

TECHNICAL REPORT

Regulation in the liner shipping industry: pathways to a balance of interests

Mary R. Brooks, Hilde Meersman, Christa Sys, Eddy Van de Voorde and Thierry Vanellander

June 12th, 2019

Title

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Authors

- Mary R. Brooks, Dalhousie University *ORCID: 0000-0002-8728-3853*
- Hilde Meersman, University of Antwerp *ORCID: 0000-0002-1806-8965*
- Christa Sys, University of Antwerp *ORCID: 0000-0001-5962-334X*
- Eddy Van de Voorde, University of Antwerp *ORCID: 0000-0002-1868-2332*
- Thierry Vanelslander, University of Antwerp *ORCID: 0000-0001-5213-3444*

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Aim

The aim of the note is to provide Regulators some insights in the findings of multidisciplinary research regarding the review of the Consortia Block Exemption Regulation No 697/2014 of 24 June 2014.

Publication to be quote as:

Brooks, M.R., Meersman, H., Sys, C., Van de Voorde, E. & Vanelslander, T. (2019) Regulation in the liner shipping industry: pathways to a balance of interests. p47. Online available at <https://www.uantwerpen.be/en/staff/christa-sys/my-website/research-interest/>

Regulation in the liner shipping industry: pathways to a balance of interests

Abstract

The Consortia Block Exemption Regulation (CBER) implemented by Commission Regulation (EU) No 697/2014 of 24 June 2014 will expire April 25th, 2020. Given the number of times the CBER has been reviewed over the years, and given the restructuring of the industry in the years since the demise of the conference system for European trades, the current five-year review of the CBER is an ideal moment to put forward some pathways to achieving a balance of interests between all actors involved, and in the interests of considering global regulatory implications. The main research question is: Are the interests of carriers and shippers in balance in the CBER era? If they are now, will they also be in the future? If not, what evidence does each actor have that the interests are not in balance, and what should be changed to bring back balance? The intent of the paper is to provide a road map for action by regulators. The study provides insights into the differing terms used and approaches by regulators, the different perspectives by the actors in a maritime supply chain, as well as exploring the benefits and drawbacks of each regulatory pathway. Finally, the need for data for permanent monitoring, and the specific types of required data, is addressed. The research is therefore relevant for scholars from a conceptual point of view, and for regulators as well as all actors in the maritime supply chain.

Keywords: *container liner shipping industry, competition, consortia block exemption, alliances, cooperative working agreements*

1. Introduction

The European Commission first adopted the Consortia Block Exemption Regulation (CBER) in 1995 by Regulation 870/95, with a five-year review cycle. In 2006, the Council of the European Communities repealed, through Regulation No 1419/2006, Council Regulation 4056/86 (its antitrust exemption for conferences) effective 31 October 2008. This meant that all joint price fixing activity (including charges and surcharges) as well as coordinated capacity management for services from or to the European Union and the European Economic Area are no longer exempt from anti-trust investigation. Concurrent with this decision, the Commission determined to amend and extend the sunset of the CBER until April 2015; one of the amendments to the criteria was the reduction of percentage threshold for market share from 35% to 30%. The new CBER was effected by Commission Regulation (EC) No 906/2009 of 28 September 2009. In 2014, the sunset date was extended again to 25 April 2020 by Commission Regulation (EU) No 697/2014 of 24 June 2014. With the imminent arrival of the 2020 sunset date, it is timely to re-examine, once again, the CBER and its value and practicality.

Consortia and other forms of cooperative agreements (CWAs) between ocean carriers have existed for centuries, dating back to the 1870s before the first conference, the UK/Calcutta Conference (Goss, 1968; Jennings, 1980; Brooks, 2000; Stopford, 2009). The capital cost of ships and the vessel loss risks found in the age of sail prompted many agreement forms to be used by the industry to spread both those risks and vessel capital costs, and this continues to today. In more recent times, the nature of consortia and CWAs has been shaped by two major regulatory reforms. In 1998, the U.S. reformed its liner shipping regulation in a significant way through the Ocean Shipping Reform Act. The next significant intervention in the way the market was regulated came with Europe's repeal of anti-trust exemption for conferences, with effect in October 2008. Both of these legislative reforms have been reviewed in depth by many authors, including the former by Brooks (2000), Fusillo (2004), Sys (2010) and the latter by Meersman et al. (2018) and Nair (2016) amongst others. This paper examines whether another significant alteration to liner shipping regulation is appropriate in the form of changes to the CBER.

In the past two decades, numerous scholarly articles on these regulatory changes and the decreasing number of alliances over the past 20 years (Table 1) prompted concern about the potential for anti-competitive market dominance by a few players. Table 1 gives an overview of the number of main trade alliances, the top 20 top share of worldwide carrying capacity (until 2011), and the number of individual carriers not involved in a global alliance in the selected years. The respective years are linked to milestones in competition rules. 1998 was the year that the U.S. implemented a legislative update of the Shipping Act of 1984 with a complete departure on many fronts, and 2001 was the year that Canadian legislation was updated, while 2005 was before the EU consortia law that made conferences illegal. The

abolishment of the liner conference block exemption, in October 2008, along with changes to the market share threshold for the CBER (reduced from 35% to 30%), made 2009 a year of importance.

Table 1: History of Global Alliances

Year	Main Trade Alliances	Top 20 Share of Total Capacity*	Top 20 Not in Global Alliances (including from Top 10...)
1998	5	53.0%	7 (#2 Evergreen, #3 Hanjin/DSR-Senator, #9 MSC)
2001	3	58.7%	8 (#1 Maersk SeaLand, # 3 Evergreen, #5 MSC, #8 CMA CGM, and #10 CP Ships**)
2005	3	70.5%	8 (#2 MSC, #3 Evergreen, #5 CMA CGM, #10 CSCL)
2009	3	70.0%	9 (#1 Maersk, #2 MSC, #3 CMA CGM, #4 Evergreen, #8 CSCL)
2017	3	90.4%	1 (#7 Hamburg Süd)
2019	3	92.7%	1 (#9 PIL)

Note: * Capacity share for Top 20 of all TEU in service worldwide from Containerisation International Yearbook, various years to 2009. After 2011, the capacity share was only available for the Top 100 from Alphaliner.

** While CP Ships ranked 10th in 2001, it was not in a global alliance (being a North Atlantic carrier); it was in a regional vessel-sharing alliance with OOCL but not on a global scale.

Source: Authors' own compilation derived from Alphaliner (2017, 2019) as of January 1 of that year., and Containerisation International (1999, 2001, 2006, 2010) for 1998, 2001, 2005 and 2009.

Two observations are clear in Table 1. Over a period of the last 20 years, the share of capacity controlled by top 20 carriers has increased significantly. Furthermore, the industry went from hundreds of container shipping companies (and could be described as fragmented) to relatively few large companies. Secondly, the number of shipping companies involved in a global alliance increased, and fewer 'go-it-alone' players remained in the top 20. By 2019,

almost no Top 20 ranked carriers were alliance-less. In the early years covered by this table, alliance formation was ad hoc not strategic, and early agreements were poorly constructed; the increasing penetration of containerization into breakbulk trades and the globalization of world trade altered global value chains in manufacturing and distribution drove shipping companies to reconsider strategy. They were further prodded by protracted poor profitability in the 1990s, and medium-sized container companies started to form strategic alliances operating on different routes around the world in order to offer a worldwide service to their clients. A new generation of strategic partnerships emerged (Brooks, 2000). In the last decade of this table, the operational efficiencies garnered from technological improvements and the need to reduce (fuel) costs and find other efficiencies led to the ordering of ever-larger ships, growing excess capacity in the market, and new challenges for reliability in service delivery (Sys, 2010, 2014). With the acquisition of Hamburg Süd by Maersk and the proposed acquisition of PIL by COSCO in 2020, it is quite clear that consortia are the norm in the marketplace and that concentration and consolidation have given the container shipping marketplace fewer players offering a portfolio of global services.

What is not clear from Table 1 is what role was played by the element of regulatory uncertainty. It may be that the state of flux in consortia relationships was promoted by that regulatory uncertainty, in addition to the frequently discussed market forces (e.g., supply outweighing demand), the advent of technology enabling ever-larger ships to be built, and the Global Financial Crisis of 2008-09 (GFC). The timing of the changing European legislation could not be more unfortunate, as economists will not likely ever untangle the GFC and the competition policy impacts. To rehash the past is to ignore the baseline of where the market is today and not particularly useful in the absence of market share data activity; capacity data acts a proxy but is not the relevant data. The paper therefore starts with the present and seeks to look forward to a time when the interests of all stakeholders can come into balance.

The goal of the research is not to revisit past research undertaken at a time that does not mirror the current industry context, but rather to examine the potential for a more global framework that focuses on more than just Europe's trade routes. The challenge to be addressed is that for some countries their policies for liner shipping are founded on a competition-policy led agenda (e.g., Australia, Europe, Hong Kong) and for others on a transport-policy led agenda (e.g., China, Korea, Japan, U.S. and Canada). In contrast to the Commission's 2014 review, and at a time when global trade policies are under stress, the paper takes the perspective that it is important for continued international trade growth that policies and laws are aligned globally at both ends of the trade routes. Therefore, the paper

seeks to identify possibilities for global consensus and the research presented here examines the scope of market regulation of cooperative working agreements like consortia.¹

Given the CBER current review, the restructuring of the industry in the years since the demise of the conference system for European trades, and the rise of truly global alliances in the container trades, it is timely to contemplate the needs of both carriers and beneficial cargo owners or BCO (importers, exporters, freight forwarders) holistically as well as those of ports and supply chain partners (ports, terminal operator companies and hinterland operators), in the context of the liner regulations of Europe's trading partners. As a result, the present paper examines the concepts of liner activities across multiple countries and identifies where there is convergence between the liner shipping regulations related to vessel activities in those countries where regulations are predominantly executed by competition authorities versus those by transport authorities.

The methodology looks for convergence and divergence through the use of a research question, so that areas of common ground can be identified and the divergences balanced. To address this challenge, the main research question is:

Are the interests of carriers and shippers in balance in the CBER era?

- If they are now, will they also be in the future?
- If not, what evidence does each actor have that the interests are not in balance, and what should be changed to bring back balance?

Answering this research question, and its two sub-questions, will provide a road map for action by regulators. The five-year review of the CBER is an ideal moment to put forward some pathways (options) to achieving a balance of interests between all actors involved. Existing research approaches the topic from an industrial economics point of view, while a more holistic understanding of existing patterns of regulation of agreements in the industry is needed for effective regulation of this global industry, and a balance of industrial economics and strategic management approaches are deployed.

The paper begins, in Section 2, by defining the terms used, not just from a European perspective, taking a broader worldview as the regulation of consortia, and other forms of cooperative working agreements. Furthermore, this section examines the differing approaches by regulators of the industry, and builds on an explanation as to how these regulatory tensions may be put in balance. It then reviews, in Section 3, the perspectives of three major industry players affected by the CBER—carriers, shippers (including freight forwarders and others acting on their behalf), and other stakeholders in the maritime supply chain respectively.

¹ Regulations regarding emissions, ballast water, ship scrapping, and the like are beyond the scope of the research even though they have been raised by stakeholders as of concern.

Section 4 presents the pathways available in moving forward on the issue of future regulation of the container liner shipping industry. Section 5 discusses the regulatory data collection and explores the opportunities that better global data collection might lend to improved regulatory outcomes. Conclusions are drawn in section 6 for both global and European regulation. Appendix 1 contrasts the definitions of the various terms as seen by regulators and industry, and explores the relevance of each term to this review of CBER options.

2. Defining the terms for a clear global perspective

Reviewing academic and sector-relevant publications makes clear that terminology in this context is loosely used across the globe. While each jurisdiction will have its own legal interpretation as established in law, it is important to step back and look at this with a more global lens. Competition policy is established by most governments to ensure that anti-competitive behaviour does not disadvantage one firm and favour another, but that all firms in the market have the opportunity to fairly win the business of its potential customers. Competition policy runs into fertile ground for debate when firms co-operate, and such co-operation may be deemed to be anti-competitive in impact. Because there is no standard definition in the strategic management literature,² the umbrella term ‘alliance’ refers to any agreement between two or more companies (legal entities) that does not involve an exchange of shares (ownership) or the creation of a new entity. That is why equity-based joint ventures are excluded from alliances. Alliances can take place in any geography, and any activity (marketing, port installations and other technical agreements, without pricing considerations) that is entered into between independent companies for mutual gain.

Consortia are a form of co-operation or alliance. This then raises the question: What does the EU include or not include in the term consortia? How does this differ or compare to U.S. definitions, and to the use of the term Cooperative Working Agreements (CWAs) by the member countries of Asia-Pacific Economic Cooperation (APEC),³ one of which is the U.S.? This becomes important if there is acceptance of the idea of global data collecting in a transition period for future liner regulation of competitive and co-operative activities. In fact, information exchange is a specifically allowed activity by consortia under the CBER, and so it could also be allowed between regulators.

As this paper focuses on the upcoming EU decision on the CBER, it begins with the definition of a consortium in EU legislation, but appends (in Appendix 1) definitions from other sources in use globally. Appendix 1 gives an overview of the different types of CWAs.

² “Through a strategic alliance, two companies will decide to share resources to accomplish a specific, mutually beneficial project. This type of agreement is less involved and less binding than a joint venture, where the two businesses pool resources in the creation of a separate business entity. Each of the two companies will maintain their autonomy in a strategic alliance while gaining a new opportunity.” (Kenton, 2019)

³ APEC is an inter-governmental forum for 21 Pacific economies, and an entity that has specifically looked at liner shipping regulation for its members.

First, the definition is noted in accordance with the competition rules. Then the relevance or non-relevance from an EU perspective is addressed. Last, an attempt is made to reflect whether there is consensus or not.

Commission Regulation (EC) No 906/2009 (Art. 2[1]) defines a consortium as:

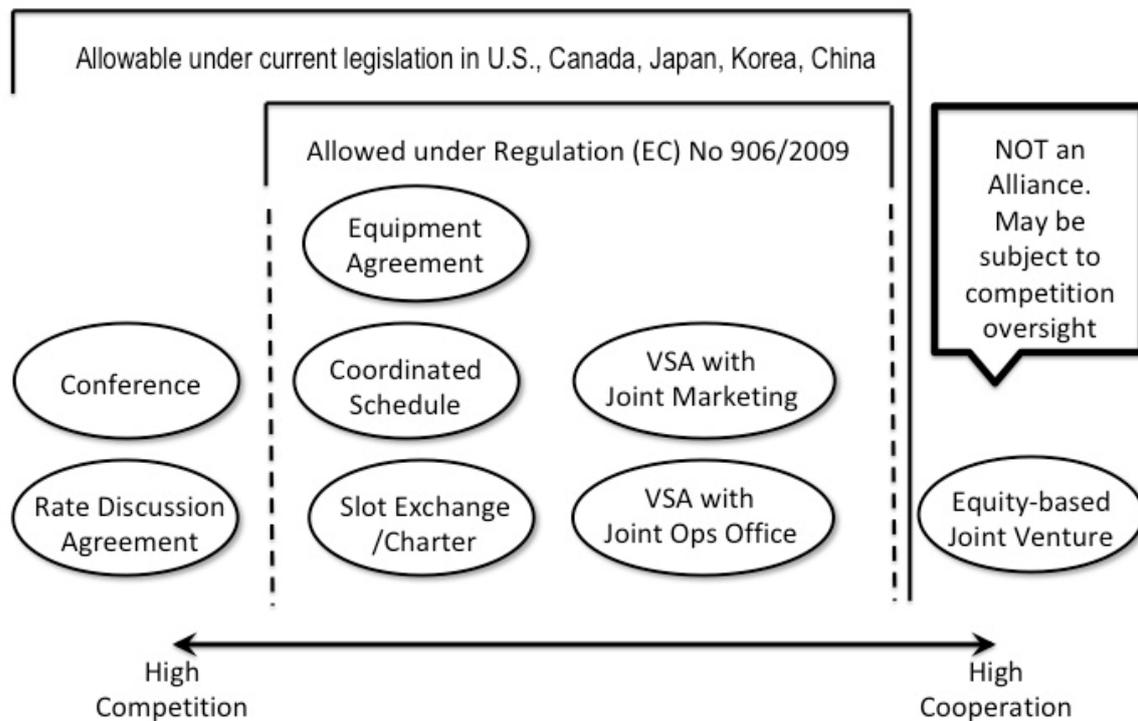
An agreement or set of interrelated agreements between two or more vessel-operating carriers which provide international liner shipping services exclusively for the carriage of cargo relating to one or more trades, the object of which is to bring about co-operation in the joint operation of a maritime transport service, and which improves the service that would be offered individually by each of its members in the absence of the consortium, in order to rationalise their operations by means of technical, operational and/or commercial agreements.

The intent is to allow the lines of a consortium to adjust capacity in response to changes in supply and demand. Article 3 further specifies what joint activities are included as acceptable (specifying the (dis)agreement with the EU approach in Appendix 1), while Article 4 specifies disallowed activities (e.g., engaging in unjustified limitations of capacity on offer or price-fixing). Subsequent articles of the Commission Regulation (EC) No 906/2009 provide further guidance on what cooperation is (un)acceptable.

In order to visualize the various allowed and disallowed activities, Figure 1 puts the majority of co-operative agreement types (found in Appendix 1) onto a continuum of alliances from high competition to high cooperation, and indicates where agreements are currently allowed or not in Europe, the U.S. and Canada among other countries. Therefore, all co-operative agreements found in the solid zone are alliances⁴. Under current European legislation applicable to liner shipping (CBER), only the dashed zone alliances are allowed consortia.

⁴ In maritime literature, linked to container shipping, a strategic/global alliance are 'interfirm cooperation arrangements aimed at pursuing mutual strategic goals' (Das & Teng, 1997) and implies that multiple geographies are covered as opposed to a single 'relevant geographic market' (for the purposes of this paper a trade lane).

Figure 1: Alliances (Cooperative Working Agreements) Continuum



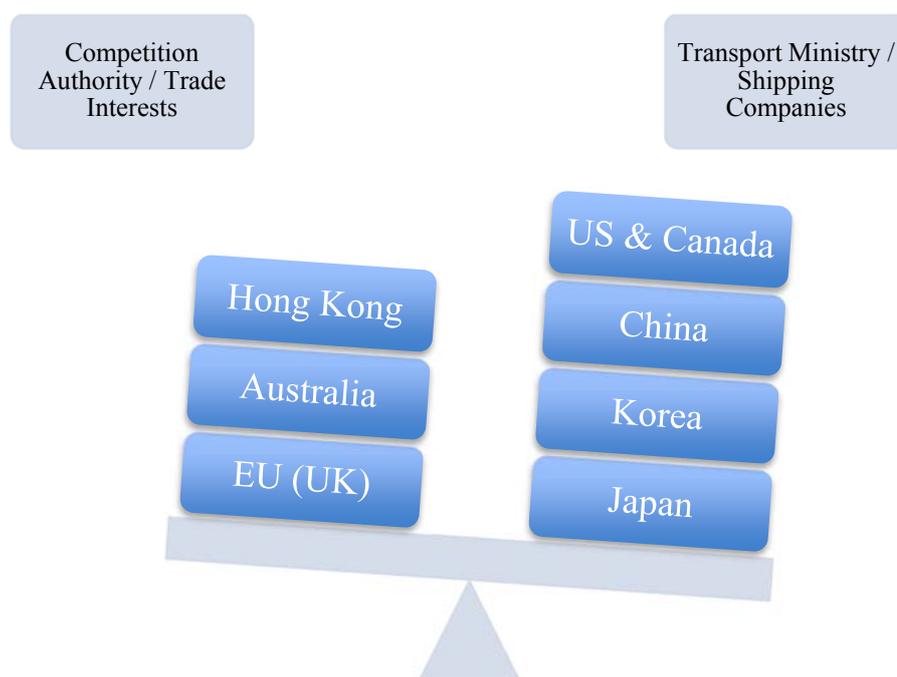
Source: A variant of Brooks, Blunden and Bidgood (1993, fig. 10.1, p. 226) updated to current nomenclature.

Figure 1 builds on a seminal one developed by Brooks et al. (1993) to explain alliances (CWAs) in the North American trades. With Commission Regulation (EC) No 906/2009, all rate-making agreements were disallowed, but those alliances (CWAs) in the dashed section of Figure 1 are still allowed activities. Equity-based joint ventures have always been subject to anti-trust oversight in the three jurisdictions and so are not considered CWAs under the CBER. Traditional conferences and rate discussion agreements remain allowed under U.S. and Canadian legislation, but are de facto non-existent. In U.S. trades, conferences only exist for government-impelled cargoes (FMC, 2018), and in Canada, they are found on paper but not in reality, as offices have given way to mailboxes or less, and officers cannot be located. The inclusion of majority joint ventures or M&As in the discussion is not appropriate as these are covered by other competition policies (and are not part of the CBER in EU); minority equity joint ventures (included as equity-based joint venture in Figure 1) may be subject to oversight, depending on the proposed structure. NVOCC (non-vessel operating common carrier) agreements, as defined by the FMC, are not discussed as these are not vessel-related (as it is the liner shipping industry that the consortia legislation applies to), and therefore not covered by this review.

As presented in Figure 2, in some countries, transportation authorities (on the right-hand side of the balance) dominate the public policy decisions by while, in others, liner shipping regulation is the purview of competition authorities (the left-hand side). The existing legal framework has allowed liner shipping companies decisions to engage in alliances, particularly given the removal of pricing, charges and surcharges co-ordination (conferences) and capacity management (rate discussion agreements) exemptions in 2008 by the European Union, when it implemented its 2006 decision (Regulation 4056/86). As a result of that regulation, enthusiasm for the types of rate-making cooperation agreements allowed under Canadian and American legislation but not European was dampened even in non-European trades (FMC, 2018). In some Asian and South-South trades, rate making CWAs are still allowed and healthy.

In reviewing Figure 1, and the definitions in Appendix 1, it becomes clear that while authority for regulation may have a different philosophical base (illustrated in Figure 2), there are many commonalities on which to build.

Figure 2: Tension of Authority⁵



Source: Brooks (2018).

⁵ In recent years, countries like amongst others Israel (2013), India (2017), Malaysia (2014), or Singapore (2006) issued a block exemption order or changed their competition policy, while Russia and South Africa opt for a general competition regime (Competition Commission, 2017). Because of the very specific statutory provisions, these jurisdictions are beyond the scope of this paper.

These commonalities and differences are summed up in Table 2, with the second column for competition policy driven regulation, and the third for transport policy driven regulation. While conferences and rate discussion agreements are not allowed in Europe, they remain available in mostly intra-Asian or south-south trades, and do not merit further discussion as it is considered highly unlikely that there is any demand from developed country trading partners for reintroduction of these by Europe. The global liner shipping world has simply moved on, and vessel sharing agreements (VSAs) have become the norm and are a focal point for the CBER review. Many VSAs incorporate other agreements (slot charter/exchange, equipment sharing/pooling, coordinated schedules, and the like into the VSA structure. However, the sharing of vessel space means that all carriers in the particular VSA are essentially offering the same ocean service although not the same customer service; that service offering may be made by carrier staff or by numerous forwarders. The resulting commoditization of the ocean service in a VSA increases the temptation for the carrier to compete on the spot price when the vessel load factor does not meet carrier expectations, or to differentiate landside customer service elements of the offering as the ocean leg has insufficient differentiation. The block exemption for non-ratemaking CWAs has provided shippers with advantages in dampened prices (see the discussion in section 3.1), and so when the various pathways are considered in section 4, it will be important to ask what limitations (or restrictions) would be appropriate to put on VSAs should the CBER be continued or amended rather than be allowed to expire?

Table 2: Global Agreement Typology Comparison

Agreement Type	Notes on EU and other competition regulating countries	Notes on US and other transport regulating countries
Conference (1)	Exempt from anti-trust investigation in the EU before 2008; no longer exempt in Australia, New Zealand or Hong Kong	Exempt in US, Canada, Japan, China, Korea, but may not occur
Rate Discussion Agreement (1)	Exempt in the EU until 2008; no longer exempt in Australia, New Zealand or Hong Kong	Exempt in US, Canada, Japan, China, Korea, but may not occur
Slot charter/exchange/swap (2)	Currently allowed	Allowed in US, Canada, Japan, China, Korea, but may not occur
Vessel sharing agreement (VSA) (2)	Currently allowed (Australia not clear as in negotiation)	Currently allowed
Global VSA (2)	Currently allowed (Australia not clear as in negotiation)	Currently allowed
Pooling agreement (2)	Currently allowed	This word is not used in US or Canada; seen as type of VSA
Joint service (2)	Currently allowed	Currently allowed
Other vessel-related activity agreements (2)	Expected as allowed with loose wording in EU	APEC (2008a,b) uses the phrase non-ratemaking CWA; frequency is occasional
Information/IT sharing agreements (2)	Currently allowed in EU; other countries not noted	APEC (2008a,b) uses the phrase non-ratemaking CWA; frequency is occasional
Equipment discussion agreements (2)	Currently allowed in EU as long as there is no rate-making included.	APEC (2008a,b) uses the phrase non-ratemaking CWA; frequency is incidental

Note: 1. These are rate-making CWAs.

2. These CWAs are non-rate-making.

Source: Own compilation based on Appendix 1.

After analysing the different types of jurisdictions, it is clear that there is a need for a globally accepted definition for each type of activity, but that the parties are not far apart. For example, VSAs are only one type of agreement under the broader umbrella of CWAs found in the industry today. Where the regulators differ is primarily in the area of rate-making CWAs. In addition, regulators must think globally in this debate, since the operational aspects

of CWAs are not defined differently whether one is a carrier or a shipper. However, from the regulatory perspective, each country has a different point of view on what activities should be allowed. Under the present CBER, activities that Europe allows are permitted in most other jurisdictions but it is clear that if the EU lets the CBER to expire without replacement, it will be at odds with other jurisdictions. Having discussed where there are regulatory differences, the following section looks at possible conflicts between the main industry actors.

3. Varying perspectives

In the fall of 2018, the Commission has released a questionnaire to industry to receive input to its deliberations. During the 12-weeks of public consultation, each industry association developed and published its opinion on the EU consortia rules. In addition, the Commission sent a targeted questionnaire to stakeholders. This survey inquired about the stakeholders' cooperation with consortia. Given that commercially sensitive data⁶ could be shared, these responses from the targeted questionnaires are considered confidential, and so the gap analysis is conducted on the published public consultation responses alone.⁷

For the most part, the position papers reflected a rehashing of previously published reports, and divergent opinions ranged from abolishing to amending to retaining the CBER. The World Shipping Council (WSC), the European Community Shipowners' Associations (ECSA), the International Chamber of Shipping (ICS), and the Asian Shipowners' Association (ASA) presented a combined effort and called for renewal (WSC, ECSA, ICC & ASA, 2018). On the other hand, the Global Shippers Forum (GSF), which has a history of taking exception to conferences on behalf of shippers across the globe, more particularly in the reviews undertaken in Australia and Hong Kong, put forward arguments for non-renewal (allowing the CBER to expire). The European Sea Ports Organisation (ESPO) noted that alliances are preferable to further consolidation in the industry but did not take a stand either for or against renewal of the CBER (ESPO, 2019). Finally, the International Transport Forum (ITF), an inter-governmental think-tank managed by the OECD, published a case-specific policy analysis report on the topic (ITF, 2018) and recommended that the EU discontinue the CBER; in addition, they published a report concerning the (lack of) relevant data (ITF, 2019b). However, both reports have been criticized as being flawed by the WSC with a publication on relevant indicators like the evolution of the number of European liner services, efficiencies gained and the pass-on benefit to customers in the EU international trade lanes (WSC, 2019; AJOT, 2019; RBB Economics, 2019). This divergence of opinion and position

⁶ The targeted questionnaire requested estimated annual TEU volumes, selected carriers, routes covered by a consortium, type of contract, prices, frequencies, number of direct ports of call, availability of capacity, reliability, transparency, customer service, and integrated logistics solutions information.

⁷ The responses to the consultation can be found on the following webpage http://ec.europa.eu/competition/consultations/2018_consortia/index_en.html.

is not surprising given the different needs of the actors. Therefore, this section explores each position in greater detail.

The debate on CBER is polarized and there appears to be no consensus between the carriers and the shippers based on their initial positions taken in the public consultation papers. It is our view that competition does not only play between carriers (supply side) and shippers (demand side), but also unfolds in the maritime supply chain. However, the decision variables, which will have an impact on the revenue and cost, and consequently influence the behavior of the respective actors, differ. In order to analyze whether the interests of carriers and shippers are balanced in the CBER era, therefore, this section explores successively the perspectives of three categories of major industry players affected by the CBER: carriers/shipowners, shippers (including freight forwarders and others acting on their behalf), and other stakeholders in the maritime supply chain (e.g. port, terminal and hinterland).

Meersman et al. (2010) set out a framework for examining the positions of these actors. This framework, free from industry bias, is designed to discuss the varying objectives and perspectives of the involved stakeholders and to analyze whether the tools to realize the respective objectives are aligned with the firms' strategies and perspectives (see sections 3.1-3.3). The framework is therefore very appropriate to verify whether the public positions taken for or against CBER by the various stakeholders correspond to their real objectives, and, if not the case, can explain why actions taken sometimes do not correspond to the public positioning.

3.1 Carriers/shipowners

According to Meersman et al. (2010), possible objectives for carriers/shipowners are maximizing profit, and acquiring market share, so as to control of the maritime chain. First, they argue that the maximization of profit (i.e., the difference between revenue and total costs – see Eq1.) is the most important objective for the carrier. Profitability has two paths, one short-term and one long-term, executed with very different management strategies. Within the container liner shipping industry, some trade lanes may be characterized as a loose/tight oligopoly (Sys, 2009). According to economic theory, oligopolists can make extra-normal profits (Lipczynski & Wilson, 2017). However, more often than not, carriers are challenged by low profitability (Sys, 2010; OECD, 2015d; ITF, 2018; WSC, ECSA, ICC, & ASA, 2018). Applying the 'persistence of profit' approach, Sys (2010, p. 29) found "that independent carriers are able to preserve their profits over time. However, abnormal profit erodes at a faster pace than in other industries." Her results further suggest "that the abnormal profit (if any) of shipping companies involved in strategic alliances erodes more quickly by forces of competition than those of independent carriers" (Sys, 2010). In theory, the carrier focuses its objectives on the creation of shareholder value. In practice, according to McKinsey (2018), most carriers in the container shipping industry have been unable to

deliver economic value to their shareholders. Second, given an oligopolistic market structure, carriers that want to maintain or gain market share must compete in a way other than price.

Thinking in terms of demand and supply, low return on equity is bound to affect the behaviour of shipping companies, which in turn influences the market performance of those firms (Bain, 1956). Hence, three variables are crucial: the realized output, Q_i , the price level, p_i , and the cost level, c_i (Eq2).

$$\text{Max(profit)} = \text{Max}(\sum p_i \cdot Q_i - \sum c_i \cdot Q_i) \quad \text{Eq1.}$$

$$= \text{Max} [\sum Q_i (p_i - c_i)] \quad \text{Eq2.}$$

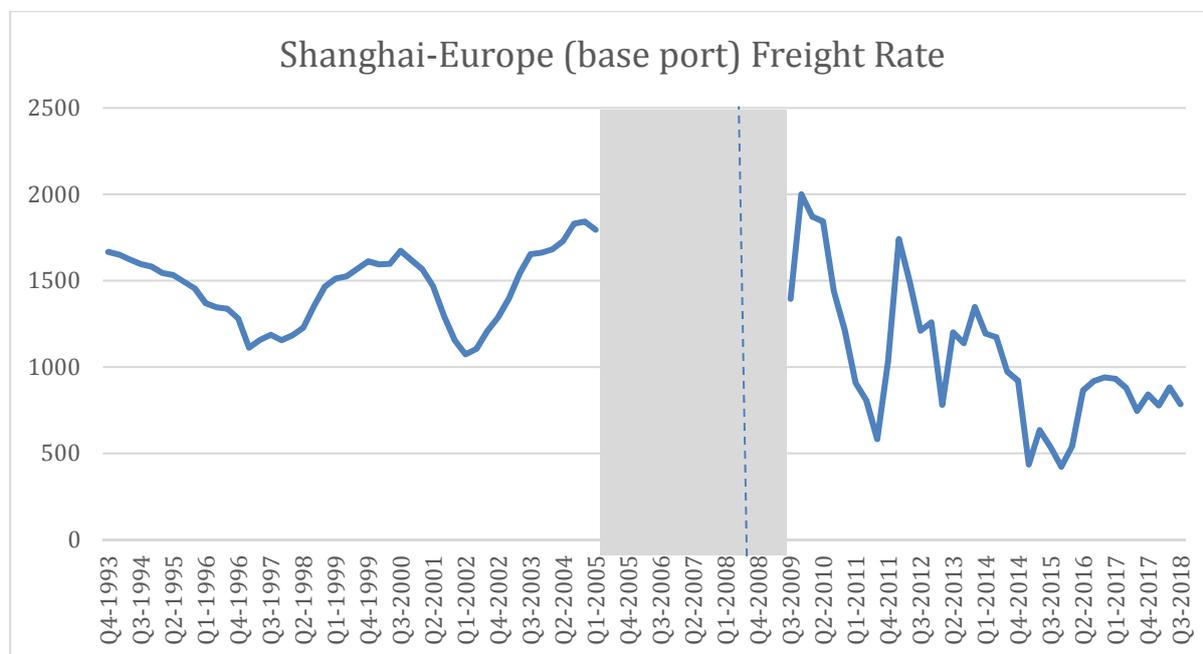
To maximize profit, firstly, the shipping company will focus on the demand side, resulting from the demand by importers and exporters. Output realized, Q_i , is a function of the world economy, vital for shipping development. Attracting more market demand and/or prompt response to changing market demand may be possible due to improved service offerings with minimum transaction, regulatory or compliance costs. CWAs enable carriers to reduce costs through acquiring economies of scale (Brooks & Fraser, 2001), but the share of transport costs of the total costs of goods at retail is often insufficient to create additional demand. Demand growth comes from two sources: (1) growing global population, and (2) rising per capita income. Supply, determined by individual carriers and shipping lines involved in CWAs, is rather influenced by fleet size, fleet productivity, shipbuilding production, scrapping and losses and certainly freight revenue (Stopford, 2009). Often, overcapacity weighs on the container liner shipping industry in terms of lower vessel utilization and putting downward pressure on freight rates (Meersman et al., 2010; OECD, 2015b). Given uncertain demand and relatively stable supply of ship space, carriers need to decide regarding capacity risk. Increase of shipping capacity leads to reduction of risk (i.e., shortage of shipping capacity); and vice versa (Ryan, 2004). Collaborating with other carriers (capacity sharing, for example, via a CWA) fits within their strategy of risk avoidance.

Second, the price level is a very important variable in this discussion of balancing all perspectives. Covering a period of 25 years, Figure 3 shows the evolution of freight rate for the Shanghai-Europe route, and while other trades could have been selected, this serves to illustrate our point. After the abolition of the conferences for European trades (October 2008), the market becomes more volatile and uncertain in terms of freight rates⁸ (which are

⁸ A parallel price evolution (including base freight and surcharges (i.e. BAF/FAF/LSS, EBS/EBA, CAF/YAS, PSS, WRS, PCS and SCS/SCF/PTF/PCC) can be observed in the Shanghai- Mediterranean trade, Shanghai-West Coast US trade and Shanghai-Dubai trade; while an upward movement is noticeable as of mid-2016 in the Shanghai-Durban trade, Shanghai-Lagos trade and Shanghai-Santos trade. BAF/FAF/LSS refers to bunkering/fuel adjustment factor and Low Sulphur surcharge or Emergency bunkering surcharge (EBS/EBA). The abbreviation CAF/YAS stands for currency adjustment factor and Yen appreciation surcharge. Other surcharges are peak season surcharge (PSS), war risk surcharge (WRS), port congestion charge (PCC) and Suez Canal surcharge (SCS).

often determined by exogenous factors). This evolution also affects the behaviour of the carriers and the optimal allocation of resources. Given the declining trend from 2009 in the base freight rate, with or without bunkering surcharges (Sys, Meersman, Rashed, Van de Voorde, & Vanelslander, 2019), the carrier falls back on the tool of ‘tariff’ adjustment. Carriers try to recover revenue through surcharges and/or tightening of demurrage and detention terms of carriage. The container liner shipping industry is trapped in a vicious cycle, the end result of which is either no further cost reduction opportunities or carrier bankruptcy, the latter being a lose-lose situation for both carrier and shipper, as was evident in the Hanjin bankruptcy.

Figure 3: Quarterly evolution of the freight rate (in USD/TEU) for the Shanghai-Europe trade covering the period 1993-2018



Note: The zone marked in gray indicates the period in which no data was publicly available.

Source: Authors’ own compilation based on Containerisation International (1999, 2001, 2006) and Clarkson Research (2019).

The third objective of the carrier is cost management (i.e., capacity management, including scrapping tonnage and idling tonnage, volume of slots offered, timing of slots offered and conditions of cooperation) (Meersman et al., 2010). Carriers make strategic choices on priorities as not all costs can be controlled simultaneously. Over the period 1995-2019, it is clear that each recession was followed by a rationalization of services. Reducing total operational costs was also possible due to the reduction in fuel/bunker cost (e.g., speed equalization, slow steaming, and retrofits), the saving of administration costs (e.g., improving procurement or CWAs for some administrative activities), the decline of equipment costs

(e.g., improving container utilization through equipment pooling), and the optimization of hinterland connections. Another tool in the carrier's toolbox is seeking to lower slot costs by investing in larger and more (fuel) efficient vessel types (owned/chartered), allowing the carrier to be globally competitive. The latter is only possible under the assumption of high vessel utilization rates. For many medium-sized carriers, cost control and improving quality is easier when setting up joint services enabled by the CBER (WSC et al., 2018; RBB Economics, 2019). However this raises fear how much this raises the question: How much more cost cutting can a carrier do before it flirts with bankruptcy?

In light of this reality, consolidation and co-operation are two paths towards market survival. The result was a new wave of mergers and acquisitions during the 2014-2018 period (horizontal integration), a new focus on integrated logistic concepts (vertical integration), and, most important for this current paper, increased clarity of what activities would take place in any consortia agreed between carriers. As the former two, in all jurisdictions, are subject to competition policy, the focus must be on the last. Without the CBER, all carriers, large and small, face legal uncertainty, resulting in increased compliance costs (WSC et al., 2018). Therefore, it is no surprise that carriers and shipowners are advocates of renewing the CBER. This is in line with the previous reviews of the CBER, but now their focus is rather on the damaging impact of the expiration of the CBER. Next to this, efficiency-enhancing operations require deploying (right-sizing) owned or chartered ships, and setting up services offering consistent levels of capacity each week, subject to seasonal and cyclical fluctuations. The circumstances are not different for small- and medium-sized carriers, particularly if they are deployed on thin routes where the market cannot absorb more carriers.

Nine shipping companies, ship owners and/or their associations responded to the public (five) and targeted (four) consultations. The summary prepared by the EC (2019) shows a consensus between these actors with regard to the legal certainty, the achieved economies of scale, the reduction of costs (e.g., compliance cost) and the rationalization/improvement of services. Moreover, the three shipping associations (ICS, ASA and ECSA) also confirmed this in a memorandum to the European Commission (ICS, ASA, & ECSA, 2019). Next to the fact that the CBER is efficient and effective, this main stakeholder notes that the guidelines are an added value (European Commission, 2019).

3.2. Shippers, including freight forwarders and logistics companies

The arguments of the shippers (including freight forwarders and others acting on their behalf) are directly linked to their main objective to minimize the total generalized logistics costs (Eq. 3)(Meersman et al, 2010). In transport economics, the generalized cost concept (G) equals the sum of out-of-pockets costs (c) that characterize a maritime service and non-monetary variables (m) like value of time (VOT), value of reliability (VOR), flexibility, frequency, risk, quality, impact on environment (Grosso, 2011; van Hassel, Meersman, Van

de Voorde, & Vanelander, 2016). According to Grosso (2011), the generalize costs function equals

$$G = c + u \left(\sum_{i=1}^n m_i \right) \quad \text{Eq; 3}$$

The price charged by the carrier (including the Terminal Handling Charge) and hinterland modes represents the cost to the shipper. It is known that the maritime transport cost in the shelf price of consumer goods is marginal. According to the International Chamber of Commerce (2012), the maritime transport cost varies between 1% and 2%. Evidence can also be found in the absorption of the extra cost due to slow-steaming introduced by the carriers.

The changed viewpoint of the shippers in the post-GFC era regarding the abolition of the CBER are rather linked to the non-monetary factors. In order to reduce risk and generalized costs, besides the VOT and VOR, flexibility, frequency, and the probability of loss, damage or environmental impact are also taken into account; but not always in the negotiations. In order to do so, shippers allocate their volumes across multiple carriers with the aim of reducing their risk. This is used as a negotiation tool. The negotiation power and the ultimate choice of carrier are dependent on volume shipped and the value of each shipment. Shippers also experience economies of scale and scope. Increased competition due to the globalization has led to scale increases for larger shippers positively impacting their negotiating position as they have more relevant market information (Heaver, Meersman, Moglia, & Van de Voorde, 2000). The volumes (in TEU) of large shippers encourage carriers to price below cost or give away value-added services to retain their customers (Brooks, 1994). Here, the circumstances can be quite different for small- and medium-sized shippers, who have less volume and therefore less negotiating power.

To align with their objectives, shippers need sufficient choice between sustainable reliable services (i.e., service with no delays, blank sailings and late arrival calls, especially for secondary ports). Moreover, they want to assess their total costs more accurately. This has to do with shippers also having a value creation imperative for their own shareholders.

In response to the public consultation, the EC received nine responses from shippers (including freight forwarders [1] and others acting on their behalf [2]); while the targeted consultation resulted in a response rate of 23% (14 responses/61 surveys). The nine public consultation stakeholders stated that the CBER is neither effective nor efficient (European Commission, 2019). The anti-CBER sentiment of the shippers is rather based on the fear of price fixing and the non-transparent exchange of information by carriers involved in CWAs, although shippers say they have little evidence to substantiate this fear (ESC, 2018; Global Shippers Forum, 2018; OTM Belgian Shippers Council, 2018). In the case of the freight forwarders, their view is that the CBER is not effective but rather linked to a fear of vertical integration (CLECAT, 2018). It may be that the European shippers (including freight

forwarders and others acting on their behalf) are playing a game, hence putting greater pressure on the EC to improve the current situation. Next, regarding the issue of passed-on benefits, the EC adopted Regulation 906/2009, aimed at ensuring a fair share of benefits. Fair share means better coverage of ports and better services. Study of the responses indicates that the CBER has become a scapegoat for shipper frustration concerning the increasingly unacceptable levels of schedule reliability, the reduction in the number of port calls, and so on. The annual shipper satisfaction survey supports their arguments (Drewry & ESC, 2019) and serves as input for the ITF report (ITF, 2019a). Those arguments indicate the importance of non-monetary factors in the total package offered shippers. The need to assess market share in volume of seaborne trade has not been addressed due to lack of data availability. The regulators also do not collect data on reliability.

The analysis above makes clear that the interests of the carriers on the one hand and the shippers (including freight forwarders and others acting on their behalf) on the other hand are not in balance. They both seek a remedy with differing directions. Carriers have been unable to get the freight rates they need but seek renewal of the CBER, while shippers are unable to get the certainty they desire on non-monetary aspects of carrier service and so seek abolition, but without providing the supporting evidence that it will resolve their concerns. The following section examines to which group of stakeholders (carriers or shippers) the other actors in the maritime chain are affiliated or if they have a third position.

3.3. Other stakeholders in the maritime supply chain

In the 2014 review of the CBER, other stakeholders were less involved in the debate about renewal or expiry of the regulation. In this review, they are more prominent and active participants in the discussions. They too have their future commercial activities at risk, and so contribute to the development of appropriate regulation for the industry.

First, the port authorities, represented by ESPO, did not take a particular position but spoke to the importance of monitoring the industry. ESPO put forward five topics: the impact of negotiating power, the pressure on port investments, horizontal and vertical alliances, new players in the market, and non-monetary benefits like service quality (ESPO, 2019). This point of view can be perfectly explained from the objectives of this actor. Meersman et al. (2010) found that port authorities, regardless their management tradition, may be driven by the goal of ‘profit maximization, possibly combined with maximization of market share within the port range or cost minimization for the maritime supply chain (both through port dues as time costs) or maximization of cargo volume handled.’ The main tool of a port authority in the negotiation process is setting its prices with an individual carrier whether or not that carrier is involved in a CWA. In practice, however, the feeling lurks that port authorities have less negotiation power because they are actually negotiating with a consortium instead of individual carriers. Meersman et al. (2018) state that the monitoring of

negotiating power is best conducted from a maritime supply chain perspective, including port operations.

Secondly, private terminal operators, represented by FEPORT, are of the opinion that CBER does not offer legal certainty. Given pressure on their performance levels, this actor argues for an updated definition of the relevant market as well as a clarification regarding the exchange of information⁹ beyond the shipping leg. Here too, their position can be better understood by looking at their objectives. According to Meersman et al. (2010), the terminal operators aim at maximizing profit through long term carrier loyalty, whether or not the carrier is involved in a CWA, through logistics services and value-added activities (reefer plugs, storage facilities, etc.). As regards the tools, terminal operators focus on price setting (terminal handling charges given volume, frequency, free time, type of goods, and so on) and technological improvement. In response to rising operating and capital costs (due to larger ships), terminal operators are reviewing their strategies regarding merger and acquisition opportunities (like DP World's acquisition of Unifeeder). The negotiation of contracts between the carriers and terminal operators is done in a bilateral oligopoly setting. The question emerges as to whether the outcome is a positive/zero/negative sum game between carriers and terminal operators. To explore this question, there is need to have insight in the cost structure.

The last sub-group, hinterland transport modes, will also try to maximize profit and increase market share. To do this, the following tools are at their disposal: tariff, speed, flexibility and capacity (Meersman et al., 2010; Grosso, 2011). Serving the alliances has led to fierce competition between hinterland operators, resulting in expanding their capacity to larger scale. No entities in this group of stakeholders submitted a position paper, but some associations (European Barge Union, European Tug owners Association, and International Union for road-rail combined transport) signed a joint industry press release calling for a repeal of the CBER or revised regulatory framework. (CLECAT et al., 2019)

In sum, four port authorities or port services providers submitted a reaction in the public consultation and three of four responded to the targeted consultation. In the EC summary report (2019), the opinions of the other actors are consolidated with the viewpoint of the shippers. However, nuances must be recognized. It is clear that these actors are less familiar with the interpretation of Article 101 of the Treaty on the Functioning of the European Union (TFEU) ruling out cartels and other agreements that could disturb free competition in the European Economic Area's internal market. In all, these actors prefer a revised regulatory

⁹ The information exchange is extensively addressed in the Horizontal Guidelines (<http://ec.europa.eu/competition/antitrust/legislation/horizontal.html>). From maritime chain perspective, these guidelines are too general (WSC, ECSA, ICC, & ASA, 2018).

framework. Moreover, they advocate that the use of data and the relevant market are clearly defined.

The analysis above clearly results in divergent opinions ranging from abolition to amending to retaining the CBER and so these stakeholders do not commonly view one or another path as the direction they would like to see the European Commission to take. This leads to the fourth objective of the paper—whether rethinking competition policy can contribute to bringing these perspectives into balance.

4. Rethinking competition policy

Brooks & Fraser (2001) stated that the divergent paths between the US and the EC can only be detrimental to this global industry. Therefore, this section proposes pathways that are a roadmap for all countries when rethinking about competition policy for liner shipping. However, an out of the box rethinking of the competition policy for the shipping industry runs contrary to the Commission's Better Regulation Guidelines (European Commission, 2017) applicable for other industries in Europe. Moreover, in Europe, the shipping industry would automatically fall under the general competition rules in the expire option, and this raises the question: are the competition rules suitable for this sector? What are the specific characteristics of the container liner shipping that say not?

From the perspective of the regulator, it is possible to put forward three different pathways: 1) allow the existing CBER to expire and subject the sector to the full force of the EU's competition policy, 2) amend the existing CBER, and there are many possible amendments, or 3) retain the existing CBER. Each pathway is explored and the impact on each stakeholder in the maritime supply chain is discussed in detail.

4.1. Distinctive characteristics of container liner shipping

The characteristics of the sector are first considered, because if not different from other industries, then no different regulatory approach is necessary.

In order to distinguish (container) liner shipping, the combination of four characteristics was considered: capital intensive, surplus capacity, low production flexibility and no stock production (Van der Ziel, 1994). In 1994, based on these characteristics, McConville stated that the shipping industry differs fundamentally from other industries. Moreover, he recognised that certain sub-segments of the shipping industry, including (container) liner shipping, require specific regulation (McConville, 1994, p. 122). Brooks (2004) questioned whether the industry has some features that makes it unique, and concluded that it was not much different than the tourism/hotel sector or airlines, industries where last minute pricing deals are used by owners to offset excess capacity. As long as the industry struggles with too much capacity, the customer acquires most of the surplus. The previous studies date from

before the abolition of the conferences. In 2015, OECD addressed the question whether the more recent evolution towards alliances is likewise affecting the market in ways that merit or necessitate regulation. These authors find that ‘what is required is adequate monitoring of market evolutions, but no new regulatory initiatives would seem necessary for the time being’ (OECD, 2015b).

Already in 1994, Heaver (1994, p. 30) noted that liner shipping will continue to become evolutionary, not revolutionary and more like other sectors, e.g., more customer-oriented. Twenty-five years later, the container liner shipping industry is still considered unique by some but losing its unique characteristics. The unique character is no longer explained by the four above-mentioned characteristics (parallel challenges for other industries) but rather by economies of scale, differentiation opportunities are still different from other industries, personal relationship and the type of goods transported like hazardous cargo (trust) and perishables, increased competition under pressure of state-owned carriers (also already involved in terminals) and uncertainty due to trade agreements. Where first initiatives of data platforms (e.g., youshipit.com) failed, new technological developments (e.g., digitalization) and acceptance will help the sector in this transition. However, one major issue remains whether every trade lane evolves in the same way. The challenge is that the impact on market share and service provision cannot be fully documented in the absence of data. Therefore, in the following subsection, the impact can only be addressed from a theoretical perspective.

4.2. Pathway 1: Allow CBER to Expire

The Commission's latest review, in 2014, found that

On the basis of the Commission's experience in applying the block exemption, it appears that the justifications for a block exemption for consortia are still valid and the conditions on the basis of which the scope and content of Regulation (EC) No 906/2009 were determined have not substantially changed. (European Commission, 2014, p. recital 1)

The critical question is whether circumstances have changed enough in the last five years (since 2014) to warrant wholesale change of the regulation of the sector, the change that the expiry pathway suggests. If the EC allows the CBER to expire in pursuit of its policy of harmonization in Europe, the shipping industry would automatically fall under the general competition rules, and this raises the question: what might be the impact for the different stakeholders. Furthermore, its multi-country regulation means that what the EU chooses to do from a regulation point of view impacts not only on the EU but also its trading partners. Both questions are dealt with based on three scenarios.

A possible first scenario may be that nothing fundamental changes for the sector. So, there is further co-operation between the carriers under the Horizontal Guidelines, in the same manner as co-operation agreements in other sectors. Without the CBER framework, the

carriers would doubt the legality of consortia, hence be less certain that their CWAs do not infringe Article 101 TFEU. On a case-by-case basis, the carriers need then to (re)examine their CWAs without the benefit of sector-specific exemption and guidance. Large carriers may fall back on these regulations in view of their experience. Such practice is also seen in inland shipping where some laws are no longer valid but are still used within contracts (Sys, 2015). Such self-assessment of single or multiple trade co-operations means increased risk and increased legal compliance costs. For the small- and medium-sized carriers that are the backbone of smaller trade lanes, a case-by-case approach may create transition costs. The key question to be contemplated in this scenario is then: will the carrier absorb the self-assessment cost of single or multiple trade co-operation agreements or can this cost be recovered from the shippers (e.g., is there a willingness to pay?). There may also be concerns regarding the level playing field between carriers from other continents (e.g., state-owned carriers might keep prices low). Next, self-assessment under Article 101 is less flexible and less agile. How will shippers deal with possible delays and uncertainties due to this delay?

Second, the other extreme can be that everything changes, hence all consortia agreements are broken up and carriers opt to operate individually. Will this scenario result in additional bankruptcies, mergers or acquisitions, and hence further consolidation (possible less choice for shippers) given the high capital requirements of the industry? Most likely, the ones with the highest cash reserves will survive but with the risk of greater concentration. Furthermore, the size of vessels in service today raises serious doubts about the future of the industry under the expiry pathway as most carriers are unable to mount a viable service with only their own vessels. What will then be the capacity decision of the carrier? Will the individual carrier continue deploying/investing in ever-larger ship sizes or opting for smaller ship types? Removal of the CBER will open carriers who have invested heavily in large ships to question slow-steaming as more ships are needed for this network strategy. A ship investment has a 20-25 year cycle but it is only 10 years since the beginning of the restructuring of the networks due to the abolition of conferences and the Global Financial Crisis.

A third scenario is in the middle. The carrier takes a less drastic capacity-risk decision and adjusts supply. The impact of this behavior can be explained by the market structure. Since 2007, the container liner shipping industry has become characterized by an oligopolistic market structure (Sys, 2009, 2010; OECD, 2015b; Meersman et al., 2018).¹⁰ This means that each carrier's behaviour is determined by expectations as to what actions its competitors are most likely to take (Lipczynski & Wilson, 2017). Hence, a higher price will not be followed by the competitors and/or is not accepted by the shippers, putting pressure on the carriers.

Just letting the Consortia BER expire without replacement legislation is not, in our opinion, a realistic option. In fact, it would increase industry uncertainty so much that all parties would

¹⁰ An oligopolistic market is characterized by companies recognizing interdependence.

lose. Moreover, if the EU allows the CBER to expire without replacement, it will be at odds with other jurisdictions, as the EU would be one of only eight study countries to not accept CWAs.

4.3. Pathway 2: Retain the Existing CBER

The second pathway is to retain the existing CBER. This option can be decided if all of the conditions (effective, efficient, relevant, coherent and added value) of the Better Regulation Guidelines (European Commission, 2017) are met. If so, the EC will prolong the exemption of consortia agreements from the application of Article 101(1) TFEU for another period limited to five years to 2025.

The impact of this decision will be limited for the carriers. As these guidelines are best understood by this actor, within BER thresholds (<30%), carriers can quickly respond in the short-term changing operational demands, keeping compliance costs low. Next to the commercial benefits, the carrier also has technical benefits (promoting technical progress related to the assets, equipment and ICT) and operational benefits (network benefits, frequent services hence economies of scale and scope, improving productivity) reflected in the consumer/producer surplus (see below). Shippers retain guaranteed services at lower prices but are left with their frustrations linked to non-monetary variables (as discussed in section 3.2). For the terminal operators, the current negative model remains; while for the port and hinterland operators, the current situation hardly changes.

In trade lanes where the CBER market share threshold is exceeded (>30%), depending on the number of self-assessments, this pathway may lead to lower operational efficiency and consequently might result in a (further) rationalization of carrier services. Over the last 10 years, the relationship between the carriers and terminal operators has evolved towards a bilateral oligopoly. A characteristic of a bilateral oligopoly is that carriers do not passively accept terminal operators' price. What is then the potential bargaining situation? Assuming capacity-risk decisions result in greater vessel utilisation, this will mean higher volumes and capacity challenges for the terminal; hence from economic theory, THCs will go up. In practice, at first, terminal operators' price might not change but the involved actors might take actions to minimize costs without explicitly stating (tacit collusion); over time, the terminal operators' prices will gradually increase. Finally, the shipper is confronted with a lesser range of services and possibly a freight rate increase (e.g., the carrier succeeds in passing through higher terminal charges). Bilateral oligopolies are usually part of a supply chain. Acting in a competitive market (inter-port, intra-port), the port authorities might be confronted with less calls, hence less revenue. For the hinterland operators, with greater probability, their volumes will be affected, not only by shipping companies' increased chain power, but also by the latter's own moves into land transport operations.

4.4. Pathway 3: Amend the Existing Consortia Block Exemption

A third possible decision that can be made is to amend the existing CBER. This regulation has already been amended in the past (e.g., from trade to market share, to remove outdated provisions, to clarify practical issues, to reduce the market share threshold from 35% to 30% and to streamline the CBER after the abolition of conferences) (European Commission, 2014; ITF, 2018, p. 75).

The following subsections will first look at amending CWAs from a European perspective, and then the impact of this pathway is also considered from a non-European viewpoint.

4.4.1 European viewpoint

On 27 February 2014, the EC stated that “Since the new legal framework has been in place and applied for only a short period of time, further changes should be avoided at this stage. This will avoid increasing the compliance costs of the operators in the industry” (European Commission, 2014).

If the CBER were to be amended again, then what new amendments are possible?

First, regarding the relevant market, the EC defines the concept of relevant geographical market as follows: “a relevant geographic market comprises the area in which the firms concerned are involved in the supply of products or services and in which the conditions of competition are sufficiently homogeneous” (European Commission, 2011). Moreover, the EC lists factors (the nature and characteristics of the services concerned, the existence of entry barriers or consumer preferences, and appreciable differences for the undertakings' market share or substantial price differences) relevant to the assessment of the relevant geographic market. The EC could be more transparent regarding the relevant geographical market.

Second, rather from the shippers' side, a reduction of the market threshold from 30% to 20% has been suggested. There is however no point to get to 20%. The market threshold of 30% is common over industries and over the study countries.¹¹ It is a multi-sector policy, not just liner policy. If the EC nevertheless considers this, then the number of consortia that require self-assessment will increase.

Third, regarding the review period, there is stability for the industry for only five years. Is this consistent with the existing level of investment in new vessels? It could be argued that only for first movers. A longer expiry timeline than five years, given the 20-year life span in ship investment, could be considered. However, as the timeline is the same for all sectors, a timeline extension is a difficult argument to make. Another five years with imposed (data) conditions would grant consortia time to restructure to generate competition in the market

¹¹ The sole exception is Hong Kong, which recently increased its threshold to 40% from 30%, the exact opposite of what EC shippers propose.

and address the non-monetary service factors that have put shippers at odds with the carrier position.

Fourth, there is the amendment perspective of other actors in the maritime supply chain (port, terminal, hinterland operators). When reviewing the CBER, those other actors particularly asked the Commission to determine the impact of CBER options beyond the ocean leg. Ports prefer to see more activities monitored. Insight into the respective guidelines (the horizontal guidelines¹², the vertical guidelines¹³, article 81(3)¹⁴ guidelines and maritime specific guidelines) and transparency would make clear that some suggestions fall outside the CBER. Next, terminal operators have expressed (privately to the authors) concern that consortia lines are now negotiating as if they were a joint venture (as opposed to a consortia) with the terminal operators, seeking consortia-wide price arrangements. This has been a driving force behind recent Federal Maritime Commission amendments to US legislation respecting liner carriers, and new data requirements of consortia have been introduced in the U.S. as a result¹⁵. As joint rate-making is not allowed under the CBER, this hint of collusive activity is ground for investigation. Here too, more transparency (e.g., will goods be transported within consortia or outside, as not all ships are deployed in the consortia) would, to a certain extent, respond to the concerns. Furthermore, carriers want to gain control over hinterland transportation by providing (often subcontracted) door-to-door transport services. In no jurisdiction in the study countries do hinterland activities fall within the scope of the consortia regulation. However, gaining control over hinterland transportation through competitive rates to their customers is best monitored by the EC (Heaver et al., 2000; OECD, 2015b).

Last and most relevant to consider, an amendment could provide a data/information collection and reporting mechanism for market share. The market share of each actor, in accordance with article 5 of the CBER, can be calculated with reference to their sales of the relevant product in the relevant geographical market (European Commission, 2011). Possibly a publicly available freight rate index especially set up for specific vulnerable trade lanes can be specified. A vulnerable trade lane is considered to be a trade lane with high potential of abuse of (monopoly power). Given that the maritime sector is slowly drifting towards digitalization (Carlan, Sys, Vanelslander, & Roumboutsos, 2017) and the increasing demand

¹² [http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32001Y0106\(01\):EN:HTML](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32001Y0106(01):EN:HTML)

¹³ http://eur-lex.europa.eu/LexUriServ/site/en/oj/2000/c_291/c_29120001013en00010044.pdf

¹⁴ [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52004XC0427\(07\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52004XC0427(07))

¹⁵ See Federal Maritime Commission Authorization Act of 2017, part of an omnibus bill, the Frank LoBiondo Coast Guard Authorization Act of 2018. The Act clearly recognizes that alliances now have significant bargaining power with marine terminal operators, and Section 709 of the Act prohibits the carriers from engaging in excessively anti-competitive strategies when collectively negotiating with terminal service providers. To ensure that carriers do not engage in anti-competitive behavior, above that already entrenched in competition policy in the U.S., the FMC is now required to conduct "an analysis of the impacts on competition for the purchase of certain covered services by alliances of ocean common carriers" on an annual basis (Section 703).

for global door-to-door services, the way data is collected could be digitized and shared. All actors (including regulators) needs to adopt to this ingenuity, given that creativity knows no boundaries.

This pathway offers some of the advantages missing from Pathway 1 and Pathway 2. Under which conditions are the amendments viable? From the carriers' perspective, retaining the definition of relevant market avoids extra compliance and/or transition costs, or at least not a disproportional increase, and avoids discontinuation of service on some routes and/or breaking up consortia. The latter reduces the uncertainty for shippers. A reduction of the market threshold might encourage carriers to opt for subcontracting. Regarding the review period, a carrier is looking for a longer time horizon (e.g., so currency and fuel can be hedged), while shippers think short term (e.g., in the case of confidential contract, crucial parameters are time (maximum one-year contract), freight rate (maximum price) and volume (not guaranteed)). In such a contract, the interests between carriers and shippers are likely to be more in balance. Although, with regard to contract duration and volume, the shipper could meet the challenges of the carriers in terms of their capacity management by accepting longer contracts with guaranteed volume. Balanced interests are more complicated in the port market given volatile/changed demand. Collaborating with other carriers (capacity sharing within CBER threshold) then allows responding quickly to such volatility. To address the shipper concerns, other data amendments (e.g., notification of blank sailings x days in advance (a pro-shipper move), and publicly available CAF and BAF percentage surcharge rates and other charges (e.g. demurrage and detention, storage charges) might be considered. The latter reduces unknown pricing impacts for shippers.

4.4.2 A non-European view of consortia (CWAs)

If one steps back from the position of looking at CWAs from just a European perspective, there has been a lot of work done outside of Europe that would be useful to review if the amendment pathway is considered. The last comprehensive overview of multi-country liner shipping regulation was undertaken by competition authorities at the OECD in 2015. The focus was mostly on CWAs, and the review, publicly available on the OECD website (OECD, 2015a, 2015b, 2015d, 2015f, 2015c, 2015e, 2015g) provides a useful summary of the existing situation from a competition authority perspective. By contrast, the last comprehensive overview of multi-country liner shipping regulation from a transport authority perspective was undertaken by the Asia-Pacific Economic Cooperation (APEC) Transportation Working Group (TWG) in 2008, and is not publicly available (APEC, 2008a, 2008b); it was completed by Meyrick & Associates of Wollongong, Australia, and analyzed the non-ratemaking agreements in liner shipping in order to develop recommended guidelines for the treatment of such agreements by the APEC economies, which include Canada and the U.S. The findings are indirectly available via their citation by Premti (2016) and ESCAP (2015), both of which report that the APEC TWG accepted them. The APEC Guidelines are noted in Figure 3.

Figure 3: Guidelines Accepted by the APEC Transportation Working Group on Cooperative Working Agreements

1. Support non-ratemaking agreements in regulation, as such agreements are efficiency-enhancing and the users can obtain a share of benefits.
2. Separate ratemaking and non-ratemaking agreements; this will allow countries that wish to adopt different policies for the two to do so.
3. Do not use market share testing. (The consultant concluded the benefits of limits are dubious, and defining the relevant market is difficult).
4. Allow ocean carriers to freely negotiate the duration of non-ratemaking agreements.
5. Governments should collect and exchange primary industry information in order to detect undesirable trends and take prompt and effective action.

Source: A synopsis of Premti (2016), pp. 20-21, and ESCAP (2015), pp. 4-5.

Each of these five recommendations has relevance with respect to EU current position in the current Commission Regulation (EC) No 906/2009. Guidelines 1 and 4 reflect the current situation under the existing CBER, and if the future amended CBER were to allow for the continuation of vessel sharing arrangements and other types of consortia currently allowed, then there would be harmonization on the main trades, between European practice and North American and Asian practice. The continuation of the benefits of vessel sharing, equipment sharing or pooling, and the coordination of administration have been argued in Section 3 to provide benefits to both shippers and carriers, to carriers in the form of reductions in capital cost requirements and to shippers in the form of freight rate benefits. These are the two main parties to the contract of carriage.

Guideline 2 leaves the national philosophy with respect to rate-making intact, with each country following its own beliefs on whether rate-making is anti-competitive. Acceptance of Guideline 2 under the CBER means a continuation of European current practice; rate-making agreements would continue to be unacceptable. As noted in Figure 1, while joint rate-making agreements are an acceptable practice under both Canadian and American regulation, in reality they have disappeared from practice, except for U.S. government-impelled cargo. There are no active rate-making agreements in Canada and only the three just noted in the U.S. As is noted in Appendix 1, where this is relevant is limited. Therefore, Europe has no impetus to alter its current stance on rate-making agreements.

This leaves Guidelines 3 and 5 as the major discussion points. Guideline 3 implies what Europeans already know that measuring market share is not easy or lightly undertaken. There is not the data currently collected by the EC, and reliance on capacity share is a good proxy

(ITF, 2019a; Sys, 2010) but more accurate data is more desirable. The data collection efforts currently in place are very expensive, as noted by ITF (2019), and not seen by industry as trust-worthy. This raises the question: Is there another way?

Guideline 5 proposes that regulators agree on a base data collection; the consultant to the APEC TWG noted proposed a common format for the data and included the following data elements: parties to the agreement; nature and scope of the agreement; agreement duration (term), entry and exit provisions; operational capacities, providers and uses agreed to; voting / decision-making rules; and selling of space to third parties. The consultant proposed these data first be made available to the APEC governments, and later to the public. In section 5, this paper returns to the concept of a data collection effort.

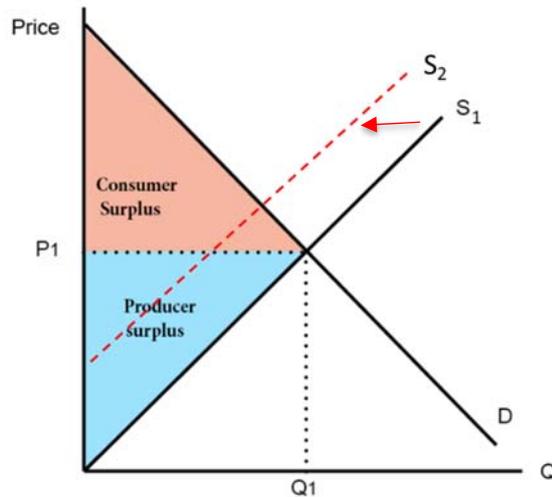
Finally, an examination of CWA monitoring activity across the study countries has revealed that only the U.S. has a grasp of all activity (all CWAs must be filed with the Federal Maritime Commission and are published on-line), but only for its own domain. So unless a CWA touches the U.S., its partners and types of activities are not known. With CWAs being multi-jurisdictional, this is hardly satisfactory. A global register of alliances for regulators would assist in monitoring this highly complex network of CWAs.

4.4 Discussion of pathways

Having discussed the three pathways available to the European Commission, and the positions taken by the three sets of stakeholders, this section steps back to explore the likely consequences of the decision taken by the European Commission from an industrial perspective. An analysis of the impact on consumer surplus and producer surplus allows for exploration of those consequences. Figure 4 depicts the consumer surplus, or the excess of what a shipper would have paid for a service (i.e. the utility) over what that shipper actually pays. This reflects the fair share of benefits for the shipper, while the benefit received by the carrier equals the producer surplus (i.e., freight rate in excess of the lowest freight rate willing to supply slot capacity).

To align with their objectives, carriers opted the last decade for improvement of technology (investment in larger fuel-efficient ships) and other cost measures (see section 3.1); consequently, the marginal cost curve has shifted downward. Services (Q_1) are offered at a lower price (P_1), reflected in Figure 4. This is the starting point for the analysis (S_1).

Figure 4: Monetary/non-monetary benefits (consumer surplus)



Source: Lipczynski et al. (2017)

If the option ‘retain’ is chosen, the consumer surplus corresponds with the area between the demand curve (D) and the marginal cost curve (S_1) (shaded area above P_1). In the case of further rationalization of services, due to increased number of self-assessments, the consumer surplus might reduce. Graphically, the producer surplus corresponds with the triangular area above the supply curve (S_1) and depends of the market price (p). The pressure on the freight rates decreases the producer surplus.

If the option ‘expire’ is chosen, the EC might monitor the possible consequences of the absence of the CBER. This would be a parallel approach as in other sectors (e.g. insurance). In this context, it could be checked as whether the sector needs further guidance. Moreover, particular attention will be paid to whether this decision leads to pronounced legal uncertainty. After all, additional compliance cost due to changed CBER policy in combination with extra costs to comply with environmental regulation will move this marginal cost curve ($S_1 \rightarrow S_2$) upwards. Consequently, this might result in a reduced consumer surplus, ceteris paribus demand. The extent to which will depend on the capacity-risk decision of the carrier (see scenarios section 4.2). In the scenario in which everything changes, the shippers may lose the weekly service frequency they have built their business models around and might be confronted with higher freight rates. While a less drastic capacity-risk decision and adjusts supply results in a less significant impact on the consumer surplus.

If amending the BER affects the capacity decision of the carrier, it may change the consumer surplus. Any effort to amend the CBER or modernize it to be future-proof will need to be built around “adequate monitoring of market evolutions, the market and the significant

variables like freight rates, charges and surcharges, level of market concentration, and degree of product development and differentiation” (OECD, 2015b, p. 10). The same authors add the need to monitor negotiating power from a maritime supply chain perspective. To do so, data collection is needed as regulators are currently unable to make decisions except by assuming that aggregated capacity on offer data for a carrier in all its markets serves as a proxy for a geographic market share by trade lane, a clear challenge for the regulators globally, not just in the EU. Moreover, data collection should also include non-monetary variables, like vessel arrival reliability and number of carrier offerings per route. Annual satisfaction surveys only present a shipper perspective, and a carrier data collection process provides the balance of evidence. In the modern era of computers and planning, the only excuses for being off schedule are severe weather, shipboard fires, and poor port performance, yet carriers continue to make excuses when every other sector of the transport industry has gone a long way to improve schedule reliability. If the liner companies cannot improve reliability, perhaps it is time for regulators to contemplate collection of schedule reliability data on major VSA routes and monitor performance for European trading interests. In fact, a global data collection effort might not be out of line for consideration by many countries, just as the Liner Shipping Connectivity Index has been developed by UNCTAD to evaluate the industry’s accessibility.¹⁶

Therefore, should amendments be made to data requirements by the regulator, then increased compliance costs are likely for the carriers. The latter might result in a shift of the supply curve ($S1 \rightarrow S2$). In addition, the welfare effect of information sharing might have an effect on consumer surplus (Ganuza & Jansen, 2013). However, more research is needed to measure the welfare and redistribution effect before any prediction of the direction of change is made.

5. Decision data to improve regulatory outcomes

In the course of conducting the research needed for this paper, it was clear that the data needed by regulators for evaluating the CBER was somewhat thin. A survey of data collected and available to regulators was undertaken across Europe, the U.S., Canada, Australia, and, for comparison purposes, South America, the last having the most detailed data set on what goods travel by which carrier (Table 3).

¹⁶ The UNCTAD’s Liner Shipping Connectivity Index allows studying the impact of pressure on non-monetary elements. The index looks at the number of ships, container-carrying capacity, maximum vessel size, number of services and number of companies that deploy container ships in a country ports excl. freight rates). Over the 2013-2018 period, this index is increasing for 19 of 21 EU countries (excl. landlocked countries) (UNCTAD, 2018; RBB Economics, 2019). This may change, and especially the smaller countries may be affected.

Table 3: Data elements for regulatory monitoring

Data elements for consortia monitoring	EC	U.S.	Canada	Australia	South America
Import, Export or both	?	Both	Import only	Import only	Both
Region of Acceptance	Yes				Yes
Loading port			Specific foreign ports	All ports prior to landing	Yes
Country of loading/embarkation					Yes
Unloading port		Yes	Yes (In Canada)	Yes (In Australia)	Yes
Country of unloading/disembarkation/discharge			Canada only	Australia only	Yes
Region/country of destination	Yes	Yes	Canada	Australia	Yes
Date or month & year or week & year of loading	Yes		Week & year	Date	Date
FCL or LCL (binary)				5 cargo types	Yes
Carrier (Shipping line)	Company name	Vessel name, IMO code, voyage number	Company name	Vessel Lloyd's number, voyage number	Company name
Cargo type (dry van, reefer)	Yes	Contain-er, reefer, ro-ro			Greater detail
2-digit HS Code		6-digit HS			Greater detail
Total TEUs for B/L					Yes
Cargo owner type (shipper, forwarder/third party)				Forwarder indicator	Yes
Unique identifier number for control		B/L number	Box ID	B/L number	Yes

Notes: Yes=collected, blank=not collected as far as can be ascertained

From table 3, it is clear that the market share by container carrier out of South-American ports is most easily calculated. The data collected is not necessarily publicly available but the focus here is whether the regulators have the data needed to evaluate the effectiveness of their consortia monitoring. This is useful, on a go-forward basis, if the European Commission, or any other regulatory agency examining liner shipping in any other country, determines that amendment of liner shipping regulation includes a requirement for particular data elements to be filed with either a third party data consolidator or with a national statistical agency.

Reviewing these countries (regions) individually, and the data elements collected, provides greater insight.

In **Europe**, the Data Management service of Customs collects data but is not involved in data exchange with the EC regarding consortia monitoring or decisions regarding mergers. The data collected is not by port pair but by trade lane. Ten trade lanes were originally identified by DG COMP, as noted in their Technical Paper of 2008 (Reed Smith LPP, 2008):

- North Europe—Far East
- Mediterranean—Far East
- North Europe—North America
- Mediterranean—North America
- Europe—West Africa
- Europe—South Africa
- Europe—East Coast South America
- Europe—West Coast South America
- Europe—Australia Asia
- Europe—Indian Subcontinent

To our knowledge, these remain the trades identified for regulatory oversight, and the data may be requested of carriers and third party sources like PIERS and CTS may supplement the data filed. Eurostat collects and reports publicly the gross weight of goods handled at ports and the volume of containers handled at the Top 20 container ports, but does not provide the data in a format enabling an assessment of market share by trade lane. HS Code level import and export data is collected by Customs but is not relevant for the market share oversight by trade lane, unless of course DG COMP were concerned about identifying captive shippers.

In the **U.S.**, bills of lading supplied to U.S. Customs and Border Protection are transferred to a third party (IHS Markit) for sanitization and consolidated, and then made available for purchase under the PIERS® brand name. The sanitization process results in a substantial number of blank cells within each record, or the use of ‘to order’ which is also not valuable. Under the consolidation process, exemptions granted under shipper application, intended to prevent identification of the larger shippers of cargo, hide what is happening from a consortium perspective; the resulting insights focus mostly on small shippers using less than

container load (LCL) services. Confidential contracts filed with the Federal Maritime Commission focus on the nature of the relationship between carrier and shipper, not on the market share resulting to the carrier from the contract. This leaves any assessment of consortia dependent on data requested of carriers, raising compliance costs for carriers, when re-direction of customs data for the purpose of consortia monitoring would serve the purpose.

In **Canada**, data is collected by the Canadian Border Services Agency from participating companies, for particular unloading ports in Canada, used for government decision-making, and, while consolidated for those participating companies in terms of dwell time and transit time, it is not publicly available to non-participants. Statistics Canada discontinued collecting data on all maritime transport loadings and unloadings with the 2011 calendar year being the last. However, this system gives the government access to the data for consortia monitoring, should it wish to use the data for this purpose.

In **Australia**, international shipping data is collected by the Australian Customs Service (Customs and Border Protection) as part of the import/export declaration forms. Customs and Border Protection receives a number of reports that contain legislatively required information supplied by shippers, importers, exporters and their agents, that can be used to count containers, using data items (or attributes) in those reports. The primary reporting instrument for shipping container counts is the Sea Cargo Report (SCR), but other reports have elements that could be cross-referenced to the SCR via the Lloyd's number and voyage number. The data collected for the Sea Cargo Report is for inbound cargo, and the data elements are listed below, all data management being focused on the vessel ID (Lloyd's number and voyage number). Other data collected in Australia includes that for *Waterline*. In this publication, stevedores and port operators supply port performance and container throughput at Australia's five major container ports. However the vessel level information is confined to number of TEUs loaded/unloaded and performance data for the loading/unloading of containers. This information is not tied to voyages, origin/destination, owners/alliances or cargo data. It seems that there is significant data being collected on import cargo but, as is the case with the U.S., Australian data is aggregated by third party for use by other government departments and is sanitized in the process. Lloyd's List Intelligence (LLI) data is purchased for the port calls, vessel characteristics, vessel movements, and vessel ownership by the Bureau of Infrastructure, Transport and Regional Economics.

For purposes of contrast to the four regions above, there are two commonly structured datasets for **South America**—Datamar for the West Coast of South America and Ultramar for the East Coast. Thus all South American governments have access to a uniform set of information on all container loadings and unloadings. These databases are collected by a third party, not sanitized, and the raw data is available for purchase by the public. As can be seen in Table 3, this is the most transparent data for regulators and for scholars interested in

understanding the trade/consortia issues in a region or globally. In the database, each bill of lading (B/L) or waybill has one line; therefore each record is a contract of carriage transaction. It is worth noting that this approach, while helpful to exporters and importers (anywhere in the world) interested in doing business in the region, the depth of data is more than needed for a successful consortia monitoring program. For example, consolidation by region would allow a clearer vision of what is happening by trade lane while ensuring that buyer and seller privacy are respected. Shipper/forwarder name could be anonymized, or carrier name coded. Regulators can decide on privacy or data confidentiality requirements while gaining access to the data they need for clarity on what is happening in the market. In other words, the level of detail these two databases provide is greater than needed for a successful consortia monitoring program.

The following conclusion is immutable: The existing data collection on liner shipping market share is woefully inadequate. There is little consistency across regions of the globe, and carrier reporting would be more efficient if carriers or customs (handling the cargo manifest) had standardized data reporting. The intention of a liner shipping regulatory monitoring program is to understand market share on a trade lane by actual loadings and unloadings, if market share is deemed to be the appropriate measurement for the regulatory policy. Until there is publicly reviewable statistical analysis demonstrating that the capacity proxy currently used is justifiable, the need for actual loading and unloading data is warranted. A five-year renewal with amendments to allow for such a collection process would go some way towards understanding if the capacity proxy is an equivalent to the market share threshold in the regulation.

Is the challenge really only one of clarity of consortia market share? Freight rates are not in Table 3 as a possible data element. This goes to the heart of current trade practices. As some trade transactions are based on contract of carriage prices—door-to-door, and some port-to-port (or other port/door combinations), and some have other arrangements built in, freight rates are not comparable; the establishment of a freight rate index is already overly complicated, and done by third parties for certain trade lanes. By making the focus on market share, we are focusing on the primary ‘pain point’ of assessing the impact of a particular consortium. This builds on the Brooks and Button (1996) assessment that (1) the price (freight rate) paid by shippers is highly disparate even at the 2-digit HS code level, and may or may not include terminal handling charges, merchant or carrier haulage, and so on; (2) the use of confidential contracts becomes violated by the existence of freight rate reporting at the contract of carriage level; and (3) there is differential pricing being even more widely practiced in an era of revenue management. Finally, the number of jurisdictions globally where freight rate-making is an exempted practice are so few that this concern is really outside the scope of most regulators and not of relevance to the European Commission’s CBER pathways. Furthermore, there are third party freight rate indexers who are serving

cargo interests well with advice on freight rates by trade lanes, and it is not necessary to have this data element, if it is not well-specified and ‘clean’.

6. Conclusions, further research and final comments

The CBER will expire April 25th, 2020. This gives rise to much debate, often based on insufficient data and knowledge. The aim of this paper was not to revisit past research undertaken at a time that does not mirror the current industry context but (1) to define the terms used, not just from a European perspective, (2) to understand the different approaches of the regulators across the study countries (EU, the U.S., Canada, Japan, Korea, China, Hong Kong and Australia), (3) to review the perspectives of the different stakeholders affected by the CBER respectively through review and gap analysis of their position papers to the public consultation by the EU, (4) to explore the three pathways possible for the EU to take on the CBER, where divergent perspectives of the industry actors may be balanced and (5) to discuss data needed for better regulatory decision-making. The research focuses on the container liner shipping industry as other segments of liner shipping (RoRo, ferries, and the like) that rely on the CBER are not under threat from the impacts of the restructuring seen recently in the large main trades.

To address this challenge, the main research question was: Are the interests of carriers and shippers in balance in the CBER era? If they are now, will they also be in the future? If not, what evidence does each actor have that the interests are not in balance, and what should be changed to bring back balance?

The answer to the main question is ‘not entirely’. While section 3 reviewed in detail the evidence given via the public consultations, there is room to for both carriers and beneficial cargo owners to move towards the middle ground. Given that there is greater stability in the confidential contract market than the spot market, shippers can seek to provide stronger volume guarantees over longer contracts to provide greater stability to carriers, while carriers should pay (more) attention to non-monetary elements, improving service reliability and seeking to improve transit times and dwell times (with port partners). If so, the benefits of cooperative working agreements for carriers need to be shared with shippers.

Efforts to bring the market back towards greater balance are not just limited to the parties along the supply chain. There is also a role to play by regulators, and that role is not only a national one but also a global one.

First, the research shows that there is a definite need for regulation that will yield greater certainty of the impact of regulations, greater clarity of their interpretation, and a time frame that will more closely mediate between the short time frame used by the majority of cargo interests (annual confidential contracts for example) and the longer time frame of carrier capital investment decision-making (the life span of a vessel investment). The review

conducted of definitions in use across the study countries—illustrated in Figure 1, summarized in Table 2, and discussed in depth on Appendix 1—indicates that a core of CWA activities of the non-rate-making variety currently occurs globally and is accepted by most of the countries studied as being appropriate. The approach under the existing CBER is clear to the carriers, the shippers and the regulators, and therefore has less uncertainty and reduced compliance/regulatory costs than the Expire option. Furthermore, all countries studied have competition laws that can be used as a regulatory tool to dampen predilections for and investigate any anti-competitive behavior that may be attempted. It is also the opinion of the authors that one globally-accepted definition of CWAs will contribute to a better understanding worldwide of what activities this global industry uses and that all stakeholders will benefit from such clarity. Harmonisation/alignment of definitions is quite possible.

Second, from the analysis, it is possible to put forward three different pathways from the perspective of the regulator: 1) allow the existing CBER to expire, 2) amend the existing CBER and 3) retain the existing CBER. Each pathway was explored relative to the legislation in place in eight countries so that the impact of Europe's decision on the CBER is placed in a global context. The review of pathways in section 4 of this paper reveals that the Expire option is the most dangerous of all pathways. The industry currently faces global uncertainty arising from decelerating growth rates in the trade in manufactures, and continuing excess capacity offered by carriers that may simply not be absorbed. Given the questionable viability of the industry, in face of new regulations on vessel emissions, trade war potential between two of the largest trading countries (the U.S. and China), and given the continuing fragility of many industry players, it does not seem appropriate to remove the activities that create considerable consumer surplus and around which the industry has restructured at this time. On the other hand, both the Retain and Amend options have advantages and disadvantages, and these are preferable to Expire. The analysis above favours the Amend option, but does not rule out a simple Retain one. A five-year framework for future review of the CBER is in keeping with other industries in Europe, and serves as a balance between the one-year contracting period for confidential contracts (also allowed in most jurisdictions) and the investment horizon for vessel investment. The Amend option allows for the European Commission to begin the process of exploring alternate data collection and reporting for better monitoring and evaluating consortia. Whether this happens through the Amend or Retain pathway is a political decision.

Third, starting from the framework by Meersman et al. (2010), the varying perspectives of the stakeholders involved were discussed and more specifically, whether the tools to materialize the respective objectives are aligned with the operators' strategies and perspectives. The review of existing stakeholder positions in the EU CBER public consultation highlights opposition, mainly between the point of view of shippers and that of carriers. The interests of the carriers and shippers were clearly not in balance during the fall

2018, when shippers were quite vocal about their desire to see the Expire option. That position was gradually modified over the months following the public consultation, with recognition that there were benefits passed on in terms of freight rates but perhaps not non-monetary elements of the transport costs borne by shippers, and that carriers were not hearing their concerns about transit time and reliability. Most obvious, however, was that the future capacity risk decisions of carriers may go against the interests of shippers and of terminal operators. The challenge, however, is that none of the stakeholders could provide evidence in support of their positions due to the lack of data. The analysis indicates that the Retain option for the CBER probably best fits the needs of shipping companies, but that also shippers might to some extent benefit, as this strategy might lead to better-equipped shipping companies, guaranteeing capacity to shippers. While the Expire option could benefit shippers, this holds the highest risk of seeing carriers disappear from the market, which would have an unintended negative consequence for the long-term health of the shipping sector. The Amend strategy is the most balanced one, but it is unclear, given current data issues, which amendments would be needed to balance these varying perspectives. What should be changed to bring back balance for shippers and carriers? We noted that shippers should seek longer-term confidential contracts with carriers, with service guarantees, while we suggested carriers seriously work to address the non-monetary concerns that shippers report.

Fourth, in section 5, the need for three actions were proposed to address the data gaps that stymied a clean review of the CBER. While the need for common definitions has already been discussed, and the variants noted in Appendix 1, the other two are recommended: (1) a global registry of CWAs for regulators to access, and (2) a trade data warehouse for consortia monitoring. Both of these need further exploration at a multi-lateral level, given the discrepancies of what data is collected in each jurisdiction. In keeping with Guideline 5 of the APEC (2008a,b) report, we suggest that the following simple elements be present in a global registry of CWAs: Carriers participating in the agreement; type of agreement (from the list in Appendix 1), geographic trade lane(s) covered by the agreement (including the 10 currently noted by ReedSmith as relevant to the EU); agreement duration (date of entry and date of expiration if noted); if selling of space to third parties is allowed; and most important (but not noted in previous studies) the legal party to contact for further details on the nature of the CWA.¹⁷

With these findings, the paper provides a good conceptual basis for further in-depth scholarly analysis. First of all, a data-supported matching of the perspectives of different players with their calculated consequences on each other's cost function and revenue would provide great

¹⁷ The reason for the last item in the database is that contacts provided to Containerisation International Yearbook's listing of conference parties in its 2012 Yearbook were in many cases untraceable in earlier research by one of the authors. If recorded in a global database, any relevant regulatory authority should be able to gather more information on the CWA if needed for regulatory purposes.

value for further development of the industrial economics examination of costs and benefits accruing to the stakeholder. From a strategic management perspective, it is important to develop a consortia monitoring data warehouse, to examine two issues: whether capacity is a proxy for market share, and what types of CWAs are effective in addressing the imbalance in carrier/shipper relationships. This will require that available data sources can be identified and made public respecting commercial sensitivities. At present, scholars are not able to be of the assistance they could to regulators and all regulators are not treating this industry as the global one it has become. Scholars specialized in industrial economics might study the consequences (what will happen, how the actors will respond), efficiency and welfare properties while scholars in strategic management may evaluate in-depth the types of alliances and how we manage them and make good regulatory policy.

Last but not least, the conducted research has some limitations. First, the analysis only looked at one industry while there might be lessons to be learned from other industries (airline industry, tourism,...). Second, the lack of relevant data is an important limitation. Third, the next step raises regulatory thinking to a multilateral level. In the long term, the countries with a competition-policy led agenda and others countries with a transport-policy led agenda might actively work together towards aligning their provisions of competition policy more closely.

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Appendix 1: Definitions of Cooperative Working Agreements of Relevance (Figure 1) from a Global Perspective

Conference Agreement

Chapter 1 of the UNCTAD Code of Conduct for Liner Conferences defines a conference as: *“a group of two or more vessel-operating carriers which provides international liner services for the carriage of cargo on a particular route or routes within specified geographical limits and which has an agreement or arrangement, whatever its nature, within the framework of which they operate under uniform or common freight rates and any other agreed conditions with respect to the provision of liner services”*.

Other comments: This definition is used by many EU trading partners, particularly many developing countries as their national policy.

Why relevant? The EU has a significant volume of trade that is North-South.

Why is it not relevant? The EU’s position on price-fixing (rate-making) makes it moot, except in circumstances where non-national shipping line access may be denied as the UNCTAD Code also allows adopting countries to reserve a share to the national shipping line.

Vessel operating common carrier (VOCC) conference agreements

The FMC (2018) authorizes two or more shipping lines to discuss rate-making, and practices and conditions of service. It is interesting to note that there are currently none on file for the movement of general commercial cargo and only three involve the transport of government-impelled cargo.

Other comments: This definition is consistent with that in the legislation of Canada, Japan, South Korea and China.

Why relevant? Not considered relevant.

Why is it not relevant? Such agreements are no longer exempt from anti-trust investigation in the EU, Hong Kong or Australia, for examples.

Vessel operating common carrier rate discussion agreements

The FMC (2018) authorizes two or more shipping lines to discuss rate-making. VOCC discussion agreements focus on the discussion of rate matters or charges, but unlike conferences, consensus on rates amongst the shipping line members is non-binding on the parties to the agreement.

Other comments: This definition is consistent with that in the legislation of Canada, Japan, South Korea and China.

Why relevant? Not considered relevant.

Why is it not relevant? Such agreements are no longer exempt from anti-trust investigation in the EU, Hong Kong or Australia, for examples.

Space charter agreements

The EU legislation does not define a space charter agreement, but it would fall under the definition of an accepted consortia activity. The FMC (2018) defines these as agreements that authorize an ocean common carrier to sell or exchange vessel space for use by another shipping line. They do not include the authority to discuss the provision of space in that trade, only the chartering of space that is already deployed.

Other comments: This definition is consistent across the industry, and the study countries, and in Figure 1 is referred to as slot exchange/charter and such exchanges may be single or multi-lane.

Why relevant? In the EU, space charter agreements are an allowed activity under Article 3. However, Article 4 does not allow the consortium carriers availing their arrangements under the CBER to space charter from a third party carrier. This is considered as allowed in all countries.

Why is it not relevant? It is the opinion of the authors that this is not relevant, as this is interpreted for the most part as similar across jurisdictions.

Equipment discussion agreements

The EU legislation does not define an equipment discussion agreement. The FMC (2018) considers agreements between shipping lines that focus on the discussion, exchange and transportation of equipment, like containers, chassis, barges and related equipment to be equipment discussion agreements.

Other comments: The industry views these as sharing agreements and, in Figure 1, they are referred to as an equipment agreement; such agreements may be single or multi-lane, and are not seen as rate-making agreements.

Why relevant? The EU considers these activities as are an allowed activity under Article 3, even though the concept of a discussion agreement in the EU is that it is rate-making; the FMC definition does not note rate-making as being included.

Why is it not relevant? It is the opinion of the authors that this is not relevant. Essentially, the interpretation of the legislation is similar across the study countries, although the language is not.

(Global) Vessel sharing agreements (VSAs) (alliances)

The EU legislation does not define a (global) vessel sharing agreement. The FMC (2018) distinguishes between VSAs and Global VSAs. The former authorizes two or more shipping lines to discuss and agree on the supply of vessel capacity in a defined trade (lane) through the deployment of a specific string or strings. It is critical to note that a vessel sharing agreement under this definition is a trade-lane specific agreement not a multi-lane agreement. The latter authorizes two or more shipping lines to discuss and agree on the supply of this capacity across multiple trade routes. The agreements may contain other authorities, such as information exchange, joint procurement of goods or services necessary to operate the services, and the like.

Other comments: There is industry consensus on the concept of VSAs and GVSAs but the language varies, being called consortia, pooling agreements, vessel sharing agreements and cooperative working agreements depending on the jurisdiction (study country). The FMC description provides clarity on the minimum scope. There is consensus in all jurisdictions that they are currently allowed, although Australia has been reviewing its block exemption and the outcome of that review is not known at time of writing.

Why relevant? The EU does not distinguish between single-lane and multi-lane vessel-sharing agreements. It is the opinion of the authors that such distinction is not necessary for any move towards greater harmonisation of liner shipping regulation.

Why is it not relevant? It is the opinion of the authors that this is not relevant. Essentially, the interpretation of the legislation is similar across the study countries, although the language is not.

Joint service agreements

The EU legislation does not define a joint service agreement. The FMC (2018) authorizes two or more shipping lines to establish and operate a combined vessel service or joint venture that uses a distinct operating name and acts as a single shipping line independent of the shipping lines that are parties to the joint service agreement.

Other comments: Brooks, Blunden & Bidgood (1993) viewed joint ventures and joint services as different by virtue of the first being an equity investment (for a minority or majority shareholding), hence its position on the far right of Figure 1. This would mean that equity joint ventures would be subject to M&A oversight if appropriate to the level of shareholding involved

Why relevant? The EU would call the inter-related agreements as making a consortium.

Why is it not relevant? It is the opinion of the authors that this is not relevant. There is consensus on joint services as being currently allowable.

Vessel operating common carrier cooperative working agreements (CWAs)

The EU legislation does not define a VOCC CWAs. The FMC (2018) authorizes shipping lines to establish exclusive, preferential or cooperative working relationships that are subject to the Shipping Act but do not fall precisely within the parameters of any other defined agreement category.

Other comments: APEC Transportation Working Group (APEC, 2008a, 2008b) uses the term CWA as an umbrella term that covers all agreements of a cooperative nature. This could include computer data exchange agreements and information-sharing agreements for example. Commission Regulation (EC) No 906/2009 preamble is clear that the “legal form of the arrangements is less important than the underlying economic reality that the parties provide a joint service.” This implies that the Commission is open to concepts of other forms of co-operation that might develop as the dynamics of the market change; in other words, vessel CWAs are currently accepted under the CBER as long as they satisfy Article 81(3) of the Treaty.

Why relevant? It is an allowed activity in the EU’s definition of consortium.

Why is it not relevant? It is the opinion of the authors that this is not relevant. There is consensus on such agreements as being currently allowable.

Note: The commentary on relevance is by the authors. The study countries are the EU, The U.S., Canada, Japan, Korea, China, Hong Kong, and Australia.

Source: The current FMC categories are defined in Federal Maritime Commission (2018). 56th Annual Report Fiscal Year 2017, March 31, pp. 12-13 (with the numbers of each category of agreement plotted on p. 12).