



PEMA
PORT EQUIPMENT MANUFACTURERS ASSOCIATION

THE CHALLENGES OF BUILDING A NEW LINK IN THE GLOBAL SUPPLY CHAIN

Ottonel Popesco, Chairman of the Board, Port Equipment Manufacturers (PEMA)

First, let us look at the figures. According to 2017 world seaborne figures, 90% of the world's goods are transported by sea, and volumes reached 10.7 billion tons, containerised trade accounted for 17.1% of total seaborne trade, major dry bulk commodities accounted for 29.9%. Globally the total cargo ships fleet is around 50,000 vessels and there is a total of around 10,000 seaports.

Is there still an opportunity for global trade business where the ports are a vital link? The answer is definitively yes.

We have at least two challenging years in front of us also depending on a COVID-19 vaccine availability and its distribution. Times of crisis are also a time of opportunity; we should focus less on reading statistics with negative facts and focus on positive issues.

What are the main drivers also affecting the ports? These are drastic changes of consumer behaviour, not only due to a

temporary social distancing affecting global trade but also because longer-term consumer confidence remains much weaker due to uncertainty.

WHAT IS GOING TO CHANGE IN OUR INDUSTRY?

LOCALISATION VS. GLOBALISATION SCENARIOS

When globalisation began it was driven mainly by cost reducing criteria bringing us to what is now a complex supply chain. Western companies moved factories, suppliers, R&D towards the Far East in order to cut costs. Consequently, the Far East markets grew and became fierce competitors as well as strategic suppliers. For a company this is the cathedral strategy, i.e. you lose some bricks on your keystone, you risk the collapse of a company.

The era of globalisation, open borders and global value chains is already

under severe pressure. Populism, protectionism, and climate change have all challenged economic globalisation. The COVID-19 pandemic presents the latest challenge.

This raises the question whether the outbreak of COVID-19 has sounded the end of economic globalisation.

Three scenarios could help us grasp the potential long-term impact of the pandemic.

SCENARIO ONE: LOCALISATION INSTEAD OF GLOBALISATION

In this scenario, the pandemic will lead to the collapse of global value chains as national governments adopt protectionist policies and force companies to relocate production facilities closer to home to avoid a reliance on foreign suppliers.

The participation of companies in both inter-regional as well as intra-regional value chains will decrease.

SCENARIO TWO: REGIONALISATION INSTEAD OF GLOBALISATION

In this second scenario, the pandemic will have a higher impact on complex inter-regional value chains and a lower impact on intra-regional value chains. This means as an example, a factory in the Far East will sell its products locally using local Far East suppliers; some brands will do the same in the America's and Western Europe.

In my opinion, the coronavirus outbreak will not lead to the end of economic globalisation, rather, it will lead to a strong process of regionalisation.

SCENARIO THREE: A CONTINUATION OF GLOBALISATION

In the third scenario, economic globalisation will recover once the economic recession has ended and financial markets have recovered from the shock of the coronavirus.

Participation in inter-regional and intra-regional global value chains will recover and economic globalisation will return to pre-COVID levels.

The goal of these scenarios is, however, not to predict the future, but to contribute to the debate and enable policymakers and managers to better navigate the uncertainty that COVID-19 is bringing about.

It is not important which of the three scenarios will stand the test of time, but whether the supply chain of an organization would stand the test of these scenarios.

WILL GENERAL RULES APPLY?

Not unless governments make them mandatory for strategic reasons. Ultimately, there are only two realistic scenarios:

- Regionalisation. For example, a port crane or component company will manufacture in the Far East for the Far East market using Far East suppliers and will also move, or maintain, its manufacturing capacities in the western world for the western market using local suppliers. This scenario will be very difficult to apply for non-volume (niche) manufacturers.
- Globalisation. This would see no change from today's model.

Any change in the actual global value chain will take years to implement, requiring adaptability and customisation for each organization/company/country requiring huge investments.

For companies working in negatively affected industries like ports, this is an unprecedented time to innovate or face extinction.

Alibaba, for instance, was transformed during the mid-2000s due to SARS epidemic in China. The company launched its first consumer marketplace just as people around the country were self-quarantining,

so they turned to shopping online, setting the company on its path to becoming a \$500 billion e-commerce giant.

When we look back on the current health crisis, there is no doubt that we will learn that it resulted in several innovations: new drugs and medical devices, improved healthcare processes, manufacturing, virtual meetings, and remote work.

This crisis presents unique conditions that allow innovators to think and move more freely to create rapid, impactful change, apply chain breakthroughs, and new collaboration techniques.

We strongly believe that these two scenarios will develop, improve, and once the COVID-19 crisis has passed will grow the port industry.

WHAT ARE THE MACRO DRIVERS AFFECTING THE PORT INDUSTRY?

Recession will dry/slow new infrastructure investments, including ports until end 2021.

Government stimulus will last possibly six to 12 months and this is not enough for large projects, as social distancing and specific quarantine between countries will last unless vaccine is found.

Let us analyse a relevant UN official data which reflects the actual situation and why it could take decades to make changing and affecting ports.

According to UN latest statistics, worldwide industrial production (manufacturing) in 2018 was split, as percentage, in between the following countries (here we have only the top 10): China, 28.4%; US, 16.6 %; Japan, 7.2 %; Germany, 5.8 %; South Korea, 3.3 %; India, 3 %; Italy, 2.3 %; France, 1.9%; UK, 1.8 %; and Mexico, 1.5 %.

This data, not well known by the public, is vital in understanding where we stand and where we go as port industry.

In the last 30 years the decision to move manufacturing towards China has left Western economies and companies almost totally dependent on China. This was boosting the sea transportation (and ports) giving incredible annual growth rates above GDP rates for the last two decades with a tremendous development of the port manufacturers.

Heavily industrialised countries, such as France, Germany, the UK, and the US, became service suppliers keeping a few strategic industries in their hands.

Today, almost all port equipment manufacturers have manufacturing and R&D centres in China dedicated to serve the domestic and the international market.

The main reasons are very simple. The opportunities of the huge domestic Chinese market and, not the least, a cheap labour cost for the competitive international market.

This strategy has also a boomerang effect as today, as you can see from the statistics, we see countries who have basically lost some of their industry expertise. As an example, in the port industry where in EU and US were once world leaders, there are only a few companies still surviving there.

Post COVID-19 crisis, there are signs that the supply chain might change in the next years, East towards West; this is not a guess and the main driver will be the lessons we learned from the crisis.

CONCLUSIONS FOR POSSIBLE TENDENCIES FOR PORTS AND TERMINAL INDUSTRY

To understand the possible future port development, the Baltic Dry Index (BDYI) can give us a colour of the sea transportation trends.

Please note that above comments and conclusions are made personally and not on behalf of PEMA members.



1. We believe that lower sea trade volumes forecasted in the next period might put a strong pressure on Shipping Alliances like Ocean Alliance, Alliance, 2M.
 2. Due to the same reasons and huge capital expenditure investments orders for vessels with increased container capacity (above 12,000 TEU) might slow or stop. This is what has happened recently with the aviation industry for the stop of B747 and A380.
 3. We might see a deeper international integration of the supply chain in connection with shipping lines-port/ terminals-inland transportation. In other words large shipping lines may continue to invest in their own terminal operators (this is already the case today with Cosco, APMT, etc) and also extend to inland transportation, logistic, servicing the customer until reaching end user.
 4. We might also see a rebound of retrofitting instead of building new port terminals or brownfield projects; the investments cost and return on investments must be realistically analysed before approving these kinds of new projects.
 5. IT/digitalisation technologies will increase as well, and this tendency showed its benefits during the existing COVID-19 crisis.
 6. Port equipment service preventive maintenance requests will increase in order to extend equipment lifetime and in some cases defer purchase of new equipment.
 7. technologies linked to carbon footprint reduction will boom; electrification will continue stronger for port mobile equipment and ship power supply.
 8. Regarding terminal automation there are mainly two points of view based on main data surveys (McKinsey 2018):
 - A. Automation will decline due to large investments needed (estimations are up to hundreds of millions USD for a full new two or three million TEU terminal) but will be present in niches where less manpower and less investment are needed, for example AGV and mooring.
 - B. Automation will continue on the 2013-2018 path with the goal of cost reduction and the new less physical contact between human operators. We believe that the a.) option (decline) is more viable at least in the coming years depending on the sea transportation market trends and the calculation of the acceptable time needed of the return on investment.
- Even if transportation in general has a negative forecast trend, we believe that sea transportation will improve and recover faster in the next period, with positive impact for ports and terminals specifically after the COVID-19 crisis.
- Our advice is *“Stay closer, even virtually, to your customers.”*

ABOUT THE AUTHOR

Mr. Popesco has 40 years of experience in the Port Industry and is Chairman of the Port Equipment Manufacturers Association-PEMA since 2008. Co-founder, chairman, board member of Nasdaq and other Stock Exchange, or private technology companies acting in various industries he is also heading his own VC investment company.

He holds various degrees and diploma, MBA, M.Sc.,P.Eng. from various Universities, Sorbonne, ASE, Harvard.

ABOUT THE ORGANIZATION

PEMA aims to provide a forum and public voice for the global port equipment and technology providers. PEMA fulfils its mission and aims through a combination of activities, among them: contribution to industry standards, guidelines, best practice, and training in liaison with other industry bodies and associations. With the contribution of its over 120 members worldwide acting in the port industry, PEMA published through its technical committees over 24 extensive information papers about guidelines, standards proposals.

