E-commerce reshaping line haul delivery

June 2017
Key takeaways

Line haul (LH) delivery refers to cargo movement, usually by truck, for long distance or between cities.

4 challenges facing LH delivery operators:
• Keen competition
• Unregulated market
• High cost
• Long payment terms

Trends in the LH delivery sector:
• The distinction between express delivery and LH delivery is blurring
• Truck matching platform: New business model in LH delivery sector
• E-commerce: New source of LH shipments in China
• Warehousing and transportation under one roof

Source: compiled by Fung Business Intelligence
What is line haul (LH) delivery?

• Unlike the B2C last mile delivery model, the B2B line haul delivery model is often ‘invisible’ to end consumers.

• LH delivery refers to cargo movement, usually by truck, for long distance or between cities. For instance, LH shipments are picked up from the distribution centres of manufacturers or wholesalers and delivered to distribution centres of downstream stakeholders or city depots of retailers/etailers.

• Once the LH shipments arrive the city depots, express delivery companies would collect the shipment and provide the last mile* delivery services.

Source: compiled by Fung Business Intelligence

*Note: “Last mile” refers to a short travel distance of parcel shipped from city depots to designated locations requested by end consumers, normally within a mile.
Three traditional sources of LH shipments in China

1. Transshipment cargo of other logistics companies
   - **Pros**
   - Serve as a supplement during non-peak season
   - Relatively stable demand for delivery services
   - Relatively high margin
   - Pay by cash on-site
   - Strict key performance indicators assigned by consigners
   - Long payment terms
   - Very low margin

2. Origin-destination cargo of manufacturers or other logistics companies to downstream stakeholders
   - **Pros**
   - Relatively stable demand for delivery services
   - Relatively high margin
   - Scale of traditional offline wholesale clusters is shrinking; the cargo sources of LH delivery become scattered and the cost of cargo consolidation increases (See Box 1)

3. Origin-destination cargo of wholesalers to retailers
   - **Pros**
   - Relatively high margin
   - Pay by cash on-site
   - Scale of traditional offline wholesale clusters is shrinking; the cargo sources of LH delivery become scattered and the cost of cargo consolidation increases (See Box 1)

Source: compiled by Fung Business Intelligence
Box 1: Wholesale market and LH delivery sector

- In China, many LH shipments are sourced from local wholesale markets.
- However, the traditional wholesale model has been disrupted by e-commerce models. Cargo origins of LH delivery has become scattered and the volume of each shipment is getting smaller. Growth of LH delivery services is flattening out.

Growth in demand for LH delivery services, by types of goods (2016)

- **More cargos**
  - E-commerce
  - Auto parts
  - Pharmaceutical goods

- **Flat**
  - Home products
  - Snacks
  - Fresh produce
  - Metals
  - Cables
  - Home appliances

- **Fewer cargos**
  - Construction materials
  - Beverage
  - Wine
  - Apparel
  - Motor

Source: Online media *Wuliucankao*, compiled by Fung Business Intelligence
China’s LH delivery sector is highly competitive
Over millions micro- or small-sized operators compete for a tiny market share, each operates with fewer than 2 trucks on average. The top 20 LH delivery companies accounted for 12.8% of the entire market in 2015

Top 10 LH delivery companies, by revenue (RMB, 2015)

1. Deppon 11.2 billion
2. Zhongtie 4.0 billion
3. TNT Hoau 2.4 billion
4. Jiaji 2.3 billion
5. Shengfeng 2.1 billion
6. ANE 2.0 billion
7. Shenhui 2.0 billion
8. YC Express 1.6 billion
9. Xinbang 1.2 billion
10. Jiayi 1.1 billion

Source: Tianfeng Securities, Tuc Media, China Federation of Logistics and Purchasing, compiled by Fung Business Intelligence
Challenges facing the LH delivery sector
Challenges facing LH delivery operators

1. Keen competition
   - Due to low entry barrier, the homogenous market is highly competitive
   - Many individual truckers set up micro- and small-sized enterprises offering price-competitive line haul services with single truck (see Box 2)
   - In addition, many new entrants are tapping into the LH delivery sector (see Trends 1 - 3)

2. Unregulated market
   - It is difficult to standardize the services provided by micro- and small-sized trucking companies, due to the number of vehicle models and truck capacities operating and variance in quality of services offered by different truckers.
   - Computerized records and online tracking and tracing are not common in LH business. Sometimes, waybills or delivery notes are handwritten without barcodes. Human errors and trust issues are common, e.g. cargo loss, discrepancy between actual load and the load stated on waybill, etc.
   - Another trust issue relates to cash on delivery practices. Truckers would collect the consignee’s payment on behalf of consigners. Under normal situations, truckers would transmit the money to the consigners. However, exceptions are not rare.
   - There is no standardized market rate. Consigners and truckers have to negotiate for the charges every trip. Disputes occur frequently, whereas some disputes would lead to violent confrontation

Source: compiled by Fung Business Intelligence
### Box 2: Fast facts of China’s truckers

<table>
<thead>
<tr>
<th>Age</th>
<th>Gender</th>
<th>Education background</th>
<th>On the road (hours per day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>46 or above</td>
<td>1%</td>
<td>Tertiary education or above 1%</td>
<td>12 hours or above 40%</td>
</tr>
<tr>
<td>36 – 45</td>
<td>29%</td>
<td>Secondary education 88%</td>
<td>8 – 12 hours 44%</td>
</tr>
<tr>
<td>26 – 35</td>
<td>56%</td>
<td>Below secondary education 11%</td>
<td>8 hours or below 16%</td>
</tr>
<tr>
<td>25 or below</td>
<td>10%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Types of truck</th>
<th>Monthly income</th>
<th>Truck ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity of 6 tons or below</td>
<td>RMB 8,000 or below 84%</td>
<td>Truck owner 74%</td>
</tr>
<tr>
<td>Capacity of 6 – 14 tons</td>
<td>RMB 8,000 – 12,000 12%</td>
<td>Not a truck owner 26%</td>
</tr>
<tr>
<td>Capacity of 14 tons or above</td>
<td>RMB 12,000 – 15,000 3%</td>
<td>- attached to a person 39%</td>
</tr>
<tr>
<td>Truck tractor</td>
<td>RMB 15,000 1%</td>
<td>- attached to an enterprise 61%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Channels for getting LH shipments</th>
<th>Income fluctuation</th>
<th>Major problems facing the truckers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular orders from consignees/ trucking companies/ transshipment hub</td>
<td>(Grey area) Expenses 7%</td>
<td>Increasing cost and keen competition 13%</td>
</tr>
<tr>
<td>Via online platforms</td>
<td>Connect to truck terminals 17.8%</td>
<td>Fine and toll charges 14%</td>
</tr>
<tr>
<td>Via scalpers</td>
<td>Recommended by third party logistics companies 8.1%</td>
<td>Difficult to source for cargo 12%</td>
</tr>
<tr>
<td>Via friends</td>
<td>Not specific 14.8%</td>
<td>Long payment terms requested by consigners 8%</td>
</tr>
</tbody>
</table>

Source: China Federation of Logistics and Purchasing, compiled by Fung Business Intelligence
Note: Survey conducted in Mar 2016; Survey respondents = 3183
Challenges facing LH delivery operators

3. High cost
   - Imbalance in inbound/outbound traffic flow leads to a high rate (35 – 40%) of empty return trip. Truckers would try to consolidate more cargos, prior to return to their origin city. They may wait for potential consigners at logistics parks, or travel to surrounding cities to seek potential orders. Idle time (sometimes, lasting a whole week), maintenance costs, toll charges and extra fuel costs are heavy burden to micro- and small-sized operators.
   - To fully utilize the truck capacity and cover the high toll charges, trucks are often overloaded in China. Road safety is a key issue. Some regulations on the truck loading capacity have been promulgated lately. Under the new standards and regulations, long haul logistics costs of transporting certain products have increased by 25%, e.g. corn, steel, coal, etc.
   - Increasing operating costs, include labour cost, fuel cost, toll fee, etc.

4. Long payment terms
   - Many consigners settle the trucking fee to trucking companies in 90 – 120 days.
Trends in the LH delivery sector
Trend 1
The distinction between express delivery and LH delivery is blurring

Express and LH delivery businesses share some similarities. For certain segments along the trip, both express and LH delivery companies have to use trucks.

On one hand, external economic factors and keen competition are trimming the profit margin of LH business. On the other hand, due to the strong demand for e-commerce delivery, the express delivery sector outperforms the LH delivery sector in China.

Recently, some of China’s largest LH delivery companies have diversified their businesses to offer express delivery services, e.g. Deppon and Ane.

Source: Deppon IPO prospectus (2017), Tianfeng Securities, compiled by Fung Business Intelligence
Trend 1 (cont’d)

Case – Deppon

Deppon is China’s largest LH delivery company and used to adopt a self-operated model with heavy asset investment. To expand its scope of business, Deppon allied with thousands of trucking and logistics partners and diversified into express delivery business, especially in the large-size last mile shipments, e.g. furniture, home appliance, etc.

Milestones

1996 • Established in Guangdong
1998 • Cooperated with China Southern Airline and provided air freight forwarding services
2000 • Developed IT system supporting cargo tracking and tracking services online
2001 • Operated the first Guangzhou-Beijing direct trucking services
2009 • Relocated the headquarter to Shanghai
2010 • Cooperated with Taobao and provided B2C huge cargo delivery service
  • Setup the first country hub in Shunde with daily handling capacity of 10,000 tons
  • Became the largest LTL* delivery company in China with an annual revenue of RMB 2.6 billion
2013 • Tapped into express delivery sector
2014 • Annual revenue reached RMB 10 billion
  • Direct operated stations exceeded 5,000 in the nation
2015 • Allied with over 1000 business partners, who provide cargo consolidation, transshipment and delivery services
2016 • Number of business partners exceeded 5,000

Source: Deppon IPO prospectus (2017), Tianfeng Securities, Tuc Media, compiled by Fung Business Intelligence

* LTL: less than truck load
Trend 1 (cont’d)
Case – Deppon

Since diversification, revenue of Deppon has doubled from RMB 8.6 billion in 2013 to RMB 17 billion in 2016.

In 2016, annual revenue growth of express delivery business jumped by 131%, while that of LH business only grew by 8%. Revenue contribution of express delivery increased from 0.1% in 2013 to 24.1% in 2016, while that of LTL delivery decreased from 94.7% in 2013 to 62.8% in 2016.

* LTL: less than truck load; FTL: full truck load

Source: Deppon IPO prospectus (2017), Tianfeng Securities, Tuc Media, compiled by Fung Business Intelligence
On the other hand, express delivery companies are tapping into the LH delivery sector

- The express delivery sector outperforms the LH delivery sector in China. However, the growth rate of express delivery is highly correlated with the growth rate of e-commerce, which is now slowing down. On the other hand, the scale of the LH delivery sector is more than 10 times that of the express delivery sector.
- Indeed, certain differences in the operation of the two sectors are observed (see Box 3). The business diversification path of express delivery companies has not really been smooth, as express delivery companies have to hire more skilled logistics workers, buy new equipment and vehicles, review their workflows, etc.
- Nonetheless, in order to fully utilize the vehicle capacity, increase the economies of scale and offer full services to the consigners, major express delivery companies are tapping into the LH delivery sector, such as SF Express, EMS, ZTO express, Best express, etc.

Source: Depon IPO prospectus (2017), Tianfeng Securities, compiled by Fung Business Intelligence
For more details about the China’s express delivery sector, view also Fung Business Intelligence’s Report “Last mile delivery: A pain point of online shopping” Mar 2017
Box 3: LH delivery vs. express delivery

<table>
<thead>
<tr>
<th></th>
<th>LH delivery</th>
<th>Express delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business models</strong></td>
<td>• B2B</td>
<td>• B2B/ B2C</td>
</tr>
<tr>
<td><strong>Type of clients</strong></td>
<td>• Corporate</td>
<td>• Corporate/ Individual consumer</td>
</tr>
<tr>
<td><strong>Transport modes</strong></td>
<td>• Truck</td>
<td>• Air (long haul)/ Truck, van &amp; motor (short haul)</td>
</tr>
<tr>
<td><strong>Services requirements</strong></td>
<td>• Strong bargaining power of the corporate clients</td>
<td>• Relatively less demanding of clients</td>
</tr>
<tr>
<td></td>
<td>• Very demanding with KPI measures, in terms of lead time, services quality, etc.</td>
<td></td>
</tr>
<tr>
<td><strong>Operation</strong></td>
<td>• More complicated processes</td>
<td>• Relatively straight forward</td>
</tr>
<tr>
<td></td>
<td>• Long distance trips between distribution centres, truck terminals in countryside, city depots, etc.</td>
<td>• Door-to-door delivery between city depots and designated locations</td>
</tr>
<tr>
<td></td>
<td>• Route planning, cargo consolidation, loading/ unloading, etc.</td>
<td></td>
</tr>
<tr>
<td><strong>Types of cargo</strong></td>
<td>• Irregular shapes</td>
<td>• Relatively regular shapes</td>
</tr>
<tr>
<td></td>
<td>• &gt;30kg</td>
<td>• Small parcels</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• &lt;30 kg</td>
</tr>
<tr>
<td><strong>Service charge</strong></td>
<td>• Negotiable</td>
<td>• Standardized</td>
</tr>
<tr>
<td><strong>Time</strong></td>
<td>• Long delivery lead time, including long idle time and travel time</td>
<td>• Very short delivery lead time (same day/ next day)</td>
</tr>
<tr>
<td><strong>Market size</strong></td>
<td>• LTL: RMB 1,040 billion; FTL: RMB 2,960 billion*</td>
<td>• Last mile: RMB 350 billion</td>
</tr>
</tbody>
</table>

Source: Deppon IPO prospectus (2017), Tianfeng Securities, compiled by Fung Business Intelligence
* LTL: less than truck load; FTL: full truck load
Trend 2

Truck matching platform: New business model in the LH delivery sector

In a sharing economy, individuals/companies can share their idle time/resources with those in need via online platforms/APPs and obtain some financial returns.

Quite a number of companies combine the sharing economy and O2O concepts and apply to the LH delivery sector. Some online truck matching platforms have emerged, connecting consigners, agents and truckers, offering offline LH delivery services and value-added services.
Trend 2 (cont’d)

With the aid of technology, O2O truck matching platforms target to resolve idle resources and trust issues

### 3 major models of online LH delivery platforms

#### Traditional online “yellow page”

**Operators:**
- Trucking agents
- Logistics companies
- Truck terminals

**Core services:**
- Provide online information for consigners and truckers, who can confirm orders offline

**Profit model:**
- Membership fee
- Advertising charge
- Charges related to additional services, e.g. insurance services, financing services, truck inspection

**Advantages:**
- Eliminate asymmetric information

**Disadvantages:**
- No guarantee on the information accuracy of the platform

#### O2O truck matching platform

**Operators:**
- Logistics companies
- Truck terminals
- Internet companies

**Core services:**
- Prompt cargo information to registered users of allied truck terminal
- Line up consigners, agents and truckers
- Assist the stakeholders to settle payment on the platform
- Support user review system

**Profit model:**
- Service fee
- Charges related to additional services, e.g. insurance services, financing services, truck inspection

**Advantages:**
- Eliminate asymmetric information and idle resources
- Resolve trust issues via review system

**Disadvantages:**
- Huge subsidizing cost for attracting users
- High management costs

#### 4th party logistics platform

**Operators:**
- Logistics companies
- Truck terminals
- Internet companies

**Core services:**
- Manage and provide one-stop-shop services of allied trucking companies for consigners

**Profit model:**
- Service fee
- Management fee
- Value-added fee
- Other charges, e.g. advertising charge, service station rental fee, storage fee, etc.

**Advantages:**
- Control service quality
- Standardized services

**Disadvantages:**
- Higher initial investment and risk

Source: Internet source, compiled by Fung Business Intelligence
Over 200 O2O truck matching platforms have been launched since 2013

Trend 2 (cont’d)

Yunmanman

• Year of establishment: Nov 2013
• Position: Inter-city trucking platform, over 800km
• Services:
  • Line up consigners, agents and truckers
  • Route planning
  • Assist the stakeholders to settle payment on the platform
  • First hand/ second hand truck purchase and maintenance
  • Set up users credit system
  • Provide truck insurance and finance services
• VC funding:
  • Seed – Nov 2013, RMB a few million
  • A – Mar 2014, US$ 5 million
  • B – May 2015, RMB 100+ million
  • C – Aug 2015, RMB 100+ million
  • D – Dec 2016, US$ 110 million
• Network: 300 cities
• Monthly active users (as of May 2017): 2,500,000
• Daily orders (as of May 2017): over 240,000
• Average value per order (as of Sep 2016): RMB 6500

Huolala

• Year of establishment: Oct 2014
• Position: Intra-city trucking platform
• Services:
  • Crowd-sourced LH delivery services
  • Assist the stakeholders to settle payment on the platform
• VC funding:
  • Pre-A – Early 2015, US$10 million
  • A+ – Sep 2015, US$10 million
  • Pre-B – May 2016, US$10 million
  • B – Jan 2017, US$30 million
• Network: 40 cities in China, e.g. Beijing, Shanghai, Guangzhou, Shenzhen; Hong Kong; Taipei; Singapore; Bangkok
• Daily active drivers: 70,000
• Daily active users: 60,000
• Daily orders (as of Jan 2017): 65,000
• Average value per order (as of Jan 2017): RMB120

Source: China’s e-commerce research centre, internet sources, company website, compiled by Fung Business Intelligence
Trend 2 (cont’d)

Over 200 O2O truck matching platforms have been launched since 2013

### YUNNIAO

- **Year of establishment:** Nov 2014
- **Position:** Intra- and inter-city trucking platform
- **Services:**
  - Line up consigners and truckers by data analytics
  - Assist the stakeholders to settle payment on the platform
  - Support real time information synchronization and truck tracking and tracing system
  - Set up services review system and users credit system
  - Provide supply chain solutions
- **VC funding:**
  - A – Jan 2015, US$10 million
  - B – Jul 2015, US$>10 million
  - C – Jan 2016, US$100 million
  - D – Feb 2017, US$100 million
- **Network:** 18 cities in China
- **Clients:** over 10,000 corporate clients

### FUYOUKACHE

- **Year of establishment:** Mar 2015
- **Position:** Inter-city FTL trucking platform
- **Services:**
  - Work with truck agents to line up consigners and truckers via online bidding system
  - Assist the stakeholders to settle payment on the platform
  - Setup services review system and users credit system
  - Provide truck insurance and finance services
- **VC funding:**
  - Angel – Jun 2014, RMB 3 million
  - A – Mar 2015, RMB 20 million
  - A+ – Aug 2015, RMB 45 million
  - B – Apr 2016, RMB 100 million
  - C – Mar 2017, RMB 250 million
- **Network:** 30 provinces in China
- **Registered consigners:** 68,000+
- **Registered agents:** 25,000+
- **Daily orders:** 1,600
- **Monthly sale value (as of 2016):** RMB 400 million

Source: China’s e-commerce research centre, internet sources, company website, compiled by Fung Business Intelligence

* FTL: full truck load
Prospect of truck matching platforms in the LH delivery sector

**Drivers**
- **Release idle capacity.** With the aid of location-based service and mobile technology, truckers can easily locate if any potential shipments nearby and quickly consolidate enough cargo, instead of wasting time at the truck terminal or spending unnecessary fuel costs to travel around for potential orders.
- **Eliminate the problem of asymmetric information and scalper issues**
- **Route planning.** The truck matching platforms capture the shipments and truckers information. With the GPS positioning technology, truckers’ driving time, route and status are seamlessly synchronized. Consigners/agents/truckers can easily plan for the trip via the platforms.
- **Financing.** The truck matching platforms can finance the registered truckers for investing on new trucks, paying fuel costs and traveling costs, based on the truckers’ credibility revealed by the user review system and transaction records.

**Hurdles**
- **Infrequent demand.** Many consigners in China are small-sized enterprises and require trucking services occasionally. It is difficult for truck matching platforms to reach an economies of scale like car hailing platforms.
- **Fake orders.** Following car hailing apps approach, some truck matching platforms attract new users with subsidies. Some agents or truckers create fake orders, and truck matching platforms suffer.
- **Trust issues.** Normally, B2B shipments are bulk cargo with a higher average total value than that of B2C shipments. Consigners prefer to place orders to familiar, reliable truckers, instead of bidding via truck matching platforms.
- **Disintermediation.** Consigners and truckers may directly contact for future shipments after knowing each other from truck matching platforms.
- **Non-standardized issues.** The charges of each trip may be different, as there are various mix of trucks (size, capacity) and shipments (size, weight, shape, distance). Simple regular price list of truck matching platforms may not work.

Source: compiled by Fung Business Intelligence
Trend 2 (cont’d)
Prospect of truck matching platforms in the LH delivery sector

Implications

• The main features of B2B trucking services are low demand frequency with high value of shipments. Price is not the only concern for consigners. To increase the traffic, it is ineffective for the truck matching platforms to attract more platform users with subsidies.

• Logistics and trucking services involve multiple stakeholders and complicated processes. The Internet may assist in information synchronization, but it may not fully replace all the intermediaries. Platform developers should understand the logistics operations and technology and the practices of local truckers.

• Trust is the biggest challenge facing truck matching platforms. Cargo tracking facilities and user reviews system are essential in addressing the trust issue. Third-party payment and payment monitoring system built into the platforms would assist in resolving the trust issue as well.

• Although some obvious weaknesses are observed in the truck matching platforms, sharing economy in the LH sector is the next blue ocean. It is expected that more venture capital funding will be injected into this area, as the cash pool temporarily stored at the platform system is an obvious strength.

• With technological breakthrough, some scalable truck matching platforms may revive China’s LH delivery market in coming years.

Source: compiled by Fung Business Intelligence
Trend 3

E-commerce: New source of LH shipments in China

Inter-city/inter-province cargo movement are largely involved in e-commerce. According to Aliresearch, a lot of domestic e-commerce products are sourced from the industrial clusters located at coastal areas and delivered to designated locations in various cities throughout the nation.

- 99% of goods transport to/from Beijing-Tianjin-Hebei region and other regions.
- 1% of goods are originated and designated within Beijing-Tianjin-Hebei region.
- 87% of goods transport to/from Jiangsu-Zhejiang-Shanghai and other regions.
- 13% of goods are originated and designated among Jiangsu-Zhejiang-Shanghai.
- 71% of goods transport to/from Yangtze economic zone and other regions.
- 29% of goods are originated and designated within Yangtze economic zone.

Source: Aliresearch 2016, compiled by Fung Business Intelligence
E-commerce logistics not only involves express delivery, but also is supported by many upstream stakeholders providing holistic logistics solutions. LH delivery is one of the important sectors in e-commerce logistics.

Major e-commerce players in China seek total logistics solutions with different approaches:

- The largest e-commerce giant, Alibaba, invests in or forms strategic alliance with plenty of LH delivery operators.
- The second largest e-commerce company, JD.com, builds its own logistics arm to handle LH delivery services.
Case 1 – Cainiao

Cainiao*, an affiliate of Alibaba Group, operates a logistics data platform and connects to 3000+ logistics companies. Some of which provide LH delivery services, such as KXTX, RRS, Suning Logistics, etc.

- Year of establishment: 2010
- Position: logistics solutions platform
- Services:
  - Online: provide LH delivery solutions and management services and other value-added services, such as payment, insurance, truck maintenance, training, etc.
  - Offline: cooperate with logistics parks and orchestrate the resources of logistics parks, e.g. users, data, etc.
- Profit model: Commissions, operation charges in logistics parks, rent, value-added services fee
- Relationship with Alibaba
  - Cainiao invested RMB >100 million in KXTX in 2014 and becomes the second largest shareholder of KXTX
- Network: 60 distribution hubs, 26 smart logistics parks
- Registered users: >2 million consigners, ~1.2 million micro- and small-sized trucking companies
- Annual number of orders: > 25 million

Source: Alizila, company website, internet sources, compiled by Fung Business Intelligence

* Cainiao announced a new logo on 22 May 2017.

For more background about Cainiao, view also Fung Business Intelligence’s Report “Last mile delivery: A pain point of online shopping” Mar 2017
Trend 3 (cont’d)

Case 2 – JD.com

In April 2017, JD.com announced to spin off its logistics arm, JD Logistics*, which offers warehousing, transportation and total logistics services to JD.com and other companies.

**JD Logistics’ services in China**

<table>
<thead>
<tr>
<th>Logistics services</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Warehouses</td>
<td>LH delivery</td>
</tr>
<tr>
<td>Express delivery</td>
<td>Cold chain logistics</td>
</tr>
<tr>
<td></td>
<td>Crowd-sourced delivery</td>
</tr>
</tbody>
</table>

**Other logistics services:**
Logistics finance, insurance

**Logistics technology:**
Drones, driverless vehicles, robotic & automated warehouses

**Logistics big data analytics**

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- JD logistics: spin-off from JD.com in 2017
- Year of establishment: 2007
- Services:
  - Provide warehouse, transport, last mile delivery, logistics data analytics, supply chain solutions and management services for JD.com and other companies
  - Launched self-operated LH delivery services since 2012
- Number of warehouses:
  - 7 smart logistics centre, 263 mega-size warehouses, over 6700 city depots
- Network: over 2600 regions and counties in China

Source: company website, compiled by Fung Business Intelligence

* For more background about JD Logistics, view also Fung Business Intelligence’s Report “Last mile delivery: A pain point of online shopping” Mar 2017
Trend 4
Warehousing and transportation under one roof

- In the past, few mega-size third-party logistics service providers offer one-stop-shop warehousing and transportation services, which incur huge initial investment. In contrast, warehousing and transportation services in China have clear specifications. Trucking and express delivery companies provide cargo and parcel movement services, while warehouse operators provide warehousing services.

- In recent years, China’s e-commerce market is transforming from C2C model to B2C model, and even now, B2B e-commerce model is emerging. The demand for logistics services is also evolving.

C2C model:
- In general, individual suppliers have lower bargaining power and smaller budget. They outsource the logistics processes to individual warehouse operators and truckers.
- The logistics process engaged numerous independent parties, and involved costly double handling. Time and money were spent, while there is no guarantee on service quality and efficiency.

B2C/ B2B model:
- Capability of providing all-in-one logistics service is a critical success factor in this new era. To enhance the efficiency and minimize the costs, many logistics operators or even e-commerce players set up digitized warehouse with transport capability at the same place.
- The logistics process is simplified and involves less handling. All data are transparently shared among stakeholders and service efficiency is highly improved.

Source: compiled by Fung Business Intelligence
Warehousing and transportation under one roof

- As mentioned in Trend 1, the distinction between express delivery and LH delivery is blurring. The express delivery operations tap into the market of LH delivery, and vice versa. In fact, the two sectors are not only diversifying their delivery models, but also putting warehousing and transportation under one roof and setting up their digitized warehouses.

<table>
<thead>
<tr>
<th>Company</th>
<th>Year of establishment (warehouse)</th>
<th>Area of warehouses</th>
<th>Network</th>
<th>Daily orders</th>
<th>System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best Logistics</td>
<td>2011 (self-operated)</td>
<td>1 million sq m</td>
<td>30 major cities, 70 digitized warehouses</td>
<td>400,000</td>
<td>Self-developed</td>
</tr>
<tr>
<td>SF Express</td>
<td>2012 (self-operated)</td>
<td>&gt; 1 million sq m</td>
<td>7 mega-size distribution centres, over 100 warehouses in 50 major cities</td>
<td>500,000</td>
<td>Outsourced</td>
</tr>
<tr>
<td>EMS</td>
<td>2013 (self-operated)</td>
<td>1.2 million sq m</td>
<td>7 mega-size distribution centres</td>
<td>50,000</td>
<td>Self-developed</td>
</tr>
</tbody>
</table>

- And as stated in Trend 3, mega-sized e-commerce players also strive for an efficient way to facilitate nationwide warehousing and transportation solutions.

Source: Deloitte (2016), compiled by Fung Business Intelligence
• Location of warehouse and truck terminal becomes one of the crucial factors in minimizing transporting costs. Data analytics is essential for optimization of digitized warehouse location.

<table>
<thead>
<tr>
<th>Factors affecting the location of digitized warehouse</th>
</tr>
</thead>
<tbody>
<tr>
<td>General location</td>
</tr>
<tr>
<td>Connection to airports/ports/rail stations, downtown, etc.</td>
</tr>
<tr>
<td>Road accessibility</td>
</tr>
<tr>
<td>Client profile/consumer demand</td>
</tr>
<tr>
<td>Source of goods</td>
</tr>
<tr>
<td>Industrial clusters, wholesale markets, etc.</td>
</tr>
<tr>
<td>Labour supply</td>
</tr>
<tr>
<td>Front line workers, logistics tech talents, management</td>
</tr>
<tr>
<td>Infrastructure</td>
</tr>
<tr>
<td>Fuel station, equipment/truck maintenance, etc.</td>
</tr>
<tr>
<td>Land cost and supply</td>
</tr>
<tr>
<td>Government policy</td>
</tr>
</tbody>
</table>

• In short, this trend in total logistics solutions provided by trucking companies/e-commerce players is a serious threat to existing third-party logistics companies, who have long been putting warehouse and transportation under one roof. Especially to the traditional third-party logistics companies that have not digitized their operations, this new threat would be a disruptive one.
Conclusions

• E-commerce not only changes the retail landscape in China, but also transforms the logistics sector.
• In the past decade, the evolution in China’s logistics sector focused on last mile delivery. The express delivery market is maturing and market concentration is increasing. Now, the game is moving onward to LH delivery.
• Due to external economic factors, keen competition and non-standardized operation, the growth of traditional LH delivery market is slowing down. And a number of new entrants, including express delivery companies, O2O truck matching platform operators and e-commerce players, are threatening the existing market leaders.
• To strike back, large-scale LH delivery companies diversify their businesses to offer express delivery services.
• However, challenges facing numerous micro- and small-sized truckers are still valid.

Source: compiled by Fung Business Intelligence
Conclusions

• It is controversial whether truck matching platforms can effectively optimize the resources of numerous micro- and small-sized truckers

• Indeed, some optimists expect that the idle resources problem can be resolved by truck sharing platforms. However, more works are needed to resolve the trust issue, e.g. equipment and service standardization, process transparency (cargo traceability), system and information synchronization (among different companies), payment system, credit review system, etc.

• More importantly, LH delivery involved complicated logistics processes and stakeholders. To achieve scaled economies in the LH delivery sector, the design of truck matching platforms must suit the logistics operations, instead of simply luring the users with subsidies

• In the Internet era, service quality and efficiency, traceability and cost effectiveness are some of the key differentiators in running e-commerce logistics. More and more companies put warehousing and transportation under one roof to enhance their efficiency and differentiate oneself from other competitors

• Besides, logistics and e-commerce giants are eager to invest in logistics technology (robotic, wearable tech, driverless trucks, automation), smart warehouse, big data analytics, Internet of things, which will further alter the logistics landscape in China. Traditional logistics companies should be alerted to the potential disruptions

• To facilitate huge investment in infrastructure and network expansion, more merger and acquisitions are expected in the logistics sector in 2017

Source: compiled by Fung Business Intelligence
Forthcoming
China’s logistics: Cross-border e-commerce

Previous report
Part 1 – Last mile delivery: A pain point of online shopping
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Management Theories and Business Models

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