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[Case Study] Things to Learn from the Hanjin Shipping Bankruptcy

On August 31, 2016, Hanjin Shipping filed for bankruptcy protection. Ports refused to accept containers from the company or started charging exorbitant rates, out of fear they wouldn't be compensated. The collapse of Hanjin Shipping is the largest container shipping bankruptcy in history, and its effect on international supply chains is poignant. Check out what other shipping companies can learn from the bankruptcy.

Situation: Hanjin Shipping Files for Bankruptcy



Image via <u>Flickr</u> by darinmarshall

The global financial crisis in 2008 caused the container shipping industry to lose \$15 billion in revenue. <u>Hanjin Shipping lost \$1.1 billion in 2009 alone</u> and has struggled to recover ever since. The U.S. recession hurt the container shipping industry tremendously, but there was also a Eurozone crisis that affected 22.7 percent of Hanjin's revenue and an economic slowdown in

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China affecting investors. Matters were complicated further by the fact that several mega container ships were ordered to support demand and growth that wasn't there.

By 2016, Hanjin Shipping had accrued more than \$5 billion in debt. The company handed over control of operations to the Korea Development Bank, its largest creditor. Then, negotiations started in an attempt for Hanjin to secure lower charter rates from ship owners. This proved unsuccessful and was deemed illegal by Seaspan. Hanjin creditors backed off amidst rumors of missed payments at ports, and this led to Hanjin's eventual bankruptcy filing in South Korean court. Hanjin Shipping was one of the largest container shipping companies in the world, and its bankruptcy shocked the industry.



Approach: Bad Debt Management and Loss of Creditors

Image via Flickr by Je.T.

Hanjin Shipping tried for months to restructure its debt and raise liquidity with creditors without success. As a result, bankruptcy was inevitable. Shippers panicked and began taking control of their containers to avoid inventory loss. Major companies like Wal-Mart, Kroger, Ashley Furniture, and Forever 21 were affected.

The Hanjin Shipping bankruptcy came at a bad time for holiday retailers who worried of merchandise shortages. Nearly 100 of Hanjin's vessels were stranded because ports didn't want to unload them. The U.S. court granted creditor protection to Hanjin to help get vessels unloaded at American ports, but there were still logistical problems and delays. Plus, Hanjin complained of price gouging.

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Impact and Advantage



Image via Flickr by wirralwater

International supply chains were drastically affected by the Hanjin Shipping bankruptcy. It's clear that retailers need to prepare for disruptions to avoid chaos and maintain supply chain continuity during crisis. It's never a good idea to rely solely on one shipper, even if it's a big company.

Holiday shoppers at the end of 2016 were faced with higher prices because some companies weren't able to keep up with shopper demands. Many <u>retailers learned the importance of</u> <u>optimizing each location's inventory capacity</u>, as well as diversifying its supply chain.

The Hanjin Shipping bankruptcy is complicated because the company is in an alliance with several other shippers, and the sheer container volume the company handles each year is impressive. It will take time for Hanjin Shipping to sell entities and achieve stability. Other shippers can learn from the bankruptcy by preparing risk management plans and being more careful with investments in case of recession.

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Purdue University to Study Truck Platooning

Truck platooning happens when a fleet of trucks drives closely together with very little following distance between each vehicle. It is a way of maximizing the capacity of a road while also saving on fuel consumption. The University of Purdue aims to study truck platooning technologies to help industry partners with their research. Truck platooning could revolutionize the trucking industry as well as present a partial solution to driver shortages and hefty truck fuel costs.

Purdue University Receives a \$5-Million Grant



Image via Flickr by cokestories

The <u>U.S. Department of Energy awarded a \$5-million grant</u> to Purdue University to study truck platooning. The study will examine the potential for fuel savings and vehicle-to-vehicle communication systems over a three-year timeframe. The project started in March 2017.

Several industry partners are joining the Purdue University team to study truck platooning, including Cummins, Peloton Technology, Peterbilt Motors Co., and ZF TMW. The University of Arizona will also work in collaboration with the National Renewable Energy Laboratory to contribute to the study.

The following are specific components that the partners will look at over the course of the truck platooning study:

- Pelton's next-generation truck platooning technologies
- Cummins' advanced powertrain concepts
- ZF TMW's automated steering controls
- Peterbilt's truck designs (579 model tractors)

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A Closer Look at Current Truck Platooning Technologies



Image via Flickr by Memoli156

The goal of truck platooning is to add autonomous capability to trucks, save on fuel, and take up less space on the road. The Department of Energy wants to boost truck fuel economy by 20 percent through platooning. Peloton's current platooning system has already shown a 7 percent increase in fuel economy with its Peterbilt 579 model tractors. Industry partners also want to add other technologies to the platooning system, such as vehicle-to-cloud connectivity and automated steering, to help boost fuel economy and autonomy. These new tractor trailers could hit the market by 2018.

Peloton's Director of Research, <u>Michael Palmer</u>, said, "Our objective is to tap into fuel savings that can only be attained by managing the powertrain precisely for the road ahead, and for the specific configuration of the trucks ... Cloud connectivity provides information about the road ahead, and the trucks exchange data about their estimated mass and powertrain capabilities. This helps us maintain smooth, efficient platooning through grades and rolling hills."

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Is Platooning the Future of Driverless Trucks?



Image via Flickr by Solar Guard Exclusive Truck Parts

The trucking industry has recently done extensive research on driverless trucks, but it will still be a long time before they are a reality on U.S. roads. However, platooning does put the industry one step closer to autonomous vehicles and trucks. Potentially, there could be one driver at the beginning of a truck platoon, and all other trucks in the fleet could communicate with the one driver about road conditions and speeds.

Truck platooning technology has <u>important implications for supply chains</u>. Companies could see goods moved to their final destinations more quickly. Pollution, road capacity, and noise could also see a reduction. Truck platooning is very promising to the entire transportation and logistics industry.

May 2017 Issue [Case Study] The Port of Oakland Sets Loaded Container Record

The Port of Oakland reached an all-time high for container volume at the end of 2016. Growth continues to soar at the port, and loaded containers account for 52 percent of all volume. Check out what enabled the Port of Oakland to set the record and how other West Coast ports can recover and do the same.

Situation: West Coast Ports Are Recovering from the Recession



Image via Flickr by Ingrid Taylar

The Port of Oakland services about 20 miles of waterfront in Oakland, California. It also oversees container volume at the Oakland International Airport and the Oakland Seaport. Thanks to recent improvements and innovations, the port has broken its record for container volume in a single year. <u>It handled 1.83 million containers</u>. That's 1 million containers more than the port's previous record in 2013. The containers were 20-foot equivalent units.

Fees paid by Oakland's marine terminal tenants are calculated based on container volume. The increase in volume means the port has increased its profits, despite consolidating five terminals to four in 2016. One of the Port of Oakland's biggest losses was the bankruptcy of Ports of America and MSC subsidiary TIL. They filed for bankruptcy and shifted volume to the Port of Los Angeles, Long Beach, and Tacoma. Despite this loss, the Port of Oakland still appears to have recovered.

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Approach: Improve the Port of Oakland's Infrastructure



Image via Flickr by wbaiv

Container volume has been down at ports around the world for the past decade. The Port of Oakland's dedication to improvement is the reason why it has been able to recover more quickly than other West Coast ports. Executives at the Port of Oakland have <u>big plans for 2017 to drive</u> more cargo volume to the port and build on the previous year's momentum.

The Port of Oakland has scheduled the following construction projects:

- Expand warehousing space by 250,000 square feet.
- Build a Seaport Logistics Complex spanning 440,000 square feet.
- Build a Cool Port refrigerated warehouse that measures 283,000 square feet and can accommodate an additional 30,000 chilled containers.
- Operate six new cranes that are 26 feet higher than standard cranes and can help with unloading bigger ships.

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Impact and Advantage



Image via Flickr by caligula1995

Like most other West Coast ports, the Port of Oakland had a hard time navigating labor disputes and slow economic growth in the U.S. between 2008 and 2015. Even though the port closed Oakland's Outer Harbor last year, lost a few major tenants, and consolidated its terminals, the port is now thriving and handling more container volume than ever before. Executives are hopeful that this trend will continue in 2017.

The new cranes at the Port of Oakland will enable the port to receive larger ships and further increase its cargo volume. Ports that do not have large cranes yet will continue to lose customers, as larger container ships are a growing trend because of the increased capacity. Executives at the Port of Oakland plan to stay ahead of the trend to draw in new customers and continue to grow. Ports that aim to increase container volume like the Port of Oakland need to build larger cranes, too.

Heavy Freight Growth Expected Over the Next Decade

The trucking industry is crucial to the success of the American economy. Shipping by truck is typically less expensive than air freight. In addition, trucks can reach more locations than container ships, rail cars, and other types of transportation. That's why it's not surprising that the freight truck industry is expected to grow dramatically over the next 10 to 15 years. Take a closer look at the challenges the industry can expect and how supply chains can prepare.

Projections for Heavy Freight Growth



Image via Flickr by Michel Curi

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The <u>American Trucking Association</u> (ATA) released a report at the end of 2016 projecting a freight volume increase of 28.6 percent over the next 11 years. That translates to an increase in freight revenue of \$1.52 trillion by 2026. <u>Bob Costello</u>, Chief Economist at ATA, stated, "The outlook for all modes of freight transportation remains bright. Continued population growth, expansion of the energy sector, and foreign trade will boost trucking, intermodal rail, and pipeline shipments in particular."

Freight growth is good news for the U.S. economy, but it does present a challenge to the trucking industry. There is already a driver shortage, and trucking companies have done little to combat the problem. Freight truck companies can only increase driver pay so much without digging into their profits. They also struggle to find qualified applicants. Beyond that, the <u>negative truck</u> <u>driver stigma</u> also presents a problem in recruiting new drivers.

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Shipping Companies Must Invest in Technology



Image via Flickr by P_Linehan

Shippers need to prepare for the freight volume increase. This means hiring new drivers and investing in freight technology. The industry will likely see a move towards larger, class-8 trucks to combat the driver shortage, but the trucking industry will also need to innovate to make sure that it keeps up with shipping demand. Possible improvements to the trucking industry include drones, on-site 3-D product printing, and driverless trucks. These are all things that could be a reality for shipping in the not-so-distant future.

It won't be long before trucking companies reach their capacity thresholds and fail to deliver orders to customers in a timely manner. Some companies may need to hire their own private fleet of trucks and manage shipping on their own. Of course, this is likely only a solution for large companies with a lot of capital. A private fleet of trucks is not ideal because of the expense, but it does help ensure products get to their destination.

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Freight Rate Projections



Image via <u>Flickr</u> by TDelCoro

If shipping companies don't find a way to keep up with demand, customers can expect higher rates. LTL freight has already seen a 4.9 percent increase in rates in the past year. Of course, demand isn't the only factor in determining freight rates. Fuel costs, investments, and the health of the economy also affect rates, but demand is a major contributor.

Staying ahead of the trend will be important for shipping companies. They are often hesitant about investing in new technology because the market is never completely reliable or stable. However, the huge freight growth projection should prompt action.

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- 27-30 November 2017 Singapore
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