A Study on International Shipping in the Philippines

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Note: Opinions expressed in this report are those of the author; they do not reflect the views of any other individual or organization.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ABBREVIATIONS

AISL	Association of International Shipping Lines
APL	American President Line
ATI	Asian Terminals, Inc.
B/L	Bill of Lading
BIR	Bureau of Internal Revenue
BOC	Bureau of Customs
BPA	Bunker Price Adjustment
CCBI	Chamber of Customs Brokers, Inc.
CIC	Container Imbalance Charge
CIF	Cost, Insurance and Freight
CMTA	Customs Modernization and Tariff Act
CNF	Cost and Freight
COSCO	China Ocean Shipping Container Line
CPCN	Certificate of Public Convenience and Necessity
CR	Concentration Ratio
CSCL	China Shipping Container Line
CTAP	Confederation of Truckers Association of the Philippines
DEA	Data Envelopment Analysis
DO	Delivery Order
DOF	Department of Finance
DOTR	Department of Transportation
DTI	Department of Trade and Industry
ECRC	Emergency Cost Recovery Charge
EU	European Union
FCA	Free Carrier
FEU	Forty Equivalent Unit
FMC	Federal Maritime Commission
FOB	Freight On Board
HCPTI	Harbour Centre Port Terminal, Inc.
HHI	Herfindahl-Hirschman Index
HMM	Hyundai Merchant Marine
ICC	International Chamber of Commerce
ICTSI	International Container Terminal Services, Inc.
IMO	International Maritime Organization
INCOTERMS	International Commercial Terms
IRR	Implementing Rules and Regulations
JAO	Joint Administrative Order
K-Line	Kawasaki Kisen Kaisha
MARINA	Maritime Industry Authority

MICT	Manila International Container Terminal
MNHPI	Manila North Harbor Port, Inc.
MOL	Mitsui Osaka Shosen Kaisha Line
MPI	Malmquist Productivity Index
MSC	Mediterranean Shipping Company
NOL	Neptune Orient Lines
NYK	Nippon Yusen Kaisha
ONE	Ocean Network Express
OOCL	Orient Overseas Container Line
OSRA	Ocean Shipping Reform Act of 1998
PCASO	Philippine Chamber of Arrastre and Stevedoring
PCBAPI	Professional Customs Brokers Association of the Philippines, Inc.
PCC	Philippine Competition Commission
PCG	Philippine Coast Guard
PPA	Philippine Ports Authority
PUCP	Port Users Confederation of the Philippines
RA	Republic Act
SBMA	Subic Bay Metropolitan Authority
SCP	Structure-Conduct-Performance
SDD	Store Door Delivery
SMC	San Miguel Corporation
TABS	Terminal Appointment Booking System
TEU	Twenty Equivalent Unit
THC	Terminal Handling Cost
UASC	United Arab Shipping Company
UNCTAD	United Nations Conference on Trade and Development
US	United States
WEF	World Economic Forum
WSC	World Shipping Council
WTO	World Trade Organization

EXECUTIVE SUMMARY

The international shipping industry plays an important role in the international supply chain and in the smooth functioning of global trade and in expanding global markets.

An application of the conventional structure-conduct-performance (SCP) paradigm shows that the international shipping industry satisfies the three characteristics of being a competitive industry: (1) at least five (5) reasonably strong or comparable rivals, (2) none of the strong rivals must possess a dominant position (e.g. 40% or more of the market share), and (3) there is ease of entry of new competitors. The trend toward forming or joining shipping alliances does not pose as barriers to entry in the international shipping industry.

Regulations concerning the shipping industry at the global level are the jurisdiction of the International Maritime Organization (IMO) – a United Nations agency based in London. The principal responsibility of enforcing IMO regulation rests with the countries in which merchant ships are registered. In the Philippines, the regulation of ports is separated from the regulation of shipping. The Philippine Ports Authority (PPA) is a government corporation mandated to handle the planning, development, and management of seaports, while the Maritime Industry Authority (MARINA) governs the activities of the shipping sector, particularly vessel seaworthiness and the training and development of seafarer/ship manpower. The Bureau of Customs (BOC) is tasked to undertake assessment and collection of customs revenues and to supervise and control all export and import cargoes not just in seaports, but also in airports, terminal facilities, container yards, and freight stations.

The stakeholders of the industry can be classified into four groups: (1) international shipping lines and its related service providers such as the truckers, customs brokers, freight forwarders, arrastre operators, and stevedoring workers; (2) regulators such as PPA, MARINA, and BOC; (3) private port operators such as the International Container Terminal Services, Inc. (ICTSI) and Asian Terminals, Inc. (ATI); and the consumers and port users such as the exporters, importers, bonded warehouse operators, door-to-door consolidators, and traders.

The International Commercial Terms (INCOTERMS) provide a set of rules relating to international commercial law. It defines the party responsible for undertaking the activity or the party liable for paying the service covered in the commercial transaction agreed between two parties. INCOTERMS are widely used in international transactions and serve as rules that clearly communicate the tasks, costs, and risks associated with the transport and delivery of goods from the seller to the buyer. For example, under the FOB (free on board) rule, the local seller at the origin assumes full responsibility for the cargo until it is on board the vessel. The buyer is responsible for all the costs once the cargo is aboard the vessel in a port.

The practice of separating surcharges from freight rate is allowed by international maritime treaties such as the World Trade Organization (WTO) Agreement, United Nations Conference on Trade and Development (UNCTAD) Convention of Code of Conduct for Liner Conferences, European Union (EU) Maritime Transport Agreement, and notices issued by the US Federal Maritime Commission (FMC).

There is intense competition in the international shipping industry. Shippers and freight forwarders have many options in choosing which shipping line or mode of transport to employ in order to move their cargo to a specific destination.

An issue is raised locally that intense competition in the international shipping industry created an oversupply of vessels that led some shipping companies to impose origin and destination surcharges on top of basic freight rates to recover their losses. A proposed Joint Administrative Order has been drafted by DOF, DTI, and DOTr (but not finalized) towards regulating the fees and charges of international shipping lines doing business in the Philippines (DOF, DTI, and DOTr, 2019).

International shipping contributes to the increased Philippine trade with ASEAN neighbors as well as with China, Japan, South Korea, India, Hongkong, Taiwan, Germany, and the United States. Robust and dynamic trade performance likewise led to Philippine economic growth in the recent years. The participation of private companies in port operation and management of major Philippine ports is an appropriate policy direction towards improving port efficiency.

Port efficiency is an important determinant of shipping costs. Manila ranks well below the global performers, such as Singapore and Shanghai, both in port productivity and port efficiency. Port efficiency is determined by port size and infrastructure, private sector participation, quality of both cargo-handling and logistics services, operational efficiency of port management, and conducive public-policy framework. The better the infrastructure, the higher the probability of an efficient port. Poor infrastructure accounts for more than 40% of transport costs. Inefficient ports have higher handling costs.

The recommendations of the study are the following:

(1) Shipping companies may voluntarily publish (or post in their websites) all-in freight charges, inclusive of all charges, but unbundling the basic freight rate from the itemized surcharges, in order to promote transparency and accountability. The risk of collusion through signaling is low vis-à-vis the benefits of transparency in an industry with many players.
(2) The government must review its strategic national port development plan and prioritize the establishment of new and deep-sea ports to decongest the ports located in the Greater Capital Region.
(3) The long-term thrust of government policy is to build regulatory capacity in a single agency (e.g. BOC or MARINA) which will then be tasked to promulgate rules and regulations regarding charges that may be imposed by international shipping lines, logistics service providers, customs brokers, cargo truck operators, terminal operators, and cargo yard operators. FMC code of regulations (available online) can serve as a starting benchmark.
(4) To address, the short-run policy concerns, DTI may refocus the thrust of the JAO from banning outright the imposition of surcharges by shipping lines to drafting monitoring rules and guidelines specifying the criteria and procedures to be followed by carriers when they impose surcharges. These rules may require carriers to publish their charges in advance, the condition that requires the imposition of surcharges, the timing of the imposition, the rules on adequacy of notice of implementation, and the criteria for the termination of a particular surcharge.
(5) BOC, the lead agency designated in the overall implementation of the JAO may want to build immediately a staff capacity geared towards monitoring various surcharges

imposed and at the same time pursuing dialogue with the shipping lines and other stakeholders on the surcharge issue.

(6) International shipping lines may be able to facilitate a government-to-government dialogue to address some trade distortions observed in inter-Asia trade.

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Introduction

In the era of globalization of production and consumption, maritime shipping and port efficiency play an important role in the smooth functioning of global trade and international supply chain. The volume of world trade has increased from $296 billion in 1950 to $8 trillion in 2005 (WTO, 2007). With the expanding global trade, more goods and services are crossing national borders than ever before. In this environment, there is a demand for an efficient flow and storage of goods between points of origin and points of destination. International shipping is part and parcel of this international supply chain network. Global value chains depend on this network. The quality of shipping services and port infrastructure has a strong effect on the facilitation of the transport of goods between the port of origin and the port of destination. Efficient shipping services facilitate the movement of products, ensuring their safety and speed, and reducing its cost.

This paper will focus on the international shipping industry and its operations in the Philippines. The paper explains and describes the pricing practices and norms in the international shipping industry and its relevance to the current Philippine port and shipping situation.

This report is organized as follows. Section II states the objectives of the study. Section III analyzes the size and structure of the international shipping industry. Section IV describes the legal and regulatory framework governing the industry. Section V identifies the various stakeholders of the industry. Section VI explains how shipping cost and other charges enter into the price and rate determination as currently practiced in the industry. Section VII assesses the impact of the international shipping industry on the Philippine economy. Section VIII explains the link between port efficiency and shipping costs. And Section IX provides the conclusion and recommendations.

II. Objectives

This study aims to provide a baseline information on the international shipping industry in order to facilitate understanding of its size and structure, scope of operations, linkages to the local economy, pricing practices, and the regulatory hurdles it faces.

Specifically, this study seeks to: (1) analyze the size and structure of the international shipping industry, (2) explain the legal, institutional, and regulatory framework that governs the industry, (3) describe the various stakeholders of the industry, (4) analyze and explain international pricing practices and its relevance in the determination of freight rates and other charges at Philippine ports, (5) evaluate the impact of the international shipping industry on

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the Philippine economy, (6) assess the link between port efficiency and transport/shipping costs, and (7) provide some policy recommendations.

III. Size and Structure of the International Shipping Industry

This section assesses the international shipping industry using the structure-conduct-performance (SCP) framework. The SCP framework assumes that the industry's performance depends on its conduct which in turn depends on the structure of the market. The structure depends on such basic conditions as technology and demand for a product.

a. Structure

Market structure refers to the number and distribution of firms in a market (industry concentration) as well as the ability of firms to enter the market (barriers to entry). The implication is that in an industry where there is only one or few firms (or a small number of firms are very large relative to the remaining firms), the dominant firms will exercise more market power. And for industries with significant long-run entry barriers, prices will remain above competitive levels for some time.

A genuinely competitive industry is described to have intense and sustained pressure among competitors, with no exercise of monopoly power or collusion. Such industry usually has the following characteristics: (1) at least five (5) reasonably strong or comparable rivals, (2) none of the strong rivals must possess a dominant position (e.g. 40% or more of the market), and (3) there is ease of entry of new competitors (Shepherd, 2004).

Table 1 shows the seven largest international shipping companies (based on containership operations). It satisfies Shepherd's three characteristics of being a competitive industry: it has more than five comparable rivals, none of the 7 largest firms has a market share of 40% or more, and there are more than 50 companies operating in the industry.

Table 1
Largest International Shipping Companies: 2017

Company	Number of ships	Capacity	Market share	Average vessel size
Maersk	621	3,201,871	16%	5,156
Mediterranean Shipping Company	469	2,935,484	14.6%	6,259
CMA-CGM	441	2,220,474	11.1%	5,035
China Ocean Shipping Company	277	1,603,341	8%	5,788
Hapag-Lloyd	180	1,038,483	5.2%	5,769
Evergreen	186	995,147	5%	5,350
Orient Overseas Container Line	107	666,558	3.3%	6,230

Source: International Chamber of Shipping.

Market structure or the number and distribution of firms in an industry can be measured by two indicators: (1) Concentration Ratio (CR), and (2) Herfindahl-Hirschman Index (HHI). CR combines the market share of the N largest firms in the industry. For instance, in Table 1, CR_3 is the sum of the market shares of Maersk, Mediterranean Shipping

Company (MSC), and CMA-CGM. CR_3 equals 16% + 14.6% + 11.1% or 41.7%. The top 3 firms account for 41.7% of the market. CR_4 is the sum of the market shares of Maersk, MSC, CMA-CGM, and China Ocean Shipping Company (COSCO). Thus, CR_4 equals 16% + 14.6% + 11.1% + 8% = 49.7%. The top 4 firms account for approximately 50% of the market. One problem with the CR as a measure of market structure is that it is invariant to changes in the sizes of the largest firms. For instance, our CR_3 measure of 41.7% does not change if Maersk gains 10% share at the expense of MSC (the second largest firm), even though this could make the market less competitive (Patalinghug, 1993).

The HHI avoids the shortcoming of CR. HHI is measured as the sum of the squares of the market shares of all firms in the industry. Using the data in Table 1, HHI is equal to the sum of squares of the market shares of Maersk, MSC, CMA-CGM, COSCO, Hapag-Lloyd, Evergreen, and Orient Overseas Container Line (OOCL) and the rest of the firms in the industry, or HHI=$(16)^2 + (14.6)^2 + (11.1)^2 + (8)^2 + (5.2)^2 + (5)^2 + (3.3)^2$ + the sum of squares of the market shares of the rest of the firms in the industry (approximately 43 more firms; as shown in Appendix A). Thus, for 2017 HHI for the international shipping industry is equal to: 719.3 + 56.83 = 776.13. This means that the largest 7 shipping firms account for 92.68% of HHI, while the remaining 43 firms account for only 7.32% of HHI. How do we interpret the HHI measure? If the international shipping industry, which was composed of at least 50 firms in 2017, had each firm with equal market share, each firm would have a market share of 2%, and ideally HHI would have been equal to $(2)^2$ x 50 = 200. If the firms are of the same size, HHI = $^1/_N$, where N is the number of equally sized firms in the industry. The lower limit of HHI is zero, as the number of equally sized firms goes to infinity. If a single firm supplies the entire market, HHI is equal to 1. In applying this concept to the market share data in the international shipping industry, HHI equals 100 if there are 100 equally sized shipping firms in 2017, instead of 50 equally sized firms. HHI increases as the number of firms falls and as the variance of market shares increases. HHI combines information about both the number of firms and the size distribution of firms. Thus, HHI 2017 for the international shipping industry is equal to 776.13 which is almost four times the HHI benchmark of 200 for 50 equally sized firms (Besanko, et al., 2013).

Concentration, either measured by CR or HHI, is an important factor affecting pricing, production, and profitability. Taking other factors into consideration, increases in concentration can be associated with increased prices and profits. It is natural to hypothesize a positive relationship between an industry's degree of market power (as measured by CR and HHI) and industry prices. The logic behind this hypothesis is that the smaller the number of firms that dominate an industry, the greater is the likelihood that firms will avoid cutthroat competition and succeed in maintaining high prices. Higher prices may be a result of tacit collusion among a small number of equally sized firms. There is considerable evidence that increases in concentration promote higher prices in various manufacturing industries. Even if the firm has a high market share, it may still face reduced profits because the few competitors in the industry are engaged in profit-reducing non-price competition.

Relating the implications of market structure to the international shipping industry, Appendix A shows that the industry has a large number of participants and there is cutthroat competition in the determination of freight rates. Moreover, greater concentration per se need not be harmful if dominant firms are efficient (e.g. they bring economies of scale instead of higher costs). The antitrust guidelines followed by the Philippine Competition Commission (PCC) take into account many factors – such as ease of entry, extent of ongoing price competition, possible efficiency gains, and concentration – in evaluating a particular industry.

If an existing shipping route is the franchise or the exclusive use by a single shipping company, that practice would not promote ease of entry. This is not the case in the present structure of the international shipping industry.

b. Barriers to Entry

Regulation is the main lever used by governments to promote competition in an industry by decreasing the barriers to entry. International regulators encourage competition and deregulate the international shipping industry. The establishment of cartels, like shipping conferences, was disallowed by shipping statutes, particularly by the U.S. Ocean Shipping Reform Act of 1998 (OSRA). Shipping conferences are associations of shipping companies which offer regular service on specific routes at publicly announced prices, regulate competition among conference members, and protect their market from non-members. The rationale behind the formation of shipping conferences is that as shipping companies engage in cutthroat competition, freight rates tend to drop below cost,[1] and many shipping companies exit the market, leading to irregular shipping schedules that upset shippers and consignees who expect stable and predictable services. Technically, shipping conferences are allowed to call at U.S. and other ports, provided that the nature of the conference allows other shipping lines to join the conference. What is being banned is the establishment of "close" conferences which do not allow any non-member shipping companies to join.

The "open" conferences that are allowed in the shipping world are now called "alliances" which are similar to the strategic alliances that exist in the airline industry. OSRA contains pro-competitive provisions. One such important provision is allowing shippers to sign service contracts directly with individual carrier, instead of with the alliance. This law likewise permits confidential contracting in international ocean shipping, privatizes common carrier tariff publication, retains antitrust exemption for the ocean liner industry, and enhances the protection afforded to shippers' association in international trade. In the U.S., the Sherman Anti-Trust Act of 1890 considers shipping conferences as cartels which are illegal under this law. OSRA allows shipping companies which belong to open conferences to make a call at U.S. ports. In other words, shipping companies are exempted from anti-trust laws under OSRA's provision. EU laws likewise exempt conferences from their antitrust laws. However, maritime conferences have lost their oligopoly-like power in recent years due to the trend towards deregulation, liberalization, and competition.

The emergence of shipping alliances (or ocean alliances) is driven by the changing environment in the international shipping industry. Globalization, improved service of non-conference carriers, and the deregulation focus of the regulatory authorities have led to the development of efficiency-enhancing alliances and the de-emphasis of the role of traditional conferences. Shipping alliances are rationalizing their capacity through vessel, terminal, and equipment-sharing schemes, joint scheduling, and joint-chartering to increase their product offerings and reduce their operational costs. As stressed earlier, the competitive nature of the international shipping industry creates an unstable, fragmented, and unconsolidated industry characterized by a boom-bust cycle. The internal growth of the industry led to capacity expansion (e.g. the launch of a Panamax-type vessels), mergers and acquisitions, and the

[1] Operational costs in shipping account for over 67% of the total cost of running a shipping line divided into bunker costs (46%) and port charges (21%). Under a shipping alliance, shipping lines can cut these variable costs through the usage of common resources such as ships, port terminals and networks around particular routes. Alliances have some negotiation power over ports and can pressure them to obtain more favorable conditions and improved services. (Freight Hub, 2017).

establishment of strategic alliances. These factors are responsible for consolidating the industry.

Shipping alliances are now an evident feature of the industry. However, shipping companies are still free to enter or exit from any alliance in the industry. Table 2 demonstrates the free mobility characteristic of the industry. For instance, OOCL which belonged to the Global Alliance in 1995, moved to the Grand Alliance in 1999. In 1995, APL belonged to Global Alliance and NOL belonged to Grand Alliance. In 1999, the merged APL/NOL belonged to the New World Alliance, and when New World Alliance and Grand Alliance merged in 2012 to form the G6 Alliance, APL (the surviving entity in the APL-NOL merger) joined the G6 Alliance. When Maersk, MSC, and CMA-CGM formed the P3 Alliance in June 2013, it received approval from the US and EU competition authorities, but China's Ministry of Commerce refused approval in June 2014 following a review on the ground that it integrates the market power and consolidates the operating network of the alliance members, eliminating effective competition between major competitors and raising entry barriers in the market. In July 2014, Maersk and MSC formed the 2M Alliance and received approval from Chinese, EU, and US regulatory authorities in October 2014. On the other hand, CMA-CGM, China Shipping Container Lines (CSCL), and United Arab Shipping Company (UASC) formed the Ocean 3 (O3) Alliance in September 2014.

It must be stressed that alliance formation is not just an industry consolidation and rationalization move, it is likewise a strategic move. In response to the creation of the CKYH Alliance (composed of COSCO, K-Line, Yang Ming and Hanjin which was later expanded to CKYHE with the addition of the Evergreen Line), the New World Alliance (composed of APL, MOL, and Hyundai) and the Grand Alliance (composed of Hapag-Lloyd, NYK, and OOCL) merged to form the G6 Alliance. CKYHE Alliance allows expanded cooperation among its five members, provides their carriers with greater operational flexibility, and permits each of their members to better serve its customers by offering wider port coverage, increased frequency of sailings, and stable shipping schedules. The G6 Alliance was formed to match CKYHE's capabilities to offer more sailing frequencies, fast transit times, broad port coverage, and possession of the latest vessels with capacities above 14,000 TEUs.

Shipping alliances are pragmatic arrangements and their compositions change every few years. The intensity of competition, cost of complexity of the alliance and volatility in freight rate led to alliance instability. And the disparity in fleet capacity and membership composition between alliances creates the situation that makes the existing arrangement unlikely to remain stable (Rau and Spinler, 2017; Yap and Zahraei, 2018).

In March 2016, COSCO and CSCL merged to form China Shipping Corporation (COSCO). Ocean Alliance was formed in April 2016 consisting of CMA-CGM, COSCO, OOCL, and Evergreen. The Alliance was formed in May 2016 consisting of Hapag-Lloyd, K-Line, MOL, NYK, and Yang Ming. G6 and CHKYE alliances were dissolved. CMA-CGM acquired APL in June 2016, Hanjin filed for recevership in August 2016 (and was declared bankrupt in February 2017); ZIM tied up with The Alliance and Hyundai Merchant Marine (HMM) tied up with the 2M Alliance in December 2016. HMM's entry into the 2M Alliance was later rejected. The relationship between Maersk, MSC, and HMM is called "2M+H Partnership." Hapag-Lloyd merged with UASC in May 2017; Maersk acquired Hamburg Sud in August 2017, and COSCO acquired OOCL in July 2017.

In March 2018, K-Line, MOL, and NYK have merged and starting in April 1, 2018 operated under a new name, Ocean Network Express (ONE).

At present, there are three alliances, namely, 2M Alliance, Ocean Alliance, and The Alliance (see Table 2). The first two have a fleet capacity of approximately 7 million TEUs, while the third one has half of the fleet capacity of the first two (Yap and Zahraei, 2018; Embassy Freight Services, 2018).

The trend towards forming or joining shipping alliances does not pose as barriers to entry in the international shipping industry. On the contrary, alliances serve as "strategic groups" within the industry which attempt to create its own market niche within the industry and foster inter-alliance competition in the industry. Alliances are geared more towards capacity rationalization of vessels, terminals, and cranes than a price-setting arrangement (Wang, 2015), and participation in alliances is an important strategy for shipping lines to compete successfully in the industry (Yap and Zahraei, 2018).

Table 2
Shipping Alliances and Its Members: 1995-2014

1995	
Global Alliance	Country
• Orient Overseas Container Line (OOCL)	Hongkong
• Mitsui Osaka Shosen Kaisha Line (MOL)	Japan
• American President Line (APL)	U.S.A.
Grand Alliance	Country
• Pacific and Orient Container Line (P&OCL)	United Kingdom
• Hapag-Lloyd	Germany
• Nippon Yusen Kaisha (NYK)	Japan
• Neptune Orient Lines	Singapore
Maersk/Sea-Land	Country
• Maersk Line	Denmark
• Sea-Land Shippoing	U.S.A.
TRICON	Country
• Hanjin Shipping	Korea
• DSR-Senator	Germany
• Cho-Yang	Korea
1999	
New World Alliance	Country
• APL/NOL	U.S.A./Singapore
• MOL	Japan
Grand Alliance	Country
• P&O Nedloyd	United Kingdom
• OOCL	Hongkong
• Hapag-Lloyd	Germany
• NYK	Japan

TRICON	Country
• Hanjin	Korea
• DSR-Senator	Germany
• Cho Yang	Korea

Sino-Japan Alliance	Country
• China Ocean Shipping Company (COSCO)	China
• Kawasaki Kasen Kaisha Limited (K Line)	Japan
• Yang Ming	Taiwan

2010

New World Alliance	Country
• APL	Singapore
• MOL	Japan
• Hyundai	Korea

Grand Alliance	Country
• Hapag-Lloyd	Germany
• NYK	Japan
• OOCL	Hongkong

CKYH Alliance	Country
• COSCO	China
• K Line	Japan
• Yang Ming	Taiwan
• Hanjin	Korea

2013

P3 Alliance	Country
• Maersk	Denmark
• Mediterranean Shipping Company	Switzerland
• CMA-CGM	France

2014

G6 Alliance	Country
• APL	Singapore
• MOL	Japan
• Hyundai	Korea
• Hapag-Lloyd	Germany
• NYK	Japan
• OOCL	Hongkong

CKYHE Alliance	Country
• COSCO	China
• K Line	Japan
• Yang Ming	Taiwan
• Hanjin	Korea
• Evergreen Line	Taiwan

2M Alliance	Country
• Maersk	Denmark
• MSC	Switzerland

Ocean Three (O3) Alliance	Country
• CMA-CGM	France
• China Shipping Container Lines (CSCL)	China
• United Arab Shipping Company (UASC)	Arab States of the Persian Gulf

2016

2M Alliance	Country
• Maersk	Denmark
• MSC	Switzerland
• HMM[a]	South Korea

Ocean Alliance	Country
• CMA-CGM	France
• COSCO	China
• OOCL	Hongkong
• Evergreen	Taiwan

The Alliance	Country
• Hapag-Lloyd	Germany
• Yang Ming	Taiwan
• K-Line	Japan
• MOL	Japan
• NYK	Japan

2019

2M Alliance	Country
• Maersk	Denmark
• MSC	Switzerland

Ocean Alliance	Country
• CMA-CGM	France
• COSCO	China
• Evergreen	Taiwan

The Alliance	Country
• Hapag-Lloyd	Germany
• Yang Ming	Taiwan
• Ocean Network Express	Japan

Source: Wang (2015); Embassy Freight Services (2018): https://www.embassy-freight.be/en/news/april018-new-alliances-seafreight/; Yap and Zahraei (2018).
[a]Hyundai Merchant Marine (HMM) was initially set to join 2M Alliance, but its entry was rejected. The relationship of the trio is called "2M+H partnership" (Freight Hub, 2017).

IV. Legal and Regulatory Framework

Regulations concerning the shipping industry at the global level are the jurisdiction of the International Maritime Organization (IMO) – a United Nations agency based in London. IMO adopted a comprehensive framework of detailed regulations based on international diplomatic conventions. The principal responsibility for enforcing IMO regulations rests with the countries in which merchant ships are registered (e.g. the flag states). However, a Philippine-owned ship registered in Panama will carry the Panama flag.

Some of the government agencies regulating and supervising the international shipping companies are the Federal Maritime Commission (US), Ministry of Transport (China), and EU Commission (Europe). Shipping alliances, such as vessel-sharing and space chartering, will have to get the approval from these regulatory agencies. The antirust implications of alliances are handled by the Federal Maritime Commission (FMC) in the U.S. based on the antitrust provision specified in the Ocean Shipping Reform Act of 1998 (OSRA). In other jurisdictions, such as in Europe and China, the antitrust implications of alliances are the jurisdiction of the European Commission and China Ministry of Commerce, respectively.

The objective of these regulatory bodies is to encourage competition and promote a market-driven and efficient international shipping industry. In support of the modernization and deregulation goals, the regulatory bodies developed comprehensive rules and regulations based on the major governing statutes for shipping in each jurisdiction. Shippers' contracts with alliances vary with alliances. Shippers dealing with alliances with greater market power get less favorable terms than shippers dealing with alliances with less market power. Shippers sign a service contract with a conference to commit a minimum volume of cargoes (e.g. in TEU) on a port-to-port basis for a specified ocean freight rate. A summary of the terms is published and is available to all parties, including other shippers and shipping lines. Other shippers may demand the same terms if they are similarly situated. A contract drawn between shipping conference and specific shippers may contain penalty clauses in the event that shippers do not live up to its commitment due to economic slowdown. One of the pro-competitive reforms introduced under OSRA is the right of shippers to sign the service contract with individual carrier (instead of with the alliance), wherein the contract is not open to the public, thus eliminating the "me-too" requirement for similarly situated shippers. These features of the service contract (flexibility and confidentiality) led to a drastic increase in the number of service contracts and the volume of cargo moved under the service contracts (Wang, 2015).

The Treaty of Lisbon provides the legal personality for the European Union (EU) to promote high-quality standards and to protect maritime safety. The IMO rules are transposed into the EU legal system, which facilitates their enforcement across the entire EU. However, EU rules may go further than IMO rules and provide stricter standards in EU area. It must be stressed that IMO has in place mechanisms for the elaboration, development and adoption of international treaties, rules and regulations. Their implementation is facilitated through a procedure adopted to amend most fundamental international conventions. The wide acceptance and legitimacy of IMO's mandate is validated by having 167 member states representing all regions of the world. Member states adopt rules and regulations by consensus, while non-member states are invited to participate at IMO conferences when new rules and standards are discussed. The regulations adopted have to be implemented by each individual state. The evolution of regulations governing the maritime transport industry is

based on a broad degree of consensus among nations because maritime transport is inherently international and many carriers are subject to the regulatory requirements of several jurisdictions. Sovereignty of a state over its ports is a rule in international law. It is the responsibility of each individual state to enforce the provisions of the regulations on the ships under its jurisdiction. All stakeholders are encouraged to utilize self-regulatory mechanisms in order to avoid the need for heavy regulation by governments (Sotiroski, 2016).

EU rules are mostly of port state, meaning that the rules are enforced in ports; flag state enforcement is less common. Under EU rules, if a ship is simply passing through EU waters, it still has to comply with EU rules to promote safety and protect the environment. The objectives of EU maritime regulation are to ensure sustainable and long-term competitiveness of the shipping sector in the EU and worldwide.

In the Philippines, the regulation of ports is separated from the regulation of shipping. The Philippine Ports Authority (PPA) is a government corporation mandated to handle the planning and development of seaports in the Philippines. PPA has the most extensive network of ports in the Philippines. The government agency governing the activities of the shipping industry is the Maritime Industry Authority (MARINA). PPA is likewise a port operator, while MARINA is not involved in ship operating activities. In the case of Manila ports (Manila International Container Port, South Harbor, and North Harbor), they are operated by private companies under a long-term concession agreements which are under the supervision of PPA.[2] PPA generates its revenues from concession fees, wharfage fee, berthing fee, pilotage fee, cargo handling revenues, and port charges on privately operated ports. Determination of port tariff rates and fees is under the mandate of PPA. MARINA regulates all carriers and shipping companies as well as logistics companies. MARINA is the flag state administrator of IMO in the Philippines. MARINA is under the supervision of the Department of Transportation (DOTr) which is responsible for the provision of navigation and maritime communication facilities. In the EU, the European Parliament created the Maritime Safety Agency to monitor and improve the surveillance of traffic in European waters to enhance the safety and efficiency of maritime traffic, and improve the response of authorities to incidents, accidents, or potentially dangerous situations at sea, including search and rescue operations. In the Philippines, the Philippine Coast Guard (PCG) is responsible for maritime security and safety enforcement (Llanto, Basilio and Basilio, 2005; Sotiroski, 2016).

MARINA issues Certificate of Public Convenience and Necessity (CPCN) to shipping vessels which is an authority to operate, specifying routes and safety regulations. It is likewise mandated to fix passenger fares and cargo freight rates. MARINA had implemented the "prior operator" rule which requires proof of the presence of sufficient traffic to warrant entry of a second operator to a given route. When entry into routes was liberalized in 1994, presumption of need was ruled in favor of the potential entrant and the existing operator has to provide the burden of proof that the route is good only for one operator. This policy opened the routes to at least two shipping operators. Likewise, passenger fares and cargo rates were deregulated. Cargo rates are now determined through negotiation between the

[2] The concession to operate the Manila International Container Port (MICT) was awarded to the International Container Terminal Services, Inc. (ICTSI), the concession to operate the South Harbor was awarded to Asian Terminals, Inc. (ATI), and the concession to operate the North Harbor was awarded to Manila North Harbor Port, Inc. (MNHPI).

shipping company and the shipper. Shipping companies are now allowed to fix their own rates.[3]

The Bureau of Customs (BOC) is mandated to undertake assessment and collection of customs revenues from imported goods and other dues, fees, fines, and penalties accruing under the Customs Modernization and Tariff Act (CMTA), supervision and control on all import and export cargoes (landed or stored in piers, airports, terminal facilities, container yards and freight stations) and enforcement of all other laws, rules, and regulations related to customs administration. Recently, BOC is also tasked to regulate and monitor all fees concerning empty container returns and charges of shipping lines.

The Bureau of Internal Revenue (BIR) has jurisdiction on the tax treatment of charges and fees imposed by international shipping lines, freight forwarders, logistics companies, customs brokers, cargo truck operators, terminal operators, and cargo yard operators.

The Department of Trade and Industry (DTI) is the main coordination, promotion, facilitation, and regulation agency of the government in the areas of trade, industry, investment and consumer protection. Its Competitiveness Bureau formulates policies and measures related to issues on logistics and shipments of commodities affecting the interest of exporters and importers, particularly those of small- and medium-sized enterprises (SMEs).

The creation of the Philippine Competition Commission (PCC) in 2016 adds another regulatory layer to the shipping industry. PCC is tasked to review proposed mergers and acquisitions, to monitor and analyze the practice of competition in markets, to conduct administrative proceedings, impose sanctions, or penalties for noncompliance or breach of the Competition Act. One of PCC's tasks is to entertain complaints on unfair or anti-competitive pricing practices.

DTI initiated the drafting of the Joint Administrative Order (JAO) together with the Department of Finance (DOF) and Department of Transportation (DOTr) to regulate the application of local charges (origin and destination fees) imposed by international shipping lines, logistics service providers, customs brokers, cargo truck operators, terminal operators, and cargo yard operators. The latest JAO draft is dated March 13, 2019 (DOF, DTI, and DOTr, 2019).

The essence of the draft JAO is to empower the Bureau of Customs (BOC) to formulate and adopt policies as well as issue rules to regulate the imposition of charges by shipping lines. The draft JAO specifies that no origin and destination surcharges other than freight shall be charged by international shipping lines, logistics service providers, customs brokers, cargo truck operators, terminal operators and cargo yard operators to Philippine consignees regardless of whether the cargo is freight prepaid or freight collect and to allow market forces to determine surcharges and other fees freely. The draft JAO also requires freight rates to be inclusive of all charges, such as but not limited to terminal handling cost (THC), container imbalance cost (CIC), emergency cost recovery charge (ECRC), and bunker price adjustment (BPA) from point of origin to point of destination. It also requires that shipping lines and cargo truck operators regularly submit to DTI and BOC their monthly average freight rates per route (DOF, DTI, and DOTr, 2019).

[3] The deregulation of passenger fares and cargo freight rates exempted third class passenger fares and specific non-containerized basic cargo freight rates which are still fixed by MARINA.

AISL has questioned the legal authority of BOC to regulate the imposition of charges by shipping lines arguing that Section 202, Chapter 1 of R.A. No. 10863 does not give BOC such authority (AISL, 2019). Furthermore, WSC argues that surcharges are usually separated by shipping lines from base freight rates in order to specifically address the cost impacts to shipping operations and to achieve greater predictability in shipping lines' revenue streams and to gain better transparency and understanding of shipping lines' costs. According to WSC, surcharges are generally intended to recover distinct and identifiable costs separate from basic transport service or to address rising or constantly fluctuating costs (WSC, 2019). The draft JAO likewise proposes a rule requiring that the Delivery Orders (DO) to be issued by shipping lines must be accompanied by certification issued by the destination container yard operator as to the availability of space for empty containers in the depot. AISL argues that this requirement will entail considerable delay in the delivery of shipments because container yard operators would be hesitant to issue such certification under present conditions. Instead, AISL suggests that the GoFast Empty Container Return System – an automated system it developed – ensures allocation of depot space in the return of empty containers (AISL, 2019).

The draft JAO has indicated at the outset that other economies, such as China, Indonesia, and Vietnam have issued similar decrees or regulations to address similar problems. AISL has argued that regulations in Vietnam do not prohibit the imposition of surcharges by shipping lines, and China has exercised its authority to monitor the collection of surcharges by shipping lines, but it does not restrict or prohibit carriers from imposing and collecting surcharges (AISL, 2019). WSC has recommended that the government maintain its ability to monitor carrier practices relating to surcharge to protect the interests of importers and exporters without taking the drastic steps contained in the draft JAO (WSC, 2019).

The Philippines may borrow a page from the experience of the U.S. Federal Maritime Commission (FMC) during the port congestion suffered by the U.S. West Coast ports in 2014 as a result of labor unrest. The Transatlantic Stabilization Agreement (TSA) – a research and discussion forum of fifteen container shipping lines[4] – announced on November 14, 2014 the imposition of surcharges of $1,000 per FEU on containers passing through the U.S. West Coast from Asia and to take effect on November 17, 2014 because a survey of member-line costs associated with service interruptions and delays related to the port worker unrest revealed that shipping lines were incurring losses and expenses due to blanked sailings, skipped port calls and chartering of added ships and equipment to maintain schedules. But FMC questioned the carriers' ability to impose surcharges on cargo that has already been accepted for delivery or is in transit. Numerous shippers complained to the FMC on the timing and legal sufficiency of surcharges to be imposed during labor unrest. FMC further explained that unless done with a waiver or exemption, any tariff or surcharges may not be effective earlier than 30 days after publication. The TSA members deferred the imposition of port congestion surcharges to 2015. The FMC pursued dialogue and greater transparency with the carriers as to the timing, fairness, adequacy of notice of implementation, and the need for future surcharges. FMC allows the imposition of surcharges, but imposes rules of transparency on the carriers to publish their tariffs in advance or conditional notice of an intention to implement surcharges in the event certain conditions are experienced. FMC requires that all such carrier tariff rules must be clear and definite as to the implementation

[4] These fifteen shipping lines are: APL, CSCL, CMA-CGM, COSCO, Evergreen, Hanjin, Hapag-Lloyd, HMM, K-Line, Maersk, MSC, NYK, OOCL, Yang Ming, and ZIM.

and termination of the surcharge based upon specific criteria related to the expected or actual port condition. FMC staff undertakes continuous monitoring of port congestion and related surcharges. Surcharges are imposed to address a certain condition that affects the carriers' cost of operation, and close monitoring requires the termination of surcharge imposition when the condition that led to its imposition no longer exists (FMC, 2014).

V. The Stakeholders of the industry

The stakeholders of the international shipping industry can be classified into four major groups: (1) international shipping lines as well as its service providers, (2) regulators, (3) private port operators, and (4) consumers and port users.

a. International Shipping Lines and Related Service Providers

Some, but not all, international shipping lines, particularly in the international container shipping industry, are represented by the Association of International Shipping Lines (AISL) in the Philippines. The main issue facing the international shipping lines is the issue whether various shipping charges (e.g. terminal handling cost, container imbalance charge, container deposit fee, container detention and demurrage charge, port congestion surcharge, container cleaning fee, and emergency cost recovery surcharge) are unreasonable and whether the Bureau of Customs (BOC) should intervene and regulate these local charges.

The related service providers are composed of truckers, freight forwarders, and customs brokers. The truckers are represented by the Confederation of Truckers Association of the Philippines (CTAP) which is an umbrella organization composed of 15 affiliated truckers' associations from different ports in the country. CTAP represents the interest of truckers and haulers and has the authority to convene all its members, decide on price adjustment in its services, and declare a collective action (e.g. nationwide strikes) if a specific situation necessitates such action. CTAP claims that "unreasonable and arbitrary" shipping charges are one of the reasons for their higher trucking fees. The other factors they identified are high fuel cost, increased spare parts expenses and high rental fees.

Customs brokers (affiliated or unaffiliated with brokerage firms) are represented by two organizations: (1) the Professional Customs Brokers Association of the Philippines, Inc. (PCBAPI) and (2) the Chamber of Customs Brokers, Inc. (CCBI). The former is an organization of customs brokers in the Port of Manila, while the latter is the accredited professional organization of customs brokers in the Philippines. PCBAPI has supported the proposed joint administrative order (JAO) to be issued by DTI, BOC, MARINA, PPA, DOF, BIR, and SBMA which will lay down the rules and regulations of surcharges imposed by the international shipping lines.

The other stakeholders in this sub-group are the freight forwarders, arrastre operators, and stevedoring companies. The latter is represented by the Philippine Chamber of Arrastre and Stevedoring Operators, Inc. (PCASO).

b. Regulators

The Department of Trade and Industry (DTI) serves primarily as a coordinative, promotive, and facilitative arm of trade, industry, and investment in the Philippines. Recently, DTI is coordinating a policy consultation towards regulating the rates charges by international shipping lines. The Bureau of Customs (BOC) is primarily tasked to assess and collect taxes of imported goods, prevent smuggling, supervise and control the entrance and clearance of vessels and aircraft engaged in foreign commerce; and supervise and control on all import and export cargoes, either landed or stored in piers, airports, terminal facilities and container yards. The Philippine Ports Authority (PPA) is a government corporation that is mandated to have jurisdiction and control on port operations and development. It functions both as port operator and regulator. PPA has the mandate to regulate fees and charges imposed within the ports under its jurisdiction. PPA had released several circulars to clarify and improve transparency of fees and charges imposed on ports.

The Maritime Industry Authority (MARINA) has the mandate to oversee maritime safety and charges pertaining to maritime vehicles used in public transport. This includes the early replacement of obsolescent and uneconomic vessels, modernization and expansion of the Philippine merchant fleet, enhancement of domestic capability for shipbuilding, repair and maintenance, and development of reservoir of trained manpower. The latter refers to the development of the Filipino seafarers/ship manning industry. The recent focus of MARINA is on (1) the ship manning industry, and (2) the security, safety, and accessibility of maritime transport for public use. The latter is actually the responsibility also of the Philippine Coast Guard (PCG). MARINA has focused less on fares and freight rates after the government deregulated the shipping industry by allowing shipping companies to fix their own rates. MARINA was given the power to intervene in the rate setting under certain conditions and the shippers were given the right to question or challenge the rate increase.[5]

Last addition to the set of industry regulators is the Philippine Competition Commission (PCC) which has the mandate to review mergers and acquisitions, promote the practice of competition in markets, and to impose sanctions or penalties for breach of the provisions of the Competition Act.[6] One type of breach described in the Competition Act is unfair or anti-competitive pricing practices.

c. Private Port Operators

In compliance with the competition, liberalization and greater private-sector participation policy objectives of the government, the privatization of the terminal operation of the Manila International Container Terminal (MICT) and the South Harbor was initiated. A 25-year contract was awarded to the International Container Services, Inc. (ICTSI) in 1988 to serve as the private terminal operator of MICT. In 1996, a 10-year contract was awarded to Asian Terminals, Inc. to serve as the private terminal operator of the South Harbor. Harbour Centre Port Terminal, Inc. (HCPTI) was given a permit in 1996 to operate both as a domestic and foreign private commercial port in North Harbor.[7] PPA is responsible for the planning and development of seaports in the country. Most ports, especially the large ones, such as MICT, South Harbor, and North Harbor, are under the control of PPA. PPA is the

[5] These are contained in the Implementing Rules and Regulations (IRR) of Republic Act 9295 ("An Act Promoting the Development of Philippine Domestic Shipping, Shipbuilding, and Repair/Breaking Industry").
[6] Republic Act 10667 (Philippine Competition Act) signed into law on July 21, 2015 and established the Philippine Competition Commission (PCC) to enforce this act.
[7] HCPTI sold its stake to ICTSI in September 2018 which now own the MNNPI jointly with San Miguel Corporation (SMC).

implementing agency of the privatization of port operation in MICT, South Harbor, and North Harbor. PPA earns revenues from the concession fees paid by the private port operators. It likewise earns from port charges (e.g. wharfage, berthing, and pilotage fees), from its share of cargo handling revenues from private cargo handling operators, and from port charges of privately operated ports.

ICTSI operates the MICT under a 25-year concession agreement granted in 1988 which was subsequently extended for another 25 years in 2013 that will end in 2038. Under its concession contract, ICTSI is entitled to all gross revenues that it generates from operating the MICT. It also manages and operates the New Container Terminals in Subic, Zambales; Bauan International Port in Batangas; Sasa Port in Davao; Mindanao Container Terminal in Misamis Oriental; Hijo International Port in Tagum, Davao; and Makar Wharf in South Cotabato.

ATI operates and manages the Manila South Harbor and the Port of Batangas under a concession agreement awarded to it by the government. ATI's concession for South Harbor was renewed in 2013 for a 25-year period, while it was granted a 25-year concession to operate the Port of Batangas in 2010. ATI also operates off-dock container yards in Sta. Mesa, Manila and Calamba City, Laguna.

Both ICTSI, ATI, and PPA were accused by truckers and customs brokers in 2015 of excessive and unnecessary fees derived from the mandatory usage of a terminal appointment booking system (TABS) which was implemented to prevent a repeat of the 2014 Manila port congestion. Both ICTSI's and ATI's tariff rates are subject to PPA's review and approval as stated in their concession agreements.

d. Consumers and Users

The consumers and users are composed of exporters, importers, bonded warehouse operators, door-to-door consolidators, and traders. The Port Users Confederation of the Philippines (PUCP) has affiliated consumers/users associations among its members, such as the Philippine Exporters Confederation, Customs Bonded Warehouse Operators Confederation, Door-to-Door Consolidators Association of the Philippines, Association of Paper Traders of the Philippines, among others.

VI. International Practices of Shipping Cost and Other Charges

a. International Commercial Terms

The International Chamber of Commerce (ICC) introduced the International Commercial Terms (INCOTERMS) in 1936 which are a set of pre-defined commercial terms relating to international commercial law. Based on the mode of transaction, INCOTERMS define the party responsible for undertaking the activity or the party liable for paying the service covered in the commercial transaction agreed between two parties. INCOTERMS are widely used in international transactions or procurement processes. They serve as rules that clearly communicate the tasks, costs, and risks associated with the transport and delivery of goods from the seller to the buyer. They are accepted by governments, legal authorities, and practitioners worldwide, and they are designed to remove uncertainties arising from different interpretation of the rules in different countries (AISL, 2018).

Table 3 presents ICC's INCOTERMS 2010 version which contains eleven rules. It defines the different terms of shipment and identifies the allocation of costs for transactions agreed between the seller (exporter) and the buyer (importer). If the buyer and the seller agree that the transfer of goods follows the FOB (free on board) rule or mode of transaction, the local seller at the origin assumes full responsibility for the cargo until it is on board the vessel. Thus, it pays all the costs until the goods are aboard the vessel in a port. The buyer is responsible once the cargo is aboard the vessel in a given port. Thus, the buyer will pay all costs relating freight, insurance, unloading in port of destination, loading in truck in port of destination, import customs clearance, import taxes and duties, and transport of goods to the buyer's location. But under the CIF (cost, insurance, and freight) rule, the seller is liable to pay all costs until the goods reach the port of destination. After the cargo arrives at the port of destination, the buyer is liable to pay all the costs until the goods are delivered to his/her location. The choice of the mode of transaction rests with both the seller and the buyer who will mutually agree on the terms of the sales and service for the shipment of goods.

Table 3
INCOTERMS 2010 Rules for Sea and Inland Water Transport: Allocations of Cost and Risk to Buyers/Sellers

Incoterm 2010	Export customs declaration	Carriage to port of export	Unloading of truck in port of export	Loading on vessel in port of export	Carriage (Sea/Air) to port of import	Insurance	Unloading in port of import	Loading on truck in port of import	Carriage to place of destination	Import customs clearance	Import duties and taxes
EXW	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer
FCA	Seller	Seller	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer
FAS	Seller	Seller	Seller	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer
FOB	Seller	Seller	Seller	Seller	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer
CPT	Seller	Seller	Seller	Seller	Seller	Buyer	Buyer/ Seller	Buyer/ Seller	Seller	Buyer	Buyer
CFR	Seller	Seller	Seller	Seller	Seller	Buyer	Buyer/ Seller	Buyer	Buyer	Buyer	Buyer
CIF	Seller	Seller	Seller	Seller	Seller	Seller	Buyer/ Seller	Buyer	Buyer	Buyer	Buyer
CIP	Seller	Seller	Seller	Seller	Seller	Seller	Buyer/Seller	Buyer/Seller	Seller	Buyer	Buyer
DAT	Seller	Seller	Seller	Seller	Seller	Seller/ Buyer	Seller	Buyer	Buyer	Buyer	Buyer
DAP	Seller	Seller	Seller	Seller	Seller	Seller/ Buyer	Seller	Seller	Seller	Buyer	Buyer
DDP	Seller	Seller	Seller	Seller	Seller	Seller/ Buyer	Seller	Seller	Seller	Seller	Seller

Source: Basilio and Raeuber (2017).

If the buyer and seller mutually agree to follow the EXW (ex-works) rule, the buyer will collect the goods from the seller's factory and assume all the costs of delivering the goods to the buyer's location.[8]

In the age of containerization, FOB may not be appropriate where goods are delivered at a terminal yard before they are on board the vessel. It is suggested, that FCA (free carrier or freight collect) rule is the more appropriate mode in this situation. In this mode, the seller

[8] The INCOTERMS 2000 version includes CNF (cost, no insurance, freight) rule in which the seller agrees to deliver the goods to the buyer's port, and SDD (store door delivery) rule, where the seller agrees to deliver the goods to the buyer's store. CNF is similar to CIF, but without insurance coverage.

delivers the goods that have been cleared for export to the carrier selected by the buyer. The seller loads the goods in a truck (the carrier's pickup location), and from that point, the buyer bears the costs and risks of moving the goods to destination. But if the seller and buyer still use the FOB rule on their signed contract, the seller is still obliged to pay all costs until the goods are delivered on board the vessel.

A better alternative is for the buyer to use a freight forwarding agent, or even to subcontract these services to the shipping line which in turn assigns these services to be delivered by third-party service providers. These companies will take care of everything and will deliver the goods to the buyer's door.

INCOTERMS 2010 has recognized the existence of surcharges by stating that the seller must make arrangements for the carriage of goods to the agreed destination. INCOTERMS 2010 rules also prevent charging the buyer for the freight cost twice: (1) as part of the seller's total selling price, and (2) as a separate component billed by the carrier or by the third-party service provider (AISL, 2018).

b. Separation of Local Charges at Origin/Destination from the Ocean Freight Rate

Laws relating to international shipping surcharges include WTO rules, bilateral maritime treaties, and UNCTAD code. For instance, UNCTAD code specifies, in Article 16, that notice for any surcharge imposed, whether general or covering only a specific port, should be provided to the relevant parties directly affected by the surcharge. UNCTAD, code of conduct for international shipping does not prohibit surcharges, but it requires that notification be given to the parties affected, spelling out the surcharges imposed prior to finalization of freight agreement with the customers, and facilitating more transparency and accessibility by posting the details of the surcharges on the websites of the shipping lines, shipping associations, and related organizations (AISL, 2018).

US Federal Maritime Commission (FMC) has explicitly granted the application of surcharges by carriers. It argues that the practice of imposing surcharges does not violate the U.S. Shipping Act because surcharges: (1) do not lead to higher base transportation rates, (2) are not fraudulent or deceptive, and (3) are generally transparent.[9] The EU Maritime Transport Agreement allows shipping companies to collect and remit freight and other charges incurred. The EU policy is to leave the price determination to the shipping operators since freight and surcharges are market-determined. All other economies in the Asia-Pacific region do not explicitly prohibit carriers from imposing shipping surcharges (AISL, 2018).

The justification for the practice of separating surcharges from ocean freight rate is for the buyer to make sensible business decision by comparing the ocean transportation costs from alternative sources or ports of origin. This practice likewise provides clear transparency to all parties involved in the transaction. Unbundling the ancillary costs and freight costs from total transportation costs associated with origin market will provide the buyers with information as to where to source their imports. Importers should not bear the burden of paying the ancillary costs of countries with high local costs. These countries should strive to reach the average cost level achieved by their competitor origin markets. The definition and component composition of each surcharge vary from carrier to carrier. Some surcharges are

[9] Federal Maritime Commission, "Notice of Inquiry Concerning the Use and Effect of Surcharges," FMC Docket No. 91-74, January 1992.

commonly found in almost all countries, while other types of surcharges are more specific to a particular characteristic of a port. To the extent that this particular characteristic of a given port raises the total ancillary costs, the solution is to address this specific situation in order to make this port competitive with the other ports in the region (AISL, 2018).

c. Market Forces and International Shipping Services

There is intense competition in the international shipping industry both regionally and globally. Shippers and freight forwarders have many options in choosing which shipping line or mode of transport to employ in order to move their cargo to a specified destination. This intense competition has led to historic low prices in the last five years. Freight cost as a percentage of landed cost is at historic low benefiting both Filipino exporters and importers, and supporting Philippine economic growth in the last few years (AISL, 2018).

A different view argues that intense competition in the international shipping industry, coupled with an oversupply of vessels, had led some shipping companies to impose origin and destination surcharges on top of basic freight rate in order to recover their losses. The freight costs to be collected from shippers (exporters) under applicable INCOTERMS rules (e.g. FOB, CNF, CIF) are replaced by discounted rates and refunds to shippers and/or shipping agents at origin ports. Instead destination charges are levied on the consignees (buyers/importers) who have no contractual relationship with the carriers, but are forced to pay the carriers who refuse to release/deliver the cargoes until payment of the destination charges are made (Basilio and Raeuber, 2017).

Based on a survey of 27 respondents, the freight component accounts, on the average, for only 39% of the total amount paid by importers to international shipping lines, while destination charges account for 61%.[10] For exporters, the freight component accounts, on the average, for only 25% of total amount paid, while origin charges account for 75%. The impact of these surcharges is estimated to cost the economy approximately from $2 billion to $5 billion annually (Basilio and Raeuber, 2017).

Does intense competition in the international shipping industry benefit or harm the economy? This question is answered in full in the next section. However, in the earlier part of this section, we discuss that a competitive market offers shippers and freight forwarders many options in choosing which shipping line to choose that provides the customer with a better bargain. Furthermore, we discuss that prices in the international shipping industry are market-determined. Table 4 shows that indeed free competition offers customers different pricing options from different carriers for a given destination or route. The different cargo service options are priced as low as $940 to a high of $1,506.

[10] The destination charges include terminal handling cost (THC), container imbalance charge (CIC), emergency cost recovery charge (ECRC), container deposit fee, container cleaning fee, container detention and demurrage charge, documentation fee, booking fee, online release fee, foreign currency adjustment, and bunker price adjustment.

Table 4
Ocean Freight and Origin-Destination Surcharges: Shanghai to Manila
(In US Dollars; Forty Equivalent Unit)

Component	Forwarder's Offer via MCC Prepaid	MCC Prepaid	MCC FOB	Cosco FOB	TSL FOB	Evergreen FOB
Ocean Freight	(500)	(290)	90	60	20	20
Origin Surcharges	291	65	465	230	291	217
Destination Surcharges	1,165	1,165	765	1,181	1,195	1,120
Total	956	940	1,320	1,471	1,506	1,357

Source: Basilio and Raeuber, 2017.

The carriers perceive that the JVO runs counter to the government's policy of free competition, privatization, liberalization, transparency, and private-sector participation. In fact, MARINA had been deregulating passenger fares and cargo rates in domestic shipping as mandated by RA 9295. Besides, shipping goods and services consistent with WTO rules are exempted from regulatory or artificial manipulation in the interest of promoting international trade. Furthermore, the Ease of Doing Business Act of 2018 (RA 110321) specifies in Section 5 that all proposed regulations under this Act shall undergo regulatory impact analysis to establish whether the proposed regulation does not add undue regulatory burden and cost to the regulatory agencies and the requesting parties.

At the policy level, commercial routes that face competition are less subject to monopoly power and will tend to have lower markups. Monopoly power can only be sustained either by government restrictive trade policies or by private anticompetitive practices (e.g. cartels). Since the Philippine government practices free trade, the focus should be on the existence of private anticompetitive practices such as the practice of fixing rates by maritime conferences. In Section III of this report, it is mentioned that maritime conferences have lost power in recent years. The Basilio-Raeuber study alleges that some international shipping companies serving the intra-Asia trade allegedly depart from observing the INCOTERMS rules, and instead impose destination surcharges to importers and give discounted rates/refunds to exporters? On the other hand, AISL (2018) asserts that INCOTERMS is a contract between buyers and sellers of goods and shipping lines are not involved in this negotiation, and is therefore actually irrelevant in a surcharge discussion between customers and carriers.

VII. Impact of the Industry on the Philippine Economy

International shipping provides an important role in the age of globalization and international trade. Trade is the lifeblood of the world economy and a key driver of global integration. A key factor behind the remarkable growth in intra-regional trade in East Asia has been the surge in cross-national production sharing among networks in the region that are connected to the global production networks. The practice of global production networks or the so-called "production fragmentation" (e.g. in automobile and electronics industries) is facilitated by technological innovation and lower trade barriers that lead to significant decline in service link costs and allow the production process to be split across different locations to leverage on economies of scale. The physical dispersion of production nodes necessitates costly service links in terms of transportation and communication (Jones and Kierzkowski,

1990). Shipping lines invested in multi-million dollar vessels, provided frequency of port calls, and served to lower the transportation costs in moving raw materials, components, and semi-finished products from one production location to another in the network that produces finished products to sell to global market centers. Intra-Asia trade is the highest volume of container shipping activity in the world. Inter-Asia trade is driven by the production network of producing components in one location and assembling them in another location to eventually ship to global markets (Arangkada, 2018).

In the Philippines, the international shipping industry also plays a crucial role in fostering economic growth. Table 5 shows the foreign cargo throughput in the Philippines from 2010 to 2017. It shows an upward trend over the period in all types of cargo (break bulk, bulk, and containerized). The ratio of foreign cargo to domestic cargo is at least 1.5 for the period with the highest ratio (1.86) occurring in 2014, the year of port congestion caused by the temporary truck ban by the City of Manila from February to September of that year (Patalinghug, et al., 2016). While the foreign cargo volume surged, economic growth was also rising by at least 6.1% to a high of 7.6% for the period, with the exception of 2011 growth which was an outlier at 3.7% (see Table 5). The period registered an average growth rate of 6.3% which was one of the highest growth in Asia, except for China in that period. Without the outlier 3.7% growth rate in 2011, the country's average growth rate for the period is at 6.7%.

Table 5
Foreign Cargo Throughput: Philippines, 2010-2017
(In Metric Tons)

Year	Break Bulk	Bulk	Containerized	Total[a]	Ratio of Foreign to Domestic	GDP Growth Rate[b]
2010	8,786,145	61,140,911	26,671,724	96,598,780	1.48	7.6%
2011	6,911,633	70,039,792	27,155,197	104,106,622	1.49	3.7%
2012	8,103,713	81,561,513	28,233,789	117,899,015	1.66	6.7%
2013	8,236,063	87,391,546	28,470,070	124,097,679	1.72	7.1%
2014	8,280,482	98,168,196	28,630,812	135,079,490	1.86	6.1%
2015	8,285,374	96,391,305	29,556,142	134,233,114	1.66	6.1%
2016	11,066,867	105,838,052	32,488,151	149,527,197	1.58	6.9%
2017	12,143,070	105,421,119	34,272,312	151,916,607	1.66	6.7%

Source: Philippine Ports Authority.
[a] Includes transit/transhipment cargo.
[b] Philippine Statistics Authority.

Looking at data on shipcalls, at berth and at anchorage, it shows that the number of shipcalls at berth exceeded 10,500 (Table 6). The foreign gross registered tonnage at berth increased, on average, at 12% annually for the 2012-2016 period (Table 7). The ports that dominate in both the number of ship calls and gross registered tonnage are located in Manila/North Luzon and Mindanao (Table 8).

The volume of exports and imports, in metric tons, is shown in Table 9. Export volume grew at an average annual rate of 8.65% during the 2010-2015 period, while import volume grew at an average annual rate of 6.12% for the period. Table 10 shows the value (in

US dollars) of Philippine exports and imports for the 2011-2016 period. Exports (in dollar terms) grew at an average annual rate of 3.71%, while imports (in dollar terms) grew at an average annual rate of 6.99% for the period. The imbalance in the export-import trade value is responsible for the imbalance in the number of export-import containers at the ports.

The top export destinations are fellow ASEAN neighbors (Indonesia, Malaysia, Singapore, and Thailand) as well as China, Japan, Hongkong, South Korea, Taiwan, Germany, and the U.S. (Table 11). On the other hand, the top import destinations are likewise fellow ASEAN members (Indonesia, Malaysia, Singapore, Thailand) as well as China, Japan, Hongkong, South Korea, Germany, and the U.S. (Table 12).

Table 6
Foreign Shipcalls at Berth and at Anchorage: 2012-2016

Shipcalls	2012	2013	2014	2015	2016
At Berth	1,812	1,764	1,675	1,480	1,643
At Anchorage	10,598	8,802	7,996	8,718	10,672
$\frac{\text{At Anchorage}}{\text{At Berth}}$	17.10%	20.04%	20.95%	16.98%	15.40%

Source of Basic Data: Philippine Statistics Authority, 2017 Philippine Statistical Yearbook (October 2017).

Table 7
Foreign Gross Registered Tonnage at Berth and at Anchorage: 2012-2016

Gross Registered Tonnage	2012	2013	2014	2015	2016
At Berth	124,152,309	129,102,165	125,345,378	145,467,113	183,656,636
At Anchorage	37,995,100	38,782,058	39,825,816	35,405,991	37,628,656
$\frac{\text{At Anchorage}}{\text{At Berth}}$	30.60%	30.04%	31.77%	24.34%	20.49%

Source of Basic Data: Philippine Statistics Authority, 2017 Philippine Statistical Yearbook (October 2017).

Table 8
Foreign Shipcalls and Gross Registered Tonnage: 2012-2016
(At Berth)

	2012	2013	2014	2015	2016
PHILIPPINES					
Shipcalls	10,598	8,802	7,996	8,718	10,672
Gross Registered Tonnage	124,152,309	129,102,165	125,345,378	145,467,113	183,656,636
MANILA/NORTH LUZON					
Shipcalls	5,285	4,667	3,621	4,008	5,002
Gross Registered Tonnage	76,813,822	77,870,421	65,401,257	74,677,139	95,325,830
SOUTHERN LUZON					
Shipcalls	1,531	1,350	1,444	1,613	1,964
Gross Registered Tonnage	19,003,736	21,409,066	26,125,908	31,955,396	39,459,161
VISAYAS					
Shipcalls	583	581	498	510	791
Gross Registered Tonnage	3,846,585	5,075,823	4,533,867	4,195,945	8,216,540
MINDANAO					
Shipcalls	3,199	2,204	2,433	2,587	2,915
Gross Registered Tonnage	24,488,166	24,746,855	29,284,346	34,638,633	40,655,106

Source: Philippine Statistics Authority, 2017 Philippine Statistical Yearbook (October 2017).

Table 9
Volume of Philippine Exports and Imports: 2010-2015
(In Metric Tons)

Year	Exports	Imports
2010	41,464,454	55,115,069
2011	50,751,993	53,354,107
2012	60,358,546	57,540,469
2013	63,217,498	60,880,181
2014	68,466,329	66,633,058
2015	60,855,315	73,765,548

Source: Philippine Statistics Authority, 2017 Philippine Statistical Yearbook (October 2017).

Table 10
Value of Philippine Exports and Imports: 2011-2016
(In Million U.S. Dollars)

Year	Exports	Imports
2011	48,304.9	60,495.8
2012	52,099.5	62,128.6
2013	56,697.9	62,410.6
2014	62,101.6	65,398.0
2015	58,827.2	71,067.2
2016	57,406.1	84,108.0

Source: Philippine Statistics Authority, 2017 Philippine Statistical Yearbook (October 2017).

Table 11
Top Export Destinations: 2013-2016
(In Thousand U.S. Dollars)

Country	2013	2014	2015	2016
Indonesia	835,131	759,659	650,478	627,586
Malaysia	1,375,270	1,160,737	1,204,119	1,207,925
Singapore	4,142,004	4,451,152	3,800,875	3,823,986
Thailand	1,909,021	2,353,096	2,239,892	2,183,860
China	7,025,215	8,467,435	6,174,784	6,372,524
Japan	12,048,496	13,901,345	12,300,521	11,670,284
Hongkong	4,541,473	5,511,728	6,390,930	6,616,697
Korea	3,399,765	2,560,595	2,426,365	2,181,823
Taiwan	1,983,304	2,445,837	2,011,629	2,126,667
Germany	2,338,880	2,657,351	2,632,405	2,329,271
United States	8,318,181	8,660,778	9,022,514	8,851,330

Source: Philippine Statistics Authority, 2017 Philippine Statistical Yearbook (October 2017).

Table 12
Top Import Origins: 2013-2016
(In Thousand U.S. Dollars)

Country	2013	2014	2015	2016
Indonesia	2,789,127	3,037,574	3,030,619	4,607,686
Malaysia	2,295,992	3,131,191	3,440,536	3,389,988
Singapore	4,235,571	4,591,926	5,005,452	5,464,135
Thailand	3,385,325	3,481,412	4,944,181	6,578,221
China	8,072,328	9,869,762	11,470,735	15,564,900
Japan	5,224,449	5,252,182	6,368,503	9,881,768
Hongkong	1,298,324	1,660,328	1,840,146	2,491,834
Korea	4,821,727	5,083,129	4,657,431	5,567,893
Taiwan	4,883,412	4,448,953	5,838,672	5,184,775
Germany	2,349,647	2,717,515	2,600,517	2,027,950
United States	7,019,911	5,738,340	7,468,019	7,575,919

Source: Philippine Statistics Authority, 2017 Philippine Statistical Yearbook (October 2017).

The growth of Philippine trade with ASEAN economies has increased, but the growth of Philippine-China trade is phenomenal. While U.S. and Japan remain to be major trading partners of the Philippines, the share of China-Philippine trade to total Philippine trade has exceeded the share of Philippines-Japan trade and the share of Philippines-U.S. trade to total Philippine trade, respectively. However, the balance of trade between Japan and the Philippines is positive, meaning the latter's exports to Japan exceed its imports from Japan. The same situation applies with respect to the balance of trade between U.S. and the Philippines. On the other hand, the balance of trade between China and the Philippines is negative, meaning Philippine imports from China far exceed its exports to China. This trade pattern contributes to container imbalance at the major ports in the Philippines.

In sum, the international shipping industry is the engine facilitating this robust and dynamic trade of the Philippines with its prosperous Asian neighbors as well as with the rest of the global markets. In turn, this robust and dynamic foreign trade supports the development and growth of the national economy.

There is no doubt that the international shipping industry is a partner for Philippine growth and development. Given the performance of the economy, is there a need to introduce more regulations at the port and shipping sector in order to promote international trade and improve international competitiveness?

VIII. Improving Port Efficiency

There are at least two common measures of port efficiency. One is a survey-based measure. This is the approach used by World Economic Forum (WEF) in measuring its "efficiency of seaport services." For example, WEF conducted executive opinion surveys in January and April 2018 using a sample of 16,658 business executives in 140 economies. The survey asks the question: "In your country, how efficient are your seaport services?" Efficiency of service includes frequency, punctuality, speed, and prices. The response to the

survey question is used to measure the average score for each economy. The score ranges from 1 (extremely inefficient) to 7 (extremely efficient). See WEF (2018).

The other measure is data-based. It uses data on port inputs (berth length, terminal area, number and type of container crane) and output (container throughput) for different ports across time to produce measures of efficiency such as Malmquist Productivity Index (MPI) using a non-parametric methodology called Data Envelopment Analysis (DEA). See Cullinane and Wang (2007), Hung, Lu, and Wang (2010), and Cheon, Dowall and Song (2010).

Table 13 presents WEF's efficiency of seaport services index for selected Asian economies in 2018 and the rank of each included country based on 140 participating economies. Singapore is ranked the most port-efficient country in Asia and in the world. The other top-ranked countries are Japan and South Korea. Unfortunately, the Philippines is ranked 84 out of 140 participating economies. In terms of median clearance time, Singapore takes only 2 days to facilitate a cargo out of the port while in China and in the Philippines, it takes 7 days.

Table 14 shows UNCTAD's liner shipping connectivity index in 2018. This index assesses a country's connectivity to global shipping networks. The index is derived based on the following data: number of ships, container-carrying capacity of ships, maximum vessel size, number of services, and number of companies that deploy container ships in a country's port. Based on this index, China is ranked as the most connected country. Singapore is ranked number 2, South Korea at number 3, and Japan at number 5. The Philippines is ranked 61 out of 140 participating economies, and the lowest rank among the Asian countries.

Table 15 presents a regional comparison of cost and time for handling a 20-foot container (TEU). It shows that East Asia and Pacific region is the cheapest in handling a TEU, while Sub-Saharan Africa is the most expensive. In terms of handling time, OECD is the most efficient because it only takes eleven days compared to East Asia and Pacific's 24 days. Converting the data in Table 15 into cost per day, Asia and the Pacific comes on top at $32.28 per day, followed by South Asia at $44.49 per day. OECD area is the most expensive at $104 per day. If time is the essence because timely release of cargo is a critical factor even if the buyer/customer has to pay extra, OECD is the most efficient region. Behar and Venables (2011) have argued that much of the technical advance in transport has gone into improved quality (e.g. speed and reliability) rather than lower cost.

Data-based measures of port productivity and efficiency in selected Asian ports are shown in Table 16. Guangzhou is the most productive port followed by Xiamen and Tianjin. Manila is second to the last in productivity of ports. In terms of efficiency, Keelung is the most efficient port, followed by Singapore and Hongkong. On the other hand, Manila and Tokyo are perceived to be among the most inefficient ports in Asia.

Table 17 presents the world rankings of port in 2015 by the World Trade Service. Shanghai, Singapore, Quingdao, Guangzhou, and Rotterdam are the top 5 ports in terms of total cargo volume; Manila is ranked 72 globally. In terms of container traffic, Shanghai, Singapore, Shenzhen, Ningbo, and Hongkong are ranked as the top 5 ports; while Manila is ranked 33 globally. Port Klang is ranked among the top 15 in both metrics, while both Laem Chabang (Thailand) and Saigon are ranked among the top 22 ports in terms of container traffic.

Table 13
Efficiency of Seaport Services, 2018

Country	Port Efficiency[a] Index	Rank[a]	Median[b] Clearance Time Days
China	4.5	48	7
India	4.6	40	NA
Indonesia	4.2	61	5
Japan	5.6	8	NA
Malaysia	5.3	17	7
Philippines	3.6	84	7
Singapore	6.4	1	2
South Korea	5.4	14	NA
Thailand	4.1	68	4
Vietnam	3.8	78	NA

Source: [a] World Economic Forum, Global Competitiveness Report 2018.
[b] Clark, Dollar, and Micco (2004).
Notes: Port efficiency index ranges from 1 to 7, the latter being the best score. The rank is based on 140 participating economies.

Table 14
Liner Shipping Connectivity Index, 2018

Country	Index	Rank
China	158.8	1
India	52.9	28
Indonesia	40.9	41
Japan	66.4	17
Malaysia	98.1	5
Philippines	25.0	61
Singapore	115.1	2
South Korea	109.5	3
Thailand	41.1	39
Vietnam	60.5	20

Source: UNCTAD.
Notes: The most connected country in 2017 (China) is used with a benchmark score of 100. The rank is based on 140 participating economies.

Table 15
Average Costs and Handling Time for a 20 Foot Container
(Using 2009 Import and Export Data)

Region	Cost (Dollars)	Time (Days)	Cost/Day
East Asia and Pacific	931	23.7	$32.28
South Asia	1437	32.3	$44.49
Latin America and Caribbean	1362	19.75	$68.96
Middle East and North Africa	1128	24.2	$46.61
Sub-Saharan Africa	2154	36.5	$53.01
Eastern Europe and Central Asia	1678	27.6	$60.80
OECD	1118	10.75	$104.00

Source: Behar and Venables (2011).

Table 16
Port Productivity and Efficiency

Port	Productivity Index	Rank[a]	Efficiency Scores[b]
Guangzhou	10.167	3	NA
Xiamen	5.241	4	NA
Tianjin	4.647	5	NA
Shanghai	3.231	12	0.65
Port Klang	2.213	29	0.54
Hongkong	2.119	33	0.85
Kaohsiung	1.712	46	0.83
Singapore	1.638	50	0.86
Tokyo	1.361	62	0.45
Keelung	0.839	86	0.95
Bangkok	0.809	87	0.59
Manila	0.774	88	0.49
Busan	0.734	89	0.65

Source: [a] Cheon, Dowall, and Song (2010) based on 1991-2004 data. Productivity index measures the change in total factor productivity from 1991 to 2004. The average is 2.418 for 98 ports.
[b] Cullinane and Wang (2007) based on 1992-1999 data. The highest possible efficiency score is 1.00, and the average is 0.69 for 57 ports.

Table 17
World Port Rankings: 2015

Port	Rank	Total Cargo Volume (Thousand Metric Tons)	Port	Rank	Container Trafiic (Thousand TEUs)
Shanghai	1	646,514	Shanghai	1	36,516
Singapore	2	575,846	Singapore	2	30,922
Quingdao	3	476,216	Shenzhen	3	24,142
Guangzhou	4	475,481	Ningbo	4	20,636
Rotterdam	5	466,363	Hongkong	5	20,073
Port Hedland	6	452,940	Busan	6	19,469
Ningbo	7	448,828	Quingdao	7	17,323
Tianjin	8	440,430	Guangzhou	8	17,097
Busan	9	347,713	Dubai Ports	9	15,585
Dalian	10	320,658	Tianjin	10	13,881
Kwangyang	11	272,007	Rotterdam	11	12,235
Hongkong	12	256,488	Port Klang	12	11,887
Qinhuangdao	13	246,550	Kauhsiung	13	10,264
South Louisiana	14	235,058	Antwerp	14	9,654
Port Klang	15	219,786	Dalian	15	9,591
Houston	16	218,575	Xiamen	16	9,215
Antwerp	17	208,423	Hamburg	17	8,821
Xiamen	18	200,500	Tanjung Pelepas	18	8,797
Nagoya	19	197,947	Los Angeles	19	8,160
Shenzhen	20	191,037	Long Beach	20	7,192
Ulsan	21	170,771	Laem Chabang	21	6,780
Dubai Ports	22	170,228	Saigon	22	6,556
Dampier	23	169,926	New York/New Jersey	23	6,372
Chiba	24	166,964	Bremen/Bremerhaven	24	5,547
New Castle	25	163,906	Jeddah	25	5,417
*Manila	72	57,356	*Manila	33	3,976

Source: IHS Global Insight, World Trade Service.

The current Manila port situation during the January-September 2018 period has shown that import dwell time has gone down from 10 days or more to 7 days. During the 2014 port congestion situation, import dwell time was 17 to 18 days. Yard utilization level is 85% compared to 96% during the 2014 port congestion situation; and quay crane production rate is 24.84 moves per hour compared to 15 moves per hour during the 2014 port congestion situation. The average dwell time of empty containers doubled from 15 to 30 days; container demand is at 20,000 TEUs, while container yard capacity is at only 16,300 TEUs. The ratio of import to export container is 3 to 1, and thus many empty containers are left in the country waiting for repositioning (Pablo, 2018). The solution of establishing yard facilities outside Metro Manila has started. ICTSI has inaugurated in November 2018 its Cavite Gateway Terminal and ATI expects its container yard facilities to be operational in the second quarter of 2019. As of March 4, 2019, ATI reported that its yard utilization hits 65% compared to

90% in the preceding weeks. Major international shipping lines, such as CMA-CGM, T.S. Lines, Evergreen, Yang Ming, Wan Hai, and Hyundai Maritime, participated in the recirculation of empty containers to other Asian destinations. The goal is to jointly pull out 10,000 empty containers from the Manila South Harbor per week (Camus, 2019a). ICTSI also reported that utilization rate at MICT dropped from 90% to 70% in April 2019 following a government-led crackdown on overstaying cargo. The terminal was able to accept almost double the number of empty containers freeing trucks and resulted in more import pullouts. Import dwell time was likewise reduced from 11 days in January 2019 to 6.6 days in April 2019 (Camus, 2019b).

Port operational efficiency is an important factor for handling goods in the international supply chain. An evaluation of the operational efficiency of five Asian ports (Singapore, Hongkong, Shanghai, Shenzhen, and Busan) shows that port size and infrastructure, private sector participation, and quality of both cargo-handling and logistics services are critical determinants of efficiency (Kennedy, Lin, Yang, and Ruth, 2011).

An evaluation of how port institutional reforms influence efficiency gains concludes that private entities should handle the commercial side of terminal operations and management and the government should just focus primarily on policy-making regarding environmental, safety, and customs regulations (Cheon, Dowall, and Song, 2010).

Port efficiency is an important determinant of shipping costs. Poor infrastructure accounts for more than 40% of predicted transport costs (Limao and Venables, 2001). Also, inefficient port increases handling cost, one of the components of shipping costs. Port efficiency is highly correlated with handling costs, and inefficient ports have higher handling costs. The better the infrastructure, the higher the probability of an efficient port. An increase of port efficiency index by one point would generate a reduction of maritime transport costs of around 6%. Port efficiency is determined by infrastructure, management, and policy variables (Clark, Dollar, and Micco, 2004).

Any unexpected delay due to additional customs requirements, cargo inspections or deficient infrastructure may increase considerably the associated port costs. Delay costs are as important as freight costs. Recently, CTAP claims that shipping companies no longer publicly issue arrival notices. Customs brokers and truckers need to go the different offices of shipping lines to get hold of arrival notices of containers. CTAP claims that this situation delays the processing of delivery orders from one day to three days (Cu, 2019).

The bottomline is that both infrastructure, management, and policy influence port efficiency which, in turn, influences the level of international shipping cost.

IX. Conclusion and Recommendations

International shipping plays an important role in the international supply chain and in the smooth functioning of global trade and in expanding global markets. The structure of the international shipping industry is shown to be competitive rather than monopolistic. The regulatory environment does not encourage forming closed conferences and the trend towards forming or joining alliances does not pose as barriers to entry in the international shipping industry.

The justification for the practice of separating surcharge from freight rate is for the buyer to make sensible business decision by comparing ocean transportation costs from alternative sources or ports of origin, or from alternative carriers in a given port of origin. International laws such as WTO rules and UNCTAD's Convention of Code of Conduct for Liner Conferences, US Federal Maritime Commission notices, and EU Maritime Transport Agreement allow the imposition of surcharges by carriers provided that parties affected by the surcharges are provided prior notices.

International trade contributes to the growth and dynamism of the Philippine economy in the recent years. And international shipping is a partner for Philippine growth and development. The participation of private companies in port operation and management of major Philippine ports is an appropriate policy towards improving port efficiency.

Port efficiency is an important determinant of shipping costs. Manila port is globally ranked at the low end of the roster of international ports both in productivity and efficiency. Port efficiency is determined by port size and infrastructure, private sector participation, quality of both cargo-handling and logistics services, and appropriate public-policy environment. Port efficiency affects shipping costs. Inefficient ports have higher handling costs.

The regulatory trend in international shipping is to promote deregulation and pro-competitive policies. The proposal to regulate fees and charges of international shipping lines rests on the assumption that some shipping lines plying the intra-Asia routes impose excessive and questionable destination charges to the consignees. Granting, without accepting, that this hypothesis is true, the question to ask is how does this alleged practice arise in an industry that is considered competitive? And the most important issue is whether the burden and cost of the proposed regulations on the regulatory agencies and the requesting parties are far below its benefits.

The recommendations of the study are the following:

(1) Shipping companies may voluntarily publish (or post in their websites) all-in freight charges, inclusive of all charges, but unbundling the basic freight rate from the itemized surcharges, in order to promote transparency and accountability. The risk of collusion through signaling is low vis-à-vis the benefits of transparency in an industry with many players.
(2) The government must review its strategic national port development plan and prioritize the establishment of new and deep-sea ports to decongest the ports located in the Greater Capital Region.
(3) The long-term thrust of government policy is to build regulatory capacity in a single agency (e.g. BOC or MARINA) which will then be tasked to promulgate rules and regulations regarding charges that may be imposed by international shipping lines, logistics service providers, customs brokers, cargo truck operators, terminal operators, and cargo yard operators. FMC code of regulations (available online) can serve as a starting benchmark.
(4) To address, the short-run policy concerns, DTI may refocus the thrust of the JAO from banning outright the imposition of surcharges by shipping lines to drafting monitoring rules and guidelines specifying the criteria and procedures to be followed by carriers when they impose surcharges. These rules may require carriers to publish their charges in advance, the condition that requires the imposition of surcharges, the

timing of the imposition, the rules on adequacy of notice of implementation, and the criteria for the termination of a particular surcharge.

(5) BOC, the lead agency designated in the overall implementation of the JAO may want to build immediately a staff capacity geared towards monitoring various surcharges imposed and at the same time pursuing dialogue with the shipping lines and other stakeholders on the surcharge issue.

(6) International shipping lines may be able to facilitate a government-to-government dialogue to address some trade distortions observed in inter-Asia trade.

Appendix A

50 Largest Containership Operators: 2017

	Company	Number of ships	Capacity	Market share	Average vessel size
1.	Maersk	621	3,201,871	16%	5,156
2.	Mediterranean Shipping Company	469	2,935,484	14.6%	6,259
3.	CMA-CGM	441	2,220,474	11.1%	5,035
4.	China Ocean Shipping Company	277	1,603,341	8.0%	5,788
5.	Hapag-Lloyd	180	1,038,483	5.2%	5,769
6.	Evergreen	186	995,147	5.0%	5,350
7.	Orient Overseas Container Line	107	666,558	3.3%	6,230
8.	Hamburg-Sud	116	594,008	3.0%	5,121
9.	Yang Ming	100	588,389	2.9%	5,884
10.	United Arab Shipping Company	56	546,220	2.7%	9,754
11.	Nippon Yusen Kaisha	97	638,754	2.7%	5,554
12.	Mitsui Osaka Shosen Kaisha Line	82	515,880	2.6%	6,291
13.	Hyundai Merchant Marine	69	458,247	2.3%	6,641
14.	Kawasaki Kasen Kaisha Limited-K Line	64	363,019	1.8%	5,672
15.	Pacific International Lines	132	361,752	1.8%	2,741
16.	Zim Integrated Shipping Services	69	307,934	1.5%	4,463
17.	Wan Hai Lines	96	248,880	1.2%	2,593
18.	X-Press Feeders 78	92	145,454	0.7%	1,581
19.	Republic of Korea Marine Transport Company	72	140,365	0.7%	1,950
20.	Shandong International Transportation Corporation	75	100,195	0.5%	1,336
21.	Islamic Republic of Iran Shipping Lines	26	89,374	0.4%	3,437
22.	Arkas Container Transport	48	86,157	0.4%	1,795
23.	TS Lines	38	74,188	0.4%	1,952
24.	Simatech Shipping	25	70,602	0.4%	2,824
25.	Sinokor Merchant Marine	42	59,533	0.3%	1,417
26.	Transword Group of Companies	33	57,588	0.3%	1,745
27.	Emirates Shipping Line	9	48,450	0.2%	5,383
28.	Regional Container Lines	24	47,782	0.2%	1,991
29.	China Merchant Group	34	48,181	0.2%	1,358
30.	Unifeeder	40	43,914	0.2%	1,098
31.	Heung-A Shipping	34	41,959	0.2%	1,234
32.	SM Line	17	41,406	0.2%	3,764
33.	Nile Dutch	11	40,957	0.2%	3,723
34.	Matson	19	39,806	0.2%	2,095
35.	Quanzhou Ansheng Shipping Company	12	37,261	0.2%	3,105
36.	Zhonggu Shipping	11	35,933	0.2%	3,287
37.	Samudera	25	32,038	0.2%	1,232
38.	Salam Pacific Indonesia Lines	31	29,576	0.1%	954
39.	Seaboard Marine	19	28,175	0.1%	1,483

	Company	Number of ships	Capacity	Market share	Average vessel size
40.	Temas Line	33	25,671	0.1%	778
41.	Namsung Shipping Company	29	24,900	0.1%	958
42.	Meratus Line	27	23,795	0.1%	881
43.	Tanto Intim Line	35	23,094	0.1%	660
44.	Shipping Corporation of India	5	20,648	0.1%	4,130
45.	Swire Group	13	20,318	0.1%	1,563
46.	National Transport and Overseas Services Company	14	18,622	0.1%	1,330
47.	Far Eastern Shipping Company	12	18,198	0.1%	1,517
48.	W.E.C. Lines	19	17,979	0.1%	946
49.	Log-in Logistica Intermodal	7	16,895	0.1%	2,414
50.	Far Shipping	10	14,436	0.1%	1,444

Source: International Chamber of Shipping.

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