



The knowledge from this research will benefit both authorities and industrial actors in planning for how to act when supply chain disruptions such as port conflicts occur.

Logistical consequences of the Gothenburg container port conflict

During the last few years, companies exporting and importing goods have experienced severe difficulties with goods going through the container terminal at the port of Gothenburg. A conflict between the terminal operator and the largest union has resulted in various strikes, blockades and a lockout throughout 2016 and 2017. As a consequence, goods have been delayed and rerouted. As part of a research project, SSPA researchers have mapped the logistical consequences for various actors in the supply chain as well as what they have done to mitigate these effects.

Higher costs

For companies sending or receiving goods there were financial consequences. More expensive road transports followed from goods being rerouted through other ports. Delays led to lost sales, higher costs for storage space for containers and rent for containers. Furthermore, to ensure that goods arrived in time, more expensive transport solutions, such as air freight were used.

Delays were common. Either the containers were stuck in port or containers were rerouted through other ports, which took longer. Apart from affecting customer relationships when promised delivery dates could not be met, a serious consequence of these delays was missed campaigns or seasons in stores. While companies importing goods could experience production stoppages, companies exporting goods had containers that they could not ship, which took up space. They further reported that it had implications for their customers' productions.

The disruptions to the goods flow also meant a lot of extra work. This involved time spent trying to handle the disruptions for customer-facing staff, planners, loading staff, and warehouses. Staff had to keep up to date regarding delivery times and new transport solutions, but also more document handling. Several of the companies described a high workload for their staff. Some of their customers were angry because the goods in-turn were delayed to them, and it was not easy providing information regarding delivery when lacking that information themselves. Companies described overtime, changes to holiday plans, and extra staff to manage the most hectic period during the largest disruptions. In addition, more long-term and proactive work was put aside for later to deal with the crisis of supply disruptions.

Bad for the environment

From an environmental point of view, the supply disruption in the port of Gothenburg meant a

greater reliance on modes of transport that are worse for the environment. Several companies used air freight to a certain degree to solve critical transports. When containers were sent via other ports the distances were generally longer, for example, containers were collected from ports in mainland Europe, Denmark, Norway and southern Sweden. For the containers that were rerouted to other ports, the transport between company and port were to a larger degree performed by truck rather than by rail compared to normal circumstances.

Various actors affected

In addition to the companies exporting and importing goods, many other actors were affected. The shipping companies were not able to unload and load as many containers per stop in the port of Gothenburg. This meant that some containers were left longer in European ports. Some decided to use smaller ships for calling

The conflict

The port conflict in this article is between the terminal operator AMP Terminals and one of the unions, Svenska Hamnarbetarförbundets avdelning 4. It has been important in this research project not to address the labour market conflict itself but focus on the logistical consequences for other actors.

in Gothenburg (e.g. feeder ships). The shipping companies decided to unload and load containers in other ports. For the shipping companies this meant route changes and higher costs for calling at more ports. More drastically, bookings to Gothenburg were refused. Agents for shipping companies report that Gothenburg is now seen as less competitive and thus less interesting for shipping companies compared to other ports.

With a rapid increase in the number of containers to other Swedish ports capable of handling containers, the total capacity was strained and several ports set a number of restrictions regarding port calls. One reason for congestion in the ports was the shortage of trucks for transporting the containers.

The hauliers either spent a long time queuing in the port of Gothenburg or had to drive longer distances to collect or drop off containers in other ports. With each drive taking longer, they did not have time to transport as many containers. As a result, the demand for trucks was higher than what was available.

Freight forwarders, who arrange much of the transport for companies importing and exporting goods, spent more time per shipment, arranging new transport, for example, finding trucks to collect containers in other ports.

Rail connections were also affected. When companies did not want to send their goods via

Gothenburg, volumes decreased and rail connections to other ports became more popular. Some containers still used rail via Gothenburg, and trucks between Gothenburg and the new port.

Companies loading and unloading containers in the Gothenburg area were also affected. With the goods rerouted to other ports, fewer companies were interested in sending their goods via Gothenburg for loading. Additionally, with containers in storage for a longer period of time, there was a shortage of empty containers for loading new goods, and containers had to be collected from elsewhere (often by road).

Different phases

The actors have experienced three phases: urgent crisis, adaptation, and stabilisation. During the urgent crisis the companies reactively tried to solve the situations they faced, such as goods not arriving and goods showing up in different ports than anticipated. The urgent crisis meant high workloads for many of the actors and a lot of searching for information and alternatives.

During the second phase, adaptation, the actors put in place more long-term actions to minimise the effects and the likelihood of consequences. For example, companies decided on and put into place new transport solutions, such as using other ports, other routes, and ordering earlier. In this second phase there was a lot of

and a scenario-based environmental impact assessment is made.

Our experts also study how the industrial actors have been affected and which measures they have taken and can take to mitigate the consequences. More than 30 interviews with various actors have been conducted, providing a thorough overview regarding consequences during 2016–2018.

Swedish Transport Administration, Swedish Maritime Administration, Lighthouse and SFO Transport are financing the two-year project, which started in 2017.

The research project

SSPA and the University of Gothenburg (School of Business, Economics and Law), are jointly investigating the consequences of the port conflict from a supply chain perspective for various types of actors in Sweden. This knowledge benefits authorities and industrial actors in planning for how to act when supply chain disruptions such as port conflicts occur.

SSPA focuses on analysing the changes in maritime container traffic and its environmental impacts. The maritime container traffic is analysed over time with AIS data



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uncertainty regarding whether there would be more issues related to the port conflict. In this phase, it was more common to have a plan B. Companies moved from the crisis to the adaptation phase at a different pace, where some companies hoped that the port conflict and its effects would end while others implemented alternatives quickly.

In the stabilisation phase, business returned to a more steady-state. Some companies decided to return their goods flows to the port of Gothenburg, while others have found new transport solutions that they think work better and have decided not to return to Gothenburg. The cost of maintaining alternatives is generally deemed too high. Nevertheless, experiences in the crisis and adaptation phases mean that relationships have been formed and processes established that would lead to a quicker reaction should a similar situation occur again.

Illustration by SSPA.