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DOES THE DIGITAL LEVIATHAN SPELL THE END OF FAIR COMPETITION IN THE SHIPPING INDUSTRY?

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Digitalisation has caused an earthquake in the legal competition frameworks of the USA and the EU. In the shipping industry it has thrown the door wide open to cooperation initiatives on logistics solutions with advanced state-of-the-art features. This raises the question of whether the US and EU legal competition frameworks are suited to deal with these issues. The manner in which the US Federal Maritime Commission (FMC) has assessed the collaboration among five of the world's biggest carriers resulting from the conjoint implementation of the Digital Container Shipping Association Agreement and the TradeLens Agreement provides a test case.

Introduction

Container liner shipping services is a global business. It demands a high level of cooperation and commitment from all actors involved in the implementation of the services. Apart from carriers, other parties including ports and terminals, customs authorities, third-party logistics, providers of inland transportation and shippers are involved. All actors must use computer programs equipped with information technology (IT) standards that specify the procedures by which data is stored, manipulated and retrieved within the program. IT standards such as common protocols, file types, interfaces, database query languages and hardware are an indispensable component for the proper functioning of computer programs.

The level of cooperation and commitment required of all actors involved can only be achieved if all computer programs are semantically interoperable, both with each other and with the business intelligence and analytics (BI&A) system, which secures the proper and smooth operation of the entire logistics chain by storing and processing the data. To achieve semantic interoperability, all computer programs and the BI&A system must use the same IT standards.

The Digital Container Shipping Association

The Mediterranean Shipping Company (MSC) has taken the initiative towards creating IT standards best suited for the exchange of data related to the international ocean transportation supply chain by establishing a standard setting organisation: the Digital Container Shipping Association (DCSA). The DCSA is a neutral, non-profit organisation. Its purpose is to pave the way for digitalisation and standardisation in the shipping industry. The work undertaken is for the benefit of the entire industry. All standards are openly published and available free of charge to interested external parties. The DCSA has no intention of developing or operating any digital platform and is not working on topics of a commercial or competitive nature. None of the standards agreed should be binding for the member lines.

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The MSC, Maersk, Hapag-Lloyd, CMA CGM and ONE (also collectively referred to as 'the parties' below) have entered into a cooperative working arrangement on the (further) development and utilisation of IT standards, known as the DCSA Agreement. Its purpose is to permit the parties to discuss, develop and utilise common or compatible IT standards for the creation, transmission and/or storage of data related to the receipt, handling, delivery and/or storage of property between participants in the international ocean transportation supply chain. Active membership of the DCSA Agreement is limited to the parties, who have the exclusive right to vote on DCSA matters. The DSCA was officially established in Amsterdam, the Netherlands, on 19 April 2019.

TradeLens

In order to enable shippers, authorities and other stakeholders to exchange data on supply chain events, the data they possess that is relevant for that purpose must be brought together onto a BI&A system that serves as a single, secure data sharing and collaboration platform. On this platform, the data is subsequently blended in high-quality visualisation formats that help laypersons understand what they are looking at, and (ideally) make better decisions based on hard information.

Maersk has taken the initiative of creating such a platform by establishing TradeLens, a joint venture of Maersk (51 per cent) and IBM (49 per cent). Known as the TradeLens cloud service, the platform includes:

- application programming interfaces (APIs) for publishing and subscribing to event data describing the physical progress of cargo through the supply chain and associated regulatory/compliance milestones including events related to documents
- the ability to store documents in a structured and unstructured form and share those documents with permissioned parties in the supply chain;
- user interfaces for viewing these events, milestones and documents and
- user interfaces and APIs for managing users and access permissions.

TradeLens is a profit-oriented business. Its cloud service is available in a pay-per-use version or as a subscription.

MSC, Maersk, Hapag-Lloyd, CMA CGM and ONE have entered into a second cooperative working arrangement, known as the TradeLens Agreement. Its purpose is to authorise the parties to cooperate with respect to the provision of data towards a blockchain-enabled, global trade digitised solution that enables shippers, authorities and other stakeholders to exchange information on supply chain events and documents on a dedicated platform and to collaborate with the platform providers on products to be offered on the platform and their marketing on the platform. The platform providers, namely International Business Machines Corporation and Maersk GTD Inc., are not parties to the TradeLens Agreement. Active membership of the agreement is limited to the parties, who have the exclusive right to vote on TradeLens matters. No party is prohibited from participating in any other e-commerce initiative.

Antitrust issues

The relevant market

The relevant market within which to assess antitrust issues is established by the combination of the product and the geographic market. The relevant product market comprises all services regarded as interchangeable or substitutable by the consumer by reason of their characteristics, prices and intended use. The definition of the relevant geographic market is based on the definition of the relevant product market. The most important factor for assessment of the relevant geographic market is the customer's situation and the transport and distribution possibilities that the provider of the products or services is able to offer.

The relevant market within which antitrust issues emanating from the implementation of the DCSA Agreement must be assessed is the market of the development and utilisation of IT standards for the shipping industry (the IT standards market). The relevant market within which antitrust issues emanating from the implementation of the TradeLens Agreement must be assessed is the market of

blockchain-enabled, global trade digitised solutions that enable shippers, authorities and other stakeholders to exchange data on supply chain events (the IT information market).

The position of the parties on the IT standards market

Apart from the parties, Evergreen Line, Hyundai Merchant Marine, Yang Ming Marine Transport Corporation and ZIM support the DCSA. This means that, with the exception of COSCO-OOCL, all major carriers are involved. It follows that the collaboration resulting from the DCSA Agreement gives the parties a strong, if not a dominant, position on the IT standards market.

The position of the parties on the IT information market

No actor that wants to do business with a carrier that supports TradeLens can refuse to join the TradeLens cloud service. At a press conference on the occasion of the presentation of the company's half-year interim report on 15 August 2019, Maersk's CEO Søren Skou said: 'So we can basically force them to join the platform. Because if they want to do business with us they have to supply data'. All in all, more than 170 companies have joined the Trade Lens cloud service. They include the majority of the world's biggest carriers, who represent a capacity equivalent to more than one-third of the world capacity. On 10 September 2020, Shipping Watch reported that TradeLens is well on its way to integrating those carriers' data and that the first pilot projects have already been launched. It follows that the collaboration resulting from the TradeLens Agreement gives the parties a very strong if not a dominant, position on the IT information market.

Antitrust concerns

The parties have decisive control in the implementation of both the DCSA and the TradeLens Agreement. The object or effect of this control is that the agreements are implemented in close conjunction with each other. This implies that the DCSA will take full advantage of the TradeLens database with a view to improving its IT standards and that the TradeLens cloud service will exclusively use the DCSA's increasingly sophisticated IT standards.

The IT standards market

The data that shippers, authorities and other stakeholders who (are forced to) participate feed into the TradeLens cloud service is both structured and unstructured. Structured data follows a model that defines the various stages of the transportation process, the type of data these stages contain and the way in which they relate to each other. Traditional platforms for the aggregation of structured data are electronic data interchange (EDI), enterprise resource planning (ERP) and systems and extensible mark-up language, known as XML. Unstructured data does not conform to a specific model. It flows outside the normal channels and is mined from multiple sources.

Shippers, authorities and other stakeholders that participate in TradeLens have a thorough understanding of, and experience with, the shipping industry. Therefore, part of the data they own, regardless of whether it is structured or unstructured, will be of a strategically sensitive nature and possibly be protected by IP rights. This will be the case particularly if the data serves as a contributory factor in the determination of their market strategies. It follows that participants in TradeLens have a vested interest in preventing this data from falling into the wrong hands.

The advanced state-of-the-art features of the logistics solutions deployed in the computer programs of the participants in TradeLens and the BI&A systems underlying the TradeLens cloud service, together with their semantic interoperability, make it very difficult, if not impossible, to dissociate strategically sensitive data from strategically non-sensitive data. Thus, by necessity, use of the TradeLens database in regard to the development and utilisation of IT standards would oblige the DCSA to make use of strategically sensitive data.

The question now is whether the antitrust concerns emanating from the conjoint implementation of the DCSA Agreement and the TradeLens Agreement may be allayed by the fact that: (i) the DCSA standards are openly published and are available free of charge to external interested parties; (ii) none of the standards agreed is binding for the parties; and (iii) no party is prohibited from participating in

any other e-commerce initiative. In my view, this question should be answered in the negative, based on the following, non-exclusive arguments.

First, access to the TradeLens database provides the DCSA with key insights about the manner in which shippers, authorities and other stakeholders conduct their business. The DCSA will use these insights for profiling and personalising its IT standards. This will substantially increase the quality of these standards, as a result of which the IT standards market may be subdivided into specific segments, each with its own data definitions and data formats. As these data definitions and formats will be largely determined by the DCSA, it follows that other providers of IT standards will find it even more difficult to compete.

Secondly, in order to be able to research and develop new IT standards that, by virtue of their characteristics, prices and intended use are interchangeable and substitutable with DSCA standards, competitors of the DCSA on the IT standards market need to have access to the technical data underlying the DCSA IT standards. This technical data is stored in the TradeLens database. Particularly if the data is wholly or partly protected by IP rights, the parties and/or participants in TradeLens who are entitled to this data may refuse access or prevent access to the TradeLens database by demanding unreasonable royalties or exorbitant licensing terms. Such conduct is often called 'patent hold-up'.

Thirdly, the DCSA may develop new standards, in which valuable data and processes already used in previous standards have been encoded. If these previous standards had defects and quirks and/or technical limitations, competitors will have to replicate these deficiencies in order to maintain the semantic interoperability of the computer programs of the participants to TradeLens, both with each other and with the BI&A system deployed within the TradeLens cloud service. As this pattern may reassert itself, the market will not be inclined to switch to alternative standards.

The IT standards market has considerable potential for offering significant productivity and effective improvements of IT standards. According to a Drewry estimate, container shipping was a US$185 billion (revenue) business in 2018 and now generates roughly 100–120 million data points from different sources every day, including ports and vessel movements. Therefore, it comes as no surprise that high-tech companies have shown a keen interest in securing a piece of the cake. Examples include companies like Eniram Oy and ABB, pioneers in this field. In addition, sophisticated software produced by Laros and GreenStream, for example, has paved the way for the growing ship data market. Also, Ericsson has increased its focus on the shipping sector. It has collaborated with Cobham Satcom to enter the market and has signed a strategic agreement with Inmarsat to promote data sharing in the maritime industry. Last but not least, Amazon and Alibaba have demonstrated a huge interest in this market. This clearly shows that potential competitors of the DCSA are not just other pieces in the power game of lines and alliances; they are the most important and strongest voices within the high-tech world. The crowding-out of these providers of competing technologies would raise serious antitrust concerns.

The IT information market

Antitrust concerns emanating from access by the DCSA to the TradeLens database are not confined to the IT standards market, but also extend to the IT information market. The ever-increasing dependency of shippers, authorities and other stakeholders on the DCSA IT standards in combination with barriers obstructing entry into the IT standards market means that inaccessibility of the technical data underlying the DCSA IT standards will make it more and more difficult for other providers of blockchain-enabled, global trade digitised solutions enabling exchange of data on supply chain events to compete with TradeLens by providing solutions equipped with IT standards other than DCSA standards. The crowding-out of these providers of competing services would raise serious antitrust concerns.

The discussion above demonstrates that the focal point for assessing the antitrust issues emanating from the conjoint implementation by the parties of the DCSA Agreement and the TradeLens Agreement on the IT standards market and the IT information market is constituted by the manner

in which the parties take benefit from the TradeLens database regarding the (further) development and utilisation of these DCSA standards. Exclusive access by the DCSA to this database, together with the blocking of the technical data underlying its IT standards, will have the object or effect of turning the TradeLens database into an instrument for raising barriers obstructing entry into the IT standards market. This will lead to the progressive dependency of shippers, authorities and other stakeholders on the DCSA's IT standards. As a result, it will become increasingly difficult for them to switch to an ecosystem that makes use of IT standards other than DCSA standards. The technology required, retraining of IT personnel and company-wide implementation of another ecosystem would simply be too expensive.

Taken together, these effects would enable TradeLens to optimise its profitability fully. On 19 August 2020, the Journal of Commerce reported that Maersk had confirmed that monetisation of TradeLens is indeed one of the key objectives for the near future. It follows that this will (or may) be to the ultimate detriment of shippers, authorities and other stakeholders as they would have less choice and might face higher prices.

The US Shipping Act

The DCSA Agreement has been filed with the US FMC and was approved on 14 March 2019. The TradeLens Agreement has been filed with the FMC and was approved on 6 February 2020. It has been argued above that exclusive access to the technical data underlying the DCSA IT standards may give rise to serious antitrust concerns, both on the IT standards market and on the IT information market. It follows that the FMC cannot restrict itself merely to assessing the solitary impact of the DCSA Agreement and of the TradeLens Agreement on each separate relevant market.

The obligation of the FMC to assess the aggregate impact of the conjoint implementation of the agreements on both relevant markets also follows from the 2017 Federal Maritime Commission Authorisation Act, being an amendment of the 1984 US Shipping Act. It was signed into law on 4 December 2018, well before the approval given by the FMC of the DCSA Agreement on 14 March 2019 and the TradeLens Agreement on 6 February 2020. Section 710 grants the FMC authority to seek injunctive relief in court against actions of regulated entities that 'substantially lessen competition in the purchasing of certain covered services'. This section expands the scope of factors that the FMC must consider, including the aggregate impact of agreements on competition, rather than reviewing the impact of each individual agreement.

The FMC has not exercised its right to obtain injunctive relief in court to block one or both of the agreements. Each agreement was approved 45 days after filing had elapsed. This indicates that the FMC has concluded that the aggregate impact of the conjoint implementation of the DCSA and the TradeLens Agreements on the IT standards market and/or the IT information market does not give rise to serious antitrust issues.

This conclusion would seem to be at odds with the observations above as well as with the antitrust issues the EU regulators have identified in their investigations of the proposed acquisition of Fitbit by Google. Although Fitbit and Google are active on different relevant markets, their concern is that the key insights into the life and health situation of the users of Fitbit devices stored in the Fitbit database would further entrench Google's market position in the online advertising markets by increasing the already vast amount of data that Google could use for personalisation of the ads it serves and displays. This approach indicates that the manner in which the parties take benefit from the TradeLens database should be the focal point in the assessment of the antitrust issues in the DCSA/TradeLens case.

The dominant position held jointly by the parties on the IT standards market and/or the IT information market implies that the findings of the EU Commission in the Fitbit/Google merger case may well apply mutatis mutandis in the DCSA/TradeLens case. These findings would seem to indicate that approval of the collaboration practised among the parties in the DCSA/TradeLens case – if at all – would first and foremost depend on acceptance by the parties of concessions regarding the use of the TradeLens database on the IT standards market and on the IT information market. The EU

Commission has rejected certain concessions proposed by Google on the use of its enlarged database and has started an in-depth investigation, to be completed by 23 December 2020. The outcome of these investigations may well be a major determinant in the assessment of the DCSA/TradeLens case.

As regards the above, I take the view that the FMC was wrong in failing to take account of the aggregate impact of the conjoint implementation by the parties of the DCSA and the TradeLens Agreements – more particularly the TradeLens database – on the IT standards market and the IT information market.

The TradeLens Agreement as filed and approved by the FMC provides that the interpretation, exercise and implementation of the agreement shall be consistent with applicable law, including Article 101 of the Treaty on the Functioning of the European Union (TFEU), and the 1984 US Shipping Act, as amended:

> In furtherance of the foregoing, this Agreement does not authorise the parties to discuss or agree upon: (a) the vessel capacity to be deployed by any of them; or (b) terms and conditions under which any Party provides ocean transportation services to its customers. It is understood and agreed that the data to be discussed by the parties shall not include rates, charges or other terms and conditions agreed upon by a Party and its customers.

This implies that the FMC is making its approval of the TradeLens Agreement conditional on the commitment that the data exchanged mutually by shippers, authorities and other stakeholders and supplied to the TradeLens database does not relate to strategically sensitive data that the parties could use as a vehicle for concerting their market conduct on vessel capacity and/or rates, charges or other terms and conditions. The advanced state-of-the-art features of the logistics solutions deployed in the computer programs of the participants to the TradeLens system and in the BI&A system underlying the TradeLens cloud service, together with their semantic interoperability, make it very difficult, if not impossible, to dissociate strategically sensitive from strategically non-sensitive data. As a result it will be very difficult for the parties to achieve this commitment, if not altogether impossible.

US antitrust law applies to agreements between carriers in foreign trade. If it can be demonstrated that the direct, substantial and reasonably foreseeable effects of these agreements could cause injury to domestic commerce in the USA by (i) reducing the competitiveness of the domestic market or (ii) by enabling anti-competitive conduct directed at domestic commerce, the conditions for application of section 6a of the Foreign Trade Antitrust Improvements Act (FTAIA) would be met.

It looks as if the parties have tried to avoid the applicability of section 6a of the FTAIA. This appears from the following proviso in the TradeLens Agreement:

> Although the activities described herein shall also be undertaken with respect to trades between countries other than the United States, such trades are not within the scope of the US Shipping Act or the jurisdiction of the Federal Maritime Commission (FMC) and therefore are not included in the Agreement.

The FMC has approved the TradeLens Agreement and thereby the above proviso. This implies that the FMC takes the view that the US Shipping Act does not apply, and that the FMC has no jurisdiction in cases where it can be demonstrated that the exchange of strategically sensitive data between the parties on topics such as vessel capacity and/or rates, charges or other terms and conditions in the foreign trade falls within the scope of section 6a of the FTAIA.

This approach cannot be upheld. In reviewing filed agreements, the FMC employed the same type of analysis as conducted by the Department of Justice and the Federal Trade Commission under the Horizontal Merger Guidelines and the Antitrust Guidelines for Collaboration among Competitors. This type of analysis covers the extra-territorial application of these Guidelines. It may well be argued, therefore, that, by approving the above proviso, the FMC has ignored the extra-territorial area of applicability of US antitrust law.

The above would seem to allow for the conclusion that there are compelling reasons for challenging the approval by the FMC of the DCSA Agreement and the TradeLens Agreement in the US courts.

The Treaty on the Functioning of the EU

Article 101(1) of the TFEU contains a per se prohibition of 'hard core' restrictions of competition. The prohibition applies irrespective of whether the restriction of competition is an 'object' or an 'effect'. Arrangements that do not have a restriction on competition for their *object* may also be caught by the cartel prohibition because they have this for their *effect*. However, this effect does not need actually to have occurred. It is sufficient for it to appear likely to happen in the near future. This second alternative for application of the cartel prohibition therefore permits the Commission to intervene to prevent distortions of competition at an early stage.

The Consortia Block Exemption Regulation (CBER) that will apply until 24 April 2024 is meant to provide guidance for assessment as to whether the prohibition rule of Article 101(1) of the TFEU applies. The CBER ordains that the rule shall not apply to activities that have the sole effect of promoting competition and do not affect the separate identity and/or the separate sales, pricing and marketing functions of companies that collaborate on the joint operation of liner shipping services. Exemptions relate to the following activities:

1. (a) the co-ordination and/or joint fixing of sailing timetables and the determination of ports-of-call;
   (b) the exchange, sale or cross-chartering of space or slots on vessels;
   (c) the pooling of vessels and/or port installations;

and

4. any other activity ancillary to those referred to above which is necessary for their implementation, such as:
   (a) the use of a computerised data exchange system.

Also, under EU antitrust law the focal point is that the advanced state-of-the-art features of the logistics solutions deployed in the computer programs of the participants in TradeLens and the BI&A system underlying the TradeLens cloud service, together with their semantic interoperability, make it very difficult, if not impossible, to dissociate strategically sensitive from strategically non-sensitive data. It follows that access to the TradeLens database would make the parties privy to strategically sensitive data, which would affect their separate identities and/or their separate sales, pricing and marketing functions and would serve as a vehicle for concerting their market conduct. I therefore take the view that the CBER does not apply with regard to the conjoint implementation by the parties of the DCSA and the TradeLens Agreements – more particularly of the TradeLens database – on the IT standards market and the IT information market.

Unlike the US Shipping Act, EU antitrust law does not provide for the possibility of gaining approval from the EU Commission by notifying an agreement prior to its entering into force. Companies in the EU are under a duty of self-assessment; they have to examine of their own accord whether their conduct falls within the scope of EU antitrust law. To that end, they must self-assess (i) under Article 101(1) of the TFEU: whether their agreement or practices make it possible to foresee to a sufficient degree of probability that future developments that may have a substantial effect, direct or indirect, actual or potential, on the pattern of trade between Member States, thus forming a sufficient basis to concert their market conduct, and/or (ii) under Article 102 of the TFEU; whether they have a dominant position on the relevant market(s) and, if so, whether they abuse this position, for example by charging unfair prices, by limiting production or by refusing to innovate, to the prejudice of customers.

The duty of self-assessment extends to arrangements or practices that fall within the scope of the prohibition of Article 101(1) of the TFEU, but may benefit from an exemption. An arrangement that fulfils the conditions of the exemption rule under Article 101(3) of the TFEU is legal from the outset and enforceable by national courts. Conversely, a restrictive agreement not fulfilling the conditions of the exemption rule will be void and unenforceable from the beginning. Apart from the EU Courts and the Commission, national courts are obliged to draw the legal and economic inferences from infringements of EU antitrust law of their own accord.

Like the USA, the EU favours the extra-territorial application of its antitrust law. It applies to foreign conduct that may have an influence, direct or indirect, actual or potential, on the pattern of trade

between Member States, thus forming a sufficient basis to concert market conduct and substitute practical cooperation for competition. Self-assessment should therefore include the extra-territorial application of EU antitrust law.

The above would seem to allow for the conclusion that there are compelling reasons for raising the anti-competitive effects of the conjoint implementation of the DCSA Agreement and the TradeLens Agreement, for example by means of a complaint to the EU Commission.

In this regard, it is reiterated that the Commission is entitled to take action when the anti-competitive effects have not actually occurred yet but only appear likely in the near future.

Conclusion

US and EU antitrust laws do not provide any guidance on the assessment of antitrust issues emanating from the advanced state-of-the-art digital solutions that are being applied in the shipping industry. It follows that both regulatory authorities and market operators are left to their fate. This sets high requirements in terms of knowledge and experience.

Current practice seems to indicate that this is not always forthcoming. Therefore, the US and the EU regulatory authorities have some serious catching up to do. They need to adopt a range of supplementary tools that provide suitable guidelines to market operators. At the same time, increased focus is needed on updating and expanding their own skills and competences. Only then will the US and the EU legal competition frameworks provide a solid basis to prevent the digital Leviathan from spelling the end of fair competition in the shipping industry.