The context of European Port Industry - Recent Developments & Challenges

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Liner Shipping has undergone a huge consolidation in the last three years. Capacity share of the three Container Shipping Alliances (OCEAN Alliance, THE Alliance, 2M) in the Far East – Europe Mainliner Trades is 99.6% (!), whilst the relevant share in the Far East – North America Mainliner Trades is 92% (ALPHALINER, March 2021).

At the same time, capacity magnification of the Container Vessels deployed in East – West Mainliner Trades continues to develop, with the capacity share of the Global Container Fleet in the range 18,000 – 24,000 TEUs reaching 11%, while in the case of orderbook the share in the above range reaches 37% (ALPHALINER, March 2021).

Ports in Europe, mainly those serving Liner Shipping, are undergoing substantial changes, not only because of the COVID 19 situation and the multifaceted situation the pandemic created, but, mainly, because of the business setting under which they operate and the prospects and challenges relating to the deployment of new business practices and technologies that they are rapidly introduced in this sector.

These developments are not unique for the European Port Industry, but they decisively influence the present and the future of ports in Europe.

The unprecedented consolidation and vertical expansion of the Liner Shipping Industry; the increasingly dominant role of the Global Terminal Operators, expanding their scope horizontally and vertically, in complex structures; the continuing magnification of container vessels and the resulting pressure both in port infrastructure as well as in the structure of connectivity patterns and the associated service strings; the introduction of digitalization and new technologies that have been already applied in other Industry and Service sectors (automation, big data, Artificial Intelligence, servitization etc.), the so-called Industry 4.0, and their impact on labour practices; the vulnerability in IT deployment; the increasing pressure for the adoption of sustainable practices in the port sector are only a few to mention.

Consolidation and vessel capacity magnification leads to container transshipment commoditization[1] and fundamental reshaping of service strings, thus influencing connectivity. The consequence of this evolving process is that transshipment hubs that are not organically related to Container Shipping Lines are heavily reliant on their decisions and vulnerable to bypassing. The recent case of closure of the Cagliari Container Terminal (CICT) in Sardegna and traffic diversion to other container terminals in West Mediterranean, like Tangier Med in Morocco, is a good example of this tendency and practice. Those terminals that rely exclusively on transshipment traffic are even more vulnerable to this decision-making exposure.

Even the recent vulnerabilities that the Container Shipping Industry and Container Terminal Operations are experiencing worldwide with congestion, both seaside and landside, and strong container equipment shortages, as a consequence or a result of the COVID 19 pandemic, can be attributed, to a certain extent, to Liner Shipping Consolidation and the associated rapid spread of the effects of blank sailing, of course along with increase in demand and the new concerted carrying resources allocation policy adopted by Container Shipping Companies.

Global Terminal Operators (GTOs) have an increasingly pivotal role in port operations worldwide, following a path of

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consolidation and business networking similar to that of Container Shipping consolidation evolution. To a large extent these two activities are interest-wise interconnected as vertical integration has rapidly attracted the interest of GTOs. In 2019, Container Terminals owned or partially owned by GTOs accounted for over 66% of the total global container port throughput and GTOs operated 62% of the global container port capacity (Drewry, Global Container Ports Operators, 2020).

Development of strategic gateway ports is not simply an issue of maritime and freight industry consolidation, but it may relate to geopolitical aspects. In the case of Cosco Group, the selection of the Port of Piraeus as a major Gateway Hub to facilitate the Belt and Road (BRI) Initiative goals, along with the acquisition of the majority of the Spanish Port Operator Noatum which provided a stronghold in West Mediterranean, in addition to the partnership with ECT Rotterdam in Euromaxx Terminal (and participation in Antwerp Gateway and in Zeebrugge CSP, Belgium) provides a strategic triangle for the core European hinterland.

As indicated earlier, vertical integration is fundamental for the strategy of most Shipping Lines and, consequently, they have invested in or developed relevant Logistics Service Providers (LSP) (e.g. participation of CMA CGM in CEVA) or invested in strategic Intermodal Freight Facilities (e.g. A.P. Moller – Maersk in partnership with Duisport in the new Logport VI, a trimodal major facility in Duisburg[2]), for servicing the European hinterland. Nevertheless, the key component of the accessibility of the entire European hinterland, in a way that an "even" and balanced situation would be achieved, is the balanced investment and completion of the Trans-European Transport Network (TEN-T). In fact, there are notable differences in realizing the TEN-T Network in the EU Member States and a sustained effort should be directed towards this goal in the coming years[3].

Introduction of digitalization is a non-return process for the Port Industry worldwide. Many important steps have been adopted during the last five years in Europe, mainly in major container terminals. Nevertheless, as it is noted by a recent report of the European Seaports Organization (ESPO)[4], the challenge is to keep smaller ports on board ensuring digital transition and information connectivity with their customers and other port industry stakeholders.

Risks of cyber-attacks represent a serious challenge for the Port Industry globally and in Europe. As it is reported recently, a sheer increase of cyber- attack incidents relating to ports has been observed[5] and as long as deployment of digital solutions is increasing the resulting risk is growing.

Introduction of the so-called Industry 4.0 in the Port Sector, besides the changes in business models and operational practices, has a certain impact on the human resources, spanning from job and function reorientation to needs for retraining and to redundancies, notwithstanding the fact that certain port functions can be well automated, whilst in other cases remote exemption management is a complex process. This area of specialized industrial psychology has not been fully addressed yet.

Decarbonization and sustainable development and operations is high at the European Ports Agenda[6]. Rolling out the measures to achieve the target of reducing air emissions is a top priority for European Ports. Nevertheless, the real challenge for European ports is to develop a long lasting and coherent set of good practices in sustainability matters. These practices, though diversified according to the specificities of each port, should ensure a kind of "chaining" process, i.e. what is important is not only to adopt an environmentally sound practice, but to ensure that this practice is based on another sound practice "upstream" and supports another good practice, downstream. Certain major European ports have worked during the last years towards this goal and can well showcase certain practices that respect this approach and mentality. Nevertheless, the real challenge is to "transfer" these experiences and practices to smaller ports, where the confined spectrum of activities, the degree of assets and resources and the participating stakeholders is a rather limiting factor.

In the context of port sustainability, Port – city relationships are instrumental both in keeping a smooth relationship between the port community and the urban setting, but also in establishing a strong partnership towards achieving sustainability goals.

Last, but not least, is the institutional setting under which European Ports currently operate. The recent Port Service Regulation (PSR) (2017/352) is a flexible piece of legislation, a product of lengthy negotiations and compromises. It provides for a setting that can respond to the very diverse National Member States institutional settings and it is designed with a view to make Port Authorities "facilitators of the Port Ecosystem", according to the terminology of ESPO. Nevertheless, the sheer power increase of the Global Terminal Operators, that goes beyond the geographic limits of European Union, along with that of the Liner Shipping Industry, poses questions as to whether the European Port Industry institutional framework is adequate to ensure that Port Authorities are not followers in this evolving global transport game...

[1] Haralambides, H.E. Gigantism in container shipping, ports and global logistics: a time-lapse into the future. Marit Econ Logist 21, 1–60 (2019)
[2] https://www.maersk.com/news/articles/2020/12/17/logport-maersk-confirms-intention-to-invest
[3] Theofanis, S. Ports in East med and Black Sea – Developments and Challenges: Some Considerations. Webinar on Transport in the Balkan and Black Sea Region. Advancements in the Port Sector.March 23, 2021.
[4] ESPO, 2019. Priorities of European Ports for 2019 – 2024.
[5] https://www.offshore-energy.biz/ports-increasingly-targeted-by-cyberattacks-as-maritime-incidents-surge/
[6] https://www.espo.be/media/Environmental%20Report-WEB-FINAL.pdf