontruck, which raised \$25m in 2018, no other company has attracted 8-figure sums from investors. This is in stark contrast to tech-based road freight companies in China, India and the US:

Figure 9.1: Top 10 trucking start-ups by investment



Source: www.ti-insight.com

There are several reasons why this should be the case.

Firstly, the market opportunity for a road freight platform start-up company in India, China or the US is much greater than Europe. Whilst the overall EU market as a bloc is the largest in the world, each of the European companies are restricted as a result of variation in language, legislation and culture, as mentioned above. This is not a complete block to expansion to adjacent countries, but it does make it more difficult for development.

Moreover, the growth opportunity in Europe is nowhere near as great as it is in India and China. In these nascent markets, large-scale traditional trucking operators have not been able to develop to the same extent as in the US and Europe. Consequently, there are more opportunities for technology-based innovators to address weak service provision and a hyper-fragmented supply side.

In China, the two largest platforms agreed to merge in late 2017. Huochebang (also known as Truck Alliance) and Yunmanman have created an enterprise (Manbang Group) valued at \$2 billion. The former has backing in part from Tencent Holdings Ltd whilst the latter counted Alibaba's Jack Ma as an investor through his holding in Yunfeng Capital. With an estimated 8.8 million truck drivers and close to 2 million on the combined platforms, the company is investing heavily in Artificial Intelligence to effectively deal with data flows. As with the US platform Truckerpath (see below), load matching is just one of the services offered. They both also sell carriers toll cards, fuel, tyres as well as second hand vehicles. Manbang Group also has plans to invest in autonomous and alternatively powered trucks, following in the footsteps of Uber.

COMPETITION BETWEEN MAJOR EUROPEAN LOGISTICS COMPANIES

An important development for Europe's digital freight marketplaces has been the response of incumbent road freight companies. Specifically, three leading firms have attempted to protect themselves from the threat of disruption by buying into the space. They are as follows:

- UPS (acquired FreightEx in January 2017 now trading as Coyote logistics)
- DHL (acquired Cillox in 2016)
- DB Schenker (invested in uShip during February 2017)

Each of the above companies has taken a slightly different approach to entering the digital road freight brokerage market.

UPS

UPS does not have an asset-heavy road freight business in Europe analogous to UPS Freight in North America. The company has scaled up its European express operations significantly over time and is also recognised throughout the continent for its contract logistics activities, but it has always lacked a trucking business.

This changed following the company's 2015 takeover of Coyote Logistics. Set up in 2006, Coyote is one of a previous generation of digital brokerage firms in the road freight space and had grown steadily over time through an approach that combined traditional brokerage with proprietary web-based software to match freight with available capacity. By 2015, the company was growing rapidly, and UPS acquired it following three years in which it had contracted the company for extra capacity during demand peaks.

With Coyote delivering strong growth within the UPS Supply Chain and Freight division, the company decided to replicate the model in Europe by acquiring a similar company, FreightEx, and establishing consistent technology and practices across both continents. UPS is currently in the process of integrating the two companies and installing unified systems. The takeover of FreightEx allows UPS to expand into the European road freight market without committing to the development of an expensive, asset-based network of operations.

DHL

By contrast to UPS, DHL Freight is well established as the second-largest player in the European road freight market. The company has diversified its operations into a number of differentiated solutions, including its premium 24 and 48-hour Eurapid service.

As such, DHL did not need to buy an established brokerage company to establish itself in the market. Instead, the company acquired an early stage start-up, Cillox in order to gain access to its technology

and is in the process of scaling it up. Cillox was later rebranded to Saloodo! and has established a presence in Germany and the UK.

The technology behind Saloodo! was developed as a cloud-based application designed for use on various devices. The application matches shipments with capacity on-demand, manages documentation, payments and provides route information to drivers. The system is available in 13 languages with Portugal and Spain the two most recent markets in which it has been rolled out.

Saloodo! differs from the integrated approach of UPS/FreightEx in that it operates solely as a software platform, with no human intermediary overseeing the carriers. Saloodo! does offer DHL Freight shipment options as an alternative service when its platform cannot provide enough capacity on demand, but aside from this, the company offers no direct point of contact to oversee transportation operations.

DB Schenker

DB Schenker is the largest road freight operator in Europe, and as with DHL, is investing in the technology as a risk mitigation strategy, rather than in an effort to spearhead growth. Where the two companies differ is in their oversight of the respective digital brokerage operations.

DB Schenker has elected to take a hands-off approach. In February 2017, the company announced a \$25m investment in the US freight matching platform uShip, having negotiated an exclusive licencing deal for the company's technology within Europe during 2016. uShip was established in 2003 and, as with FreightEx, this longevity demonstrates the viability of the business.

In addition to its capacity matching function, uShip provides payments and documentation management, insurance, messaging and tracking within its application. By incorporating the company's technology into its operations, DB Schenker will have access to capacity on-demand during peak periods, complementing its core assets.

US CASE STUDY: TRUCKER PATH

Trucker Path offers crowd-sourced guidance to truck drivers; this includes the nearest truck stop, weigh stations, hotels, diesel fuel and freight shipments.

Freight shipments are managed through a marketplace system for regional or long-haul business, where brokers submit shipments along with deadlines, destinations and other requirements, with parking and navigation information to long-haul truckers in the US.

The company initially launched as a free information service app, before subsequently adding the freight marketplace. As such, the business had cultivated a community of users and has built out its marketplace as an additional service within a wider ecosystem.

Furthermore, Trucker Path has been successful in adding a payments service 'InstaPay'. This non-recourse factoring arrangement pays carriers immediately, issuing a one-time flat rate with no

hidden fees, and addresses a major pain point amongst carriers who often wait 30-60 days before receiving payment.

In total, Trucker Path claims to serve 550,000 long haul truckers in the US, out of a total of roughly 1.6m. The company's marketplace business, 'Truckloads', serves substantially less (around 100,000 with 3m monthly load postings), but by gaining traction amongst the population of long-haul drivers in the US, the company has established a defensible position.

CONCLUSION

Theoretically, digital platforms have the potential to dramatically disrupt many of the world's least efficient road freight/trucking markets. However, the extent of this disruption is far from clear. In Europe the opportunity may not be as big as many start-ups believe and the market has already become crowded. To succeed, platforms will need to focus relentlessly on specific market segments and build targeted communities, integrated and served by exceptional technology and a range of services. China and India would seem to hold greater opportunities. In comparison with the relatively high quality road freight markets in Europe and North America, the industry is plagued by inefficiencies. The giant logistics platforms which have developed see themselves not so much as freight exchanges but as disruptive technology platforms which can transform the entire industry. In contrast, the role of the digital freight platform in Europe and North America will perhaps always be complementary to the dominant incumbent trucking operators. In all cases, significant investment in technology and resources to gain enough scale to provide any significant market disruption is needed. There are not many companies in a position or with the resources to achieve this.