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The Impact of the Maritime Industry on the Philippine Economy

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The Impact of the Maritime Industry on the Philippine Economy

Crewing and Manning
From Seafarer's Education to Employment
Port Operations & Services
Liner Services
Shipbuilding, Shipyards & Engineering
Tourism Maritime Facilities



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Introduction

The Philippines: young, English-speaking, cosmopolitan. Thanks to thoughtful reforms and stable finances, the Philippines has become a newly industrialized country and one of Southeast Asia's growth leaders. In the beginning of 2016, the Philippine economy was the fastest growing economy in Asia and even overtook China for a few months.

The archipelago is rich in natural resources. Hydro energy and geothermal energy make up 30% of power. Agriculture is important, providing employment to more than half of the workforce. The Philippines is the world's largest producer of coconut and pineapple products. But the most popular industry today is the services sector. The Philippines has replaced India as the No. 1 outsourcing hub. The new urban middle class increases internal demand for more consumer products, boosting tourism, the automotive and real estate market.

One is often not aware of how all these products, materials and machinery in our daily routine would find their way into our life. How many nautical miles it had to be transported until it reached the consumer or manufacturer? One may assume that because of the archipelagic nature of the Philippines, the maritime industry is traditionally anchored in its economy. The truth is, it should be considered as one of the industry giants of the country.

The maritime committee of the German-Philippine Chamber of Commerce and Industry, Inc. (GPCCI) is one of the strongest industry working groups from among the bilateral chambers in the Philippines. It supports and provides maritime expertise and acts as well-represented coalition of quality ship owners, principals and many more players from the international and local maritime community. The committee never understates the need for a forum to address pressing maritime issues that concern employers, seafarers and other stakeholders. It regularly invites all key players to engage in discussions and facilitate a constant dialogue strengthening the industries partnership with the government.

Spearheaded by the Chairman, Mr. Cliff Davies and Co-Chairman Mr. Klaus Schröder, the committee decided to make waves: put all available and current information on paper and emphasize the maritime industry's significance and impact on the Philippine economy. The six sub-committees collated data depicting the industry's contribution to the country.

Table 1: Subcommittees of the Maritime Committee.

Subcommittee	Chair	Company
Crewing & Manning Services	Mr. Alberto Gomez	Hartmann Crew Philippines
Seafarers Education & Training	Mr. Antonio Galvez	Marlow Navigation Phils., Inc.
Port Operations & Services	Mr. Chris Lozano	International Container Terminal Services Inc.
Liner Operations, break-bulk and affiliated services	Mr. Klaus Schroeder & Atty. Max Cruz	Hapag-Lloyd Phils., Inc.
	Ms. Ovi Sevilla	Association of International Shipping Lines, Inc.
Shipbuilding, Shipyards & Engineering	Capt. Roland Lehmann	Rhenus Logistics, Inc.
Tourism Maritime Facilities	Mr. Stephen Tagud	Alfa Ship & Crew Management, Inc.
		2GO Travel

GPPCI evaluated the provided information, conducted interviews with the members and collected the results in this study. Furthermore, in this report business and investment opportunities for companies to underline the growth potential of the industry are discussed. To offer the reader a first insight in the maritime industry the study beforehand provides an overview of the current concerns. The last chapter of this publication contains a summary of the achieved findings and an outlook on future trends.



Maritime Matters in the Philippines

CO-LOADING

- **Background of the Issue:**

Under Presidential Decree 1464, R.A. 1937, the Tariff and Customs Code of 1978, and RA 9295 or the Domestic Shipping Development Act of 2004, foreign vessels are not allowed to be engaged in coastwise transportation.¹ Thus, vessels not registered under the Philippine flag, which transport imported cargo into the Philippines; have to unload their goods at the port of entry. Afterwards, the cargo will be re-loaded onto a domestic vessel to carry it to its final local destination.² This cabotage principle constituted a serious bottleneck to the Philippine growth, as it created entry barriers and thereby limited the competition.³

- **Current Status:**

In July 2015, former President Benigno Aquino III signed amendments to Republic Act (RA) No. 10668, also known as the Co-Loading Law or “An Act Allowing Foreign Vessels to Transport and Co-Load Foreign Cargoes for Domestic Transshipment and For Other Purposes” in order to create a more well-organized import and export system, as well as decongest the major ports of the country.⁴ The amendments on said law would allow foreign shipping lines to dock at multiple Philippine ports and co-load import and export cargos only.

CREW CLAIMS

- **Background of the Issue:**

Over the past few years there has been an increase in crew claims, with an alarmingly rising trend in pro claimant decisions. Crew claims are commonly filed if an employer does not adhere to his contractual duties and obligations. Usually, this is the case if an employee suffers an injury during work or from any work-related medical condition. Unless the dispute between employee and employer can be settled extrajudicial, the issue will have to be resolved by arbitration decision.

There are several reasons why there is such a high number of crew claims being filed in the Philippines. Courts, for one, seem to inherit a rather strong pro-seafarer position, hence

oftentimes ruling in favor of the claimant. According to the Philippine Constitution, judgment may be based on probability, rather than on certainty. In practice, this means that a claim might already be successful if the court sees the claimant’s statement as more probably than improbably rightful.

Another factor contributing to the increase in crew claims is the nonexistent economic barrier for the claimant. In the Philippines, lawyers are only rewarded if a case is won or settled through an out-of-court agreement. Hence, the claimant does not have to fear economic damage from a lost law suit.

- Paradoxically, the defendant, on the other hand, might face economic damage even if he wins the final court decision. If a lower-ranking institution rules in favor of the claimant, the defendant has to pay a fee, even if he appeals the decision. If his appeal turns out to be successful, the chances of getting back the previously paid fee are negligible.^{5 6}

- **Current Status:**

In November 2015 the Philippine government issued a law targeting the reduction of ambulance chasing. The so-called Seafarers Protection Act states that lawyers representing seafarers shall be compensated with no more than 10% of the benefit awarded to the seafarer.⁷

However, this issue remains to be of concern, especially for the crewing and manning industry. If crew claims continue to rise and the decisions maintain a pro-claimant outcome, with no further measures undertaken to address the underlying issues, it will have a detrimental effect on the Philippines’ competitiveness as a seafarer resource nation and will very likely lose its status as the number one nation of choice for seafarers.

MARINA AND THE SEPERATION OF DOTC

- **Background of the Issue:**

In 1989, the transportation and communication sectors were combined under the Department of Transportation and Communication (DOTC) as one of the first government agencies.⁸ The

1 Patalinghug, E. E. et al. (2015).

2 Business World online (2016a).

3 Patalinghug, E. E. et al. (2015).

4 PortCalls (2015).

5 Gard (2013).

6 Steamship mutual (2016).

7 GOV (2015).

8 DOTr (2016).

Maritime Industry Authority (MARINA) is an attached agency of DOTC with the functions of domestic shipping, overseas shipping, ship building and ship repair, as well as maritime manpower sectors.⁹

- **Current Status:**

In December 2015, the senate adopted a bill to separate the Department of Transportation and Communications (DOTC) into two agencies. The DOTC would be renamed Department of Transportation and the Department of Information and Communications Technology (DICT) would be created for communications. The bill was transmitted to Malacañang on May 2016. According to the sponsor of the bill creating the Department of Information and Communications Technology Act (DICT), former Senate President Pro-Tempore Ralph Recto, the new DICT would be a huge step in improving the ICT sector of the Philippines in this age of technology.¹⁰

In May 2016, the former President Benigno Aquino III, signed Republic Act 10844, an act creating the Department of Information and Communications Technology (DICT). Aside from the renaming of DOTC and creation of DICT, other agencies such as the Information and Communications Technology Office (ICTO), National Computer Center (NCC), National Computer Institute (NCI), Telecommunications Office (TELOF), and the National Telecommunications Training Institute (NTTI) will be moved to DICT.¹¹

Under the new law, there will be a 6-month transition period for the transfer of functions, assets, and personnel. Additionally, as provided by the new law, the DICT shall be headed by a Secretary, and to be supported by three Undersecretaries and four Assistant Secretaries.¹²

The transportation and the communication sector were separated to ensure a more efficient and effective provision of services and to address the problems which have occurred due to the solitary agency management.¹³

Against the backdrop of a need for massive improvement of infrastructure, its development can be considered positive.

According to the Information and
9 Marina (2013).

10 Rappler (2016).

11 GOV (2016a).

12 Inter Aksyon (2016).

13 GOV (2016b).

Communications Technology (ICT) Division of MARINA, their agency will still remain under the new Department of Transportation once the separation of the DOTC is done.

MANILA PORT CONGESTION

- **Background of the Issue:**

In 2014, several factors contributed to the port congestion. However, the situation drastically escalated when Manila's Mayor Joseph Estrada implemented the Manila truck ban in February 2014. This truck ban resulted in a huge number of containers being accumulated in the Manila South Harbor, the Manila International Container Terminal Services, Inc. (ICTSI) and the local North Harbor. Likewise, consignees could not return empty containers to the congested ports thereby filling up the empty container yards, which could no longer manage the big volumes. Containers were diverted to Batangas and Subic with additional costs given to the importer and exporters. Even the port of Batangas was quickly overwhelmed by the additional volumes.

This congestion resulted in disruptions of the entire supply chain of delivery of goods and had a negative impact on the economy. From April to September 2014, the government and private sector lost roughly 70 million Philippine Peso (PHP) due to port congestion. The entire loss to the industry was even much larger considering that the port congestion only ended in the first quarter of 2015 despite the fact that the truck ban was partially lifted in September 2014.¹⁴

- **Current Status:**

Since March of 2015, the South Harbor (Asian Terminals, Inc. (ATI)) and North Harbor (ICTSI) are operating normally again and many improvements have been made by the port operators in cooperation with the lines which are represented by the Association of International Shipping Lines, Inc. (AISL). In October 2015, the MICT and the ATI have rolled out the Terminal Appointment Booking System (TABS). TABS is an online and web-based book system which brokers, importers and exporters as well as cargo owners use to book the time slots for the supply and the withdrawal of their cargo so that the volume of trucks can be evenly distributed through out of the day.¹⁵

Nonetheless it is imperative that the
14 Interview with Schröder, K., Hapag-Lloyd Phils. Inc. (2016).

15 Interview with Lozano, C., ICTSI (2016).

infrastructure leading to the ports must be urgently addressed to enable cargo to move to the North and South of Manila as truckers are still heavily delayed by the road congestion in Manila.

It will take the government and / or private sector several years to develop new ports to the North and South of Manila to cope with future container volume growth. In the meantime consignees and shippers in and around Manila will continue to use the existing ports.

POEA: Maintaining a global competitive edge

- **Background of the Issue:**

The Philippine Overseas Employment Administration (POEA) is a government agency under the Department of Labor and Employment (DOLE) in the Philippines with exclusive responsibility for the regulation of deployment of Overseas Filipino Workers (OFW's), both Land- and Sea-based (Seafarers), whose responsibilities include, but are not limited to enhancing the benefits from overseas employment programs and monitoring recruitment agencies in the Philippines.¹⁶ Recruitment and employment of Filipino seafarers is highly regulated and administered by the POEA as mandated under the POEA Rules and Regulations Governing the Recruitment and Employment of Seafarers.¹⁷

International ship owners and managers face challenges with the operational realities of POEA as their policies and procedures are not fully aligned with International Maritime business practices. The lengthy processing of the documents and requirements of the seafarers, specifically in the accreditation of a new principal and its vessels, the accreditation of new vessels under construction, and the transfer of vessels from one manning agency to another. The long process in the POEA is a burden to some ship owners as last minute recruitment is often required in the maritime sector.

- **Current Status:**

Last August 6 2016, the POEA Governing Board composed of Department of Labor and Employment Secretary Silvestre H. Bello III, POEA Administrator and Governing Board Vice-Chair Hans Leo J. Cacdac, and members

Felix M. Oca, Estrelita S. Hizon, Alexander E. Asuncion, and Milagros Isabel A. Cristobal signed Resolution No. 13 Series of 2016, where the Seafarers Registration Certificates (SRC) would be replaced by an online seafarer registry on September 15, 2016.¹⁸ This will be very beneficial as it could eliminate the long lines at POEA offices.

Although there have been some improvements, there are still some problems being encountered. In order for POEA to adjust their policies and procedures to operational realities, more awareness on the shipping industry should be created. Furthermore, the complaint procedure for ISO Certified entities should be clarified. Moreover, in terms of bureaucracy, disapprovals are passed orally and not formally written, expecting other countries to have the same method of registering business and permits the same way it is being done in the Philippines, and delays in settling administrative cases.

Safety of Life at Sea: Verified Gross Mass

- **Background of the Issue:**

Before 2014, the convention of the Safety of Life at Sea (SOLAS) only required a shipper to indicate the gross mass of the container to the ship's master or representative. Furthermore, the shipper had to guarantee that the actual gross mass is equal to the declared gross mass. In addition, there were no requirements from the International Maritime Organization (IMO) to verify the actual weight, nor an effective enforcement in most jurisdictions.¹⁹

The lack of requirements led to declarations of incorrect container weights. A misdeclaration of weight can entail a whole range of consequences. It risks not only the safety of the crew, or on the ship, but also that of the shore side workers and equipment at the ports and cargo handling terminals. It also has impacts on the operation costs and can lead to supply chain delay and to higher operation cost. To address the misdeclaration of weight in order to improve the safety on ships and on land, the IMO adopted mandatory requirements to the convention for the SOLAS in November 2014.²⁰

- **Current Status:**

On July 1, 2016, these amendments to the

¹⁶ OFWGuide (2015).

¹⁷ POEA (2003).

¹⁸ POEA (2016).

¹⁹ MOL (2016).

²⁰ MOL (2016).

Safety of Life at Sea (SOLAS) convention became effective. According to this amendment, the shipper is required to verify the gross weight of containers and indicate the verified gross mass (VGM) to the carrier or port operator before the packed container is loaded on the vessel.²¹ Thus, no packed container without VGM will be loaded on a vessel. This amendment was adopted in November 2014.

The VGM of the container will be determined at the moment of the Terminal entry. Thus, no information on the VGM is sent to the Terminals and Shipping Lines beforehand. The Manila International Container Terminal Inc. (MICT), ATI, Subic Bay Metropolitan Authority (SBMA), Batangas Ports Authority (BPA) are the only responsible entities that are allowed to declare the VGM. Furthermore, only those terminals are authorized to send the VGM to the concerned shipping line/s. To avoid apprehension, the Shipper/Exporter has to indicate the maximum gross weight, which should be easily visible on the door plate. Furthermore, it has been set that the weighing of each container does not result in additional costs. From July to September, the implementation of the VGM will be explored. After this time, there will be a review of the progress by the IMO.²²

In the case of overloading, the container will either be sent back to the shipper or stripped at the Terminal. In both cases, the excess goods have to be unloaded to achieve the allowable maximum gross weight.²³ On a positive side, the amendments of the SOLAS convention regarding the VGM will lower the port accidents since the weight of the equipment, such as quay cranes, forklifts etc., has to be limited due to the amendments.²⁴

The Philippines vs. China case

- **Background of the Issue:**

Scarborough Shoal or Bajo de Masinloc is a triangular chain of reefs abundant in marine resource.²⁵ It is located about

124 Nautical Miles (NM) from the nearest coast of the Philippines and approximately 472 NM from the nearest coast of China.²⁶

As specified under the United Nations Law of the Sea, it is within the Exclusive Economic Zone of the Philippines; however China still continues to assert its claim in it due to its economic potential.²⁷

In April 2012, a Philippine Navy Surveillance aircraft monitored eight (8) Chinese fishing vessels anchored inside the Bajo De Masinloc/ Scarborough Shoal and reported that large amounts of corals, giant clams and live sharks were being illegally collected.²⁸ Tensions between the two claimants further escalated and the Philippines proceeded into a legal battle against China.²⁹

The Philippine Government, through the Department of Foreign Affairs and Department of Justice, filed a ruling on the matter before the International Tribunal on the Law of the Sea of the 1982 United Nations Convention on the Law of the Sea (UNCLOS), wherein the Philippines outlined its grievances against China and the legal basis for its claims.

The Permanent Court of Arbitration (PCA) at Hague responded by issuing a press release outlining the rules of procedure. A few years after, the PCA announced that a final decision was to be expected from the Arbitration Tribunal by June 2016.³⁰

- **Current Status:**

On the 12th of July 2016, the international panel of judges at the PCA in The Hague unanimously ruled in favor of the Philippines in the case against China's claims to the whole West Philippine/South China Sea.³¹ The five-member Arbitral Tribunal supported the position of the Philippines that China's "nine-dash line maritime claim is excessive and encroached into the Philippines' 200-nautical mile exclusive economic zone (EEZ)"³², but China refuses to recognize the tribunal ruling.³³

21 World Shipping Council (2015).

22 Interview with Sevilla, O., Rhenus Logistics, Inc., (July, 2016).

23 Interview with Sevilla, O., Rhenus Logistics, Inc., (August, 2016).

24 Interview with Medina, J., Rhenus Logistics, Inc., (July, 2016).

25 Inquirer.net. (2012).

26 GOV (2012).

27 CNNPhilippines (2015).

28 GOV (2012).

29 Global Security (2016).

30 AMTI (2013).

31 Permanent Court of Arbitration (2013).

32 CNNPhilippines (2016a).

33 The guardian (2016).

Executive Summary

The maritime industry, consisting of different sub-industries that comprise of (1) the crewing and manning industry, (2) the training and education of seafarers, (3) the port and (4) liner operations, break-bulk and affiliated services, (5) the shipbuilding, shipyards and engineering and (6) the maritime tourism, the economic impact is vast and difficult to measure. Combined however, these sub-industries form an important pillar for the national economy by creating jobs, attracting foreign investments, generating further support industries, strengthening the local purchasing power as well as offering plenty of business opportunities.

In the last 50 years, the archipelago has become a major provider of maritime experts.³⁴ In 2014, the Philippines contributed 402,000 seafarers to more than 30% of the global maritime workforce. In 2014, the remittances from the Filipino seafarers alone contributed \$5.5 billion USD to the national economy. In addition, the crewing and manning sector creates various sub-industries which benefit from the maritime sector and likewise contribute to the economy by creating further jobs.³⁵

The education and training of seafarers is a main factor of the maritime industry, as it maintains and develops the level of knowledge and skills in the maritime sector and guarantee maritime safety. The government authorities CHED, TESDA and MARINA regulate the Maritime Education Training Institutions (METIs) in the Philippines. In 2014, the total contribution of the institutions under the three government authorities as well as the independent review centers through tuition fees to the Philippine GDP accounted for around 11.9 billion PHP (~\$242.89 million USD).³⁶

Ports have a crucial role in the competitiveness of the maritime industry and the entire Philippine economy, since its operations and services influence significantly the value of the supply chain. The international ports in the Philippines are highly competitive and the operations are continuously adapted to latest global standards. In 2015, the Philippine Port Authority (PPA) achieved around 13.2 billion PHP revenues and invested approx. 22.5 billion PHP in the development of their Port Management Offices. In the same year, the direct economic impact, captured as collection of

³⁴ Oxford Business Group (2016a).

³⁵ Capt. Lehmann, R. (2016).

³⁶ In 2014, the GDP share of the education and training sector was 0.088% from Galvez, A., Tuapin, G. et al. (2016).



the Bureau of Customs (BOC), was around 366 billion PHP.³⁷

Closely connected to port operations are international cargo vessels and affiliated services which in 2014 paid a total of 9.9 billion PHP in taxes to the national and local government. Foreign container vessels and break-bulk carriers handling export cargo from the Philippines paid a total of 2.4 billion PHP and 1.3 billion PHP in taxes, respectively. Workers in the trucking industry servicing both international and domestic container traffic paid a total income tax of 1.6 billion PHP, trailer and truck operators approximately 4.5 billion PHP. In addition, tug boat operators paid income tax in the total amount of 123 million PHP.³⁸

In 2010, due to the country's geographical structure, a positive investment climate and a high level of skilled workforce, the Philippines became the 4th largest shipbuilding nation after China, South Korea and Japan.³⁹ In 2015, the shipbuilding industry paid over \$500 million USD (24 billion PHP) in tax to the Philippine government. In the same year, the cumulative investments in the Philippine shipbuilding industry were around \$2.4 billion USD (116 billion PHP). Overall, the industry employed 46,000 workers (subcontractors are included).⁴⁰

The tourism and travel sector is an essential pillar of the Philippine economy, as it makes a substantial contribution to the GDP. In 2014, the direct contribution to the Philippines' GDP was around 533 billion PHP amounting around 4.2% of the GDP. Due to the geographical structure a large part of travel and tourism in the Philippines is by sea and the maritime tourism has a significant influence on the competitiveness of the whole tourism industry.⁴¹ In 2014, based on 12% value-added tax (VAT) the entire domestic maritime passenger transport sector paid approximately 322 million PHP in taxes. The entire domestic cargo market paid approximately 1.7 billion PHP VAT-taxes.⁴²

37 Lozano, C., Cuevas, A. (2016).

38 Schröder, K., Atty Cruz, M. (2016).

39 Danish Export Association (2015).

40 Capt. Lehmann, R. (2016).

41 Marina (2013).

42 Tagud, S. (2016).



1 Crewing and Manning

Deployment of Seafarers: **401,826**
 Number of Manning Agencies: **406**
 Volume of sea-based remittances: **\$5.5 billion USD**



2 Seafarers Education and Training

GDP Contribution of MHEIs, MTIs and Review Centers:
 Total GDP per year: **11,795,969,314**
 Total GDP per year in USD: **250,978,071**
 GDP of the Philippines per year in USD: **284,777,093,019**
GDP Contribution of Maritime Education and Training Institutions to the GDP of the Philippines: 0.088131%



3 Port Operations and Services

Investments: **22,531,162,183 PHP**
 PPA Revenue: **13,189,962,652 PHP**
 Direct Economic Impact (BOC Collection):
366,013,000,00 PHP



4 International Cargo Vessels and Affiliated Services

Taxes: **9,873,718,054 PHP**



5 Shipbuilding, Shipyards and Engineering

Taxes paid: over **\$500 million USD**
 Investments: over **\$2.4 billion USD**
 Number of Employees/Job Creation: Overall: **46,000**
 (including subcontractors)



6 Tourism Maritime Facilities

Passenger transport sector: ~ **322 Mio PHP VAT Taxes**
 Cargo sector: ~ **1.7 billion PHP VAT Taxes.**

All numbers are from the year 2014 except 3 and 5 which refer to the year 2015.



Development and Potential of the Maritime Industry



1 Crewing and Manning

1

Crewing and Manning

One main sector of the maritime industry is the crewing and manning of seafarers. As almost 90% of trade activities worldwide are being operated by ships, seafarers play a key role in sustaining both the efficiency and stability of the maritime sector as a whole.

The manning industry includes companies that provide employment to Filipino seafarers on board. Since the late 1980's, its purpose of recruitment slowly progressed into human resource management, since recruitment functions of training, selection, deployment, compensation and career development can now be considered a part of standard service, depending on what the manning agent and the principal had agreed upon. As of July 2016, there are 406 manning agencies with valid licenses accredited under POEA.⁴³



43 Gomez, A., Tobias- Festijo, F. (2016).

Meanwhile, the crewing sector is responsible for employing seafarers and processing the documentation of all migrant seafarers working on ships.⁴⁴ In January 2015, there were 421 licensed crewing agents in the Philippines.⁴⁵

1.1 Filipino Seafarers

China supplies more seafarers than the Philippines. This might not come as a surprise as China is one of the top three ship owner countries worldwide and has a population of roughly 15 times the size of the Philippines. In 2014, around 402,000 Filipino seafarers contribute to roughly 30% of the global maritime workforce, making the Philippines the second largest supplier of seafarers worldwide. In other words, one out of three workers in the global maritime industry is a Filipino.⁴⁶

While China is leading the overall supply of seafarers and officers, the Philippines still supply the most ratings⁴⁷ worldwide. With China's overwhelming manpower in mind, the role of Filipino seafarers for the maritime industry becomes even more remarkable. According to a report by The Baltic and International Maritime Council (BIMCO), the Philippines not only leads the ranking concerning ratings, but also supplies the second highest number of officers.⁴⁸ The extraordinarily high demand for Filipino seafarers can be traced back to “their outstanding qualities, i.e., technical knowledge, flexibility, reliability, trustworthiness, hard work, and their command of the English language”⁴⁹.

Filipino seafarers usually receive fixed six- to eight-month contracts. The most basic contract is issued by the POEA. According to the POEA, the maximum employment period is twelve months. These contracts are normally agreed upon by the crew, the manning agency and the ship manager. In some cases, seafarers also acquire a collective bargaining agreement (CBA), which tops the common POEA contract. As the CBA contains higher benefits, it is also more attractive to seafarers.⁵⁰

In 2014, around 1.8 M Filipino workers were deployed overseas in which approximately one out of five was employed as a seafarer. Figure 1 compares the number of land- and sea-based Filipinos working abroad.



44 Gomez, A., Tobias- Festijo, F. (2016).

45 Inquirer.net (2016).

46 Gomez, A., Tobias- Festijo, F. (2016).

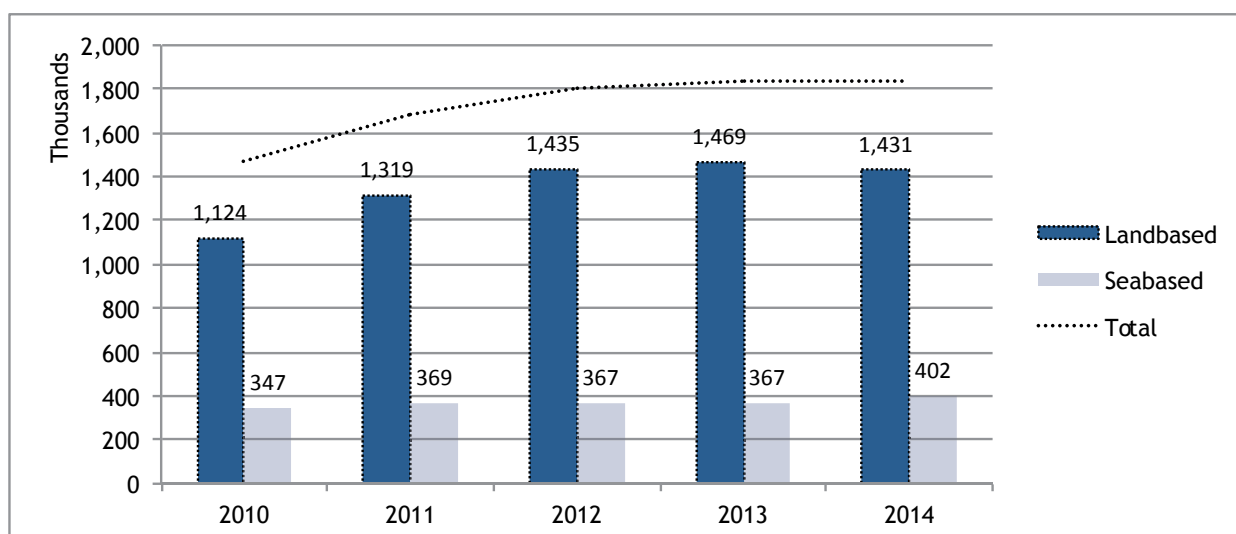
47 Ratings are seafarers with a lower level of competence than officers.

48 BIMCO (2015).

49 Daxim, L. L. (2015).

50 Gomez, A., Tobias- Festijo, F. (2016).

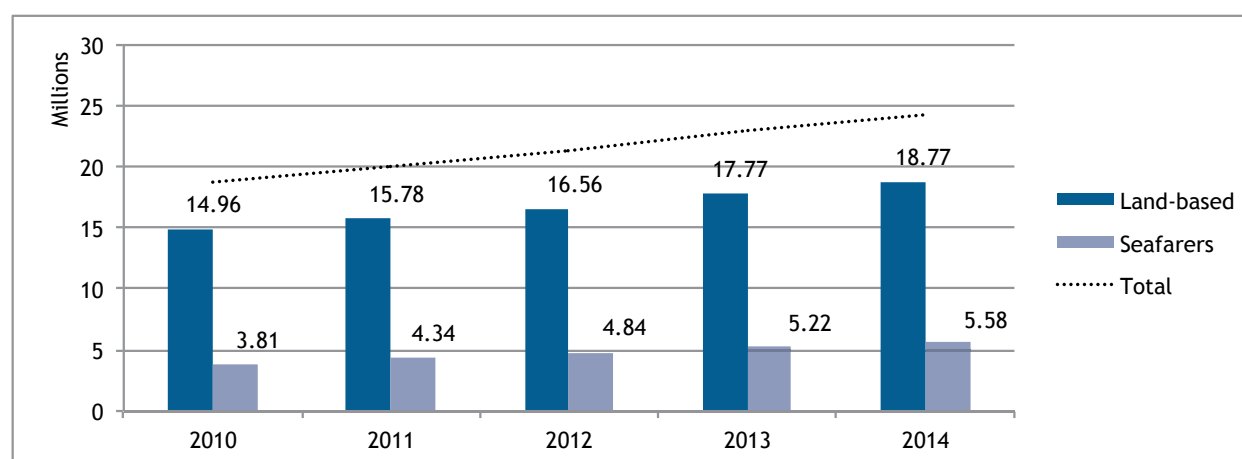
Figure 1: Comparison of deployed OFW (2010-2014).



Source: Gomez, A., Tobias- Festijo, F. (2016).

Figure 2 states the cash remittances from 2010 to 2014. Out of the \$ 24 billion remittances contributed by both land- and sea-based Filipinos, seafarers alone contributed \$ 5.5 billion. With the number of seafarers predicted to increase in years to come, the volume of sea-based remittances is expected to receive a boost as well. As these remittances are already majorly contributing to the GDP of the Philippines, the anticipated increase will only strengthen the seafarer's outstanding contribution to the Philippine economy as a whole.⁵¹

Figure 2: Comparison of Number of Cash Remittances of sea-based and land-based workers.



Source: Gomez, A., Tobias- Festijo, F. (2016)

1.2 Philippine Manning and its Support Industries

The crewing and manning industry itself is so extensive that it has created various sub-industries. These support businesses are vital in ensuring a smooth flow of the entire industry. Services range from education and training, to uniform and protective gear suppliers, to special bank services. All these industries add to the already outstanding importance of the crewing and manning sector.

Among others, the bank and finance sector is one of the key support industry. Once a month, Filipino seafarers are obligated to make a money transfer to a representative residing in the

⁵¹ Gomez, A., Tobias- Festijo, F. (2016).

Philippines. These transfers have to be processed through an authorized Philippine bank. There are at least five major banks with significant shares in sea-based total remittances in 2015. These are the Bank of the Philippine Islands (BPI), Banco De Oro (BDO), Philippine National Bank (PNB), Rizal Commercial Banking Corporation (RCBC) and Metrobank. BPI holds 46% in sea-based market shares and 29% in the cash remittance market. BDO has a sea-based market share of 26%, followed by the PNB with 10%. The sea-based market share of RCBC amounted to 3.5%.⁵² As these remittances alone can help grow a bank's revenue, they play an important role for the Philippine economy.⁵³

Another sector that benefits from the seafarers manning and crewing industry are the suppliers of the necessary Protective Personal Equipment (PPE). Usually, PPE suppliers are small to medium enterprises owned by a family or a corporation. Their businesses have been flourishing over the past few years as some employers ask their manning agency to take care of the allocation of necessary working gear like uniforms, coveralls/boiler suits and safety shoes. The agencies in return contact PPE suppliers who then provide the gear. Some manning agencies work closely with their own accredited PPE supplier that provides their own crew's requirements. In other cases, PPE suppliers source out their products to other suppliers. Since the required capital of these businesses is relatively high, with investment reaching from 1 to 17 M PHP,⁵⁴ it is difficult to enter the market. However, the barriers to exit are low as many suppliers can start producing for another industry by simply diverting their assets.⁵⁵

Before seafarers can go onboard, their employer has to ensure that they are physically and mentally fit for the job to perform their duties at sea. In order to be able to guarantee their operational readiness, manning agencies send the seafarers to clinics and hospitals licensed by the POEA. In 2015, there were 152 medical facilities for overseas workers and seafarers registered with the Department of Health. The operation of such facilities often comes with high capital assets. As a result it is equally as hard to enter and exit this market. As these hospitals have to maximize their capital investment, the competition regarding P&I Club accreditation,⁵⁶ service to clients, flexibility and geographic presence within this sub-industry is relatively high.⁵⁷

1.3 Opportunities & Challenges

The Philippines has a significant competitive advantage compared to other nations: it possesses a pool of internationally renowned, skilled and experienced seafarers. This pool of talented seafarers gives the country the opportunity to offer its maritime expertise to other international companies. In terms of Business Process Outsourcing (BPO), one of the fastest growing sectors in the Philippines, the maritime industry holds great potential, as there are a lot of back office processes (ship management, ship damage claims, crew accounting, payroll, record of all transactions, port disbursement, supplier payment, crew accounting, accounts payable etc.) that can be outsourced. Furthermore, the outsourcing of recruitment and sourcing, and of the training and development of seafarers represent an attractive business opportunity.

One challenge in the future of the crewing and manning sector is the issue of crew claims. This legal issue poses a threat for a continuing prosperous growth of the Philippine maritime industry as a whole. With inconsistent and seemingly unjust verdicts being a regular occurrence, foreign ship owners might no longer re-employ Filipino maritime professionals. This possible decline in employment opportunities can lead to the decrease of the annual billion dollar remittances they bring into the country. Actions to prevent this scenario have already been undertaken. The so-called Seafarers Protection Act, which was implemented in late 2015, aims at reducing acts

⁵² The sea-based market share of the Metrobank is unknown.

⁵³ Gomez, A., Tobias- Festijo, F. (2016).

⁵⁴ Interview of the major companies.

⁵⁵ Gomez, A., Tobias- Festijo, F. (2016).

⁵⁶ P&I stands for Protection and Indemnity, as these clubs cover injury costs, hospitals seek to cooperate with them.

⁵⁷ Gomez, A., Tobias- Festijo, F. (2016).



of ambulance-chasing. It states that lawyers representing seafarers shall be compensated with no more than 10% of the benefit awarded to the seafarer.⁵⁸ Additionally, unjust claims must be avoided through fair arbitration to remain competitive in the long-term. In this context, the qualifications of the volunteer arbiters should be reviewed and the reasons for delisting an arbitrator need to be reexamined. Incorrect and unfair decisions should entail more grave consequences. Furthermore, the labor laws may require to be reviewed if they balance the interest of employees and employer in a fair way.

Another challenge is to strengthen the long-term commitment of the seafarers. Throughout their career they are exposed to physical stress. Among others, they are confronted with exhaustion and heavy workloads. These are the common reasons why many seafarers return to land-based jobs once they have acquired sufficient funds. Therefore, the stakeholders such as the ship owners and government institutions are implementing measures that improve the life standards and the health conditions onboard. The concerns of seafarers are being heard, and benefits and privileges are given to encourage them to pursue their career as seafarers. Hence, current initiatives focusing on the well-being at sea, safety of the seafarers and improvement of their overall life quality must be retained and strengthened. Another positive prospect is the enhancement of gender equality in this sector. This development is expected to lead to an increase in female seafarers joining the workforce. Due to the previously described possibilities of education through new technologies, female workers' levels of competence are also expected to reach the standard of their male counterparts.⁵⁹

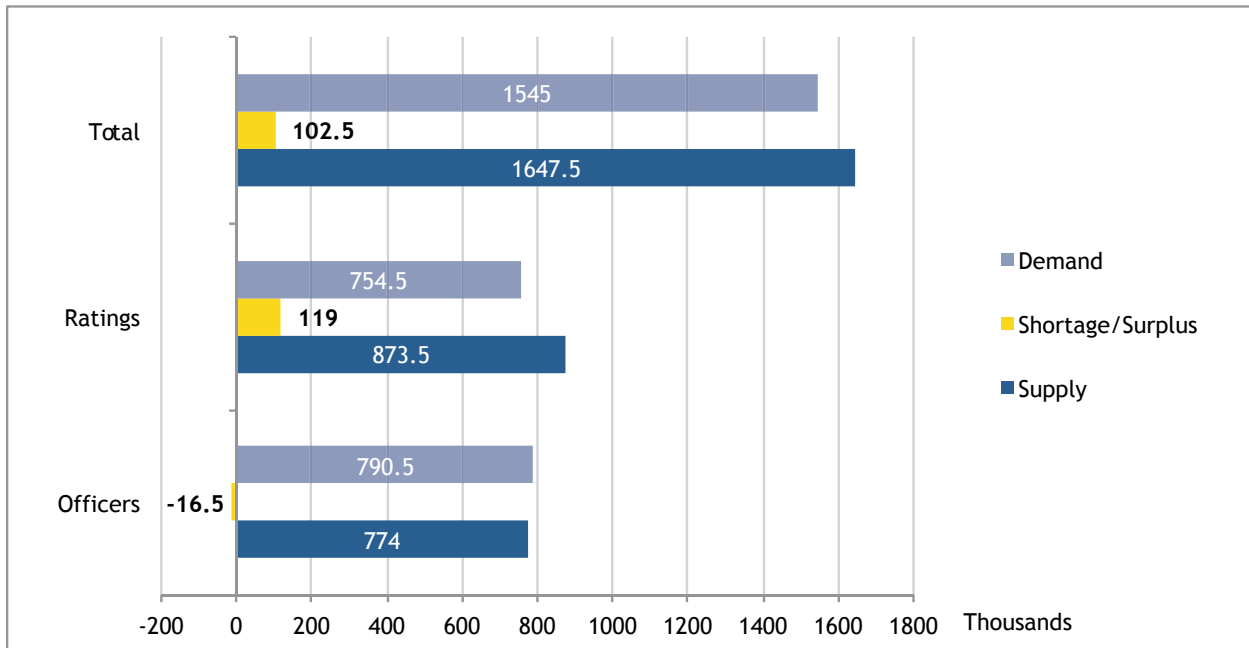
Through further development in Asia and especially in the Association of Southeast Asian Nations (ASEAN), trading opportunities for Philippine goods and services are expected to prosper. This trend will open up sea shipping networks and enable collaborations and the sharing of best practices between the Philippines and its neighbors. As a result, the general outlook of the labor market for seafarers is auspicious, but a more detailed look reveals that balancing out the

⁵⁸ GOV (2015).

⁵⁹ Gomez, A., Tobias- Festijo, F. (2016).

predicted demand for officers and oversupply of ratings will be a major challenge in the next few years. The current contribution of recruitment and training is not sufficient enough to reduce this shortage of officers or keep pace with the forecasted demand for officers in the future.⁶⁰ According to the Manpower Report 2015, there was a slight global shortage in officers in 2015. The demand for 790,500 officers could not be met by a supply of 774,000. This disparity led to a shortage of 16,500 officers or 2.1%. In contrast, there was a surplus of ratings. The demand for 754,500 ratings was excelled by a supply of 873,500. This leads to a surplus of 119,000 ratings or 15.8%. In total, a surplus of seafarers remained. The demand for 1,545,000 seafarers was met by a supply of 1,647,500. This led to a surplus of 102,000 seafarers or 6.6% (Figure 3).⁶¹

Figure 3: Estimated global supply and demand of/for seafarers in 2015.



Source: BIMCO (2015).

The world merchant fleet is expected to continuously grow over the next ten years. Along with this development comes a growing demand for seafarers, which will likely continue the trend of an overall shortage in the supply of officers. In 2015, the shortage of officers amounted to 16,500. This number is expected to increase to 92,000 in 2020 and reach a lack of 147,500 officers in 2025 (Figure 4).⁶²

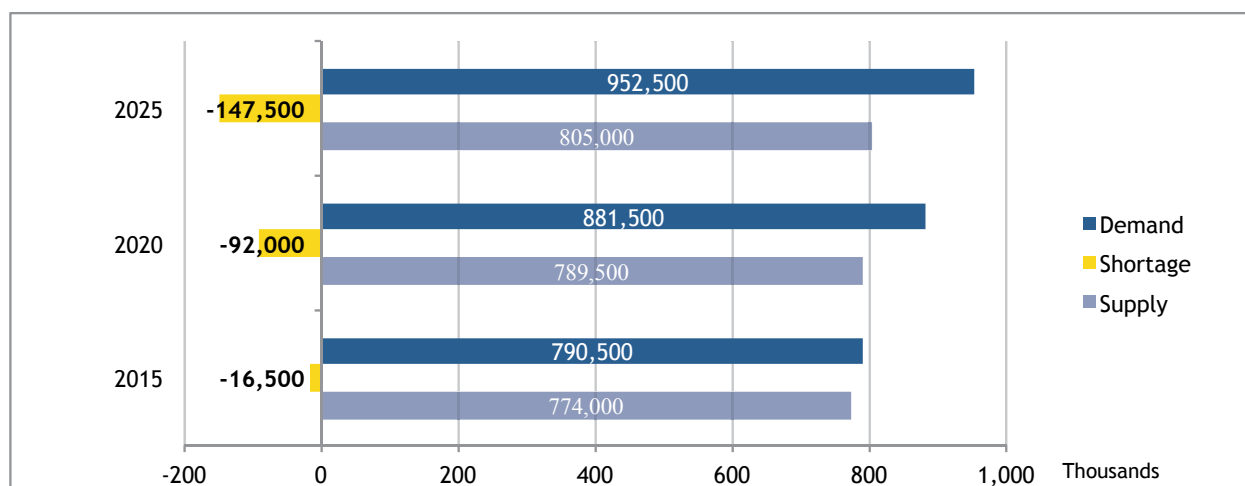


⁶⁰ BIMCO (2015).

⁶¹ BIMCO (2015).

⁶² BIMCO (2015).

Figure 4: Basic forecast for the future supply-demand balance for officers.



Source: BIMCO (2015).

The current maritime manpower situation and future outlook indicate that the industry and relevant stakeholders should not and cannot expect an abundant supply of qualified and competent seafarers in the future without concerted efforts and measures to address key manpower issues. If the Philippines wants to remain a key player in the global crewing and manning industry, certain measures should be considered. While high in ratings, the Philippines is not producing a sufficient amount of officers. With the estimated increase in demand for officers, the Philippine maritime authorities should consider provisions that will enable more aspiring seafarers to become officers. Crewing and manning companies should focus on providing education and training to Filipino seafarers in order to enable them to take higher positions aboard. This could be achieved through the application of up-to-date technology such as e-learning and computer-based training. This course of action would also enhance the competence and quality of Filipino seafarers, and thus, would create a strong position with regards to the tight competition with China. Furthermore, there is a need to create and communicate incentives for career path development. This could be achieved, for instance, by free seminars and workshops conducted by the manning agencies, wherein the financial and non-financial benefits of becoming an officer are presented. It is crucial to promote careers at sea, enhance maritime education and training in the Philippines, address the retention of seafarers, and to continue monitoring the global supply and demand for seafarers on a regular basis.⁶³

63 BIMCO (2015), Gomez, A., Tobias- Festijo, F. (2016).



2 From Seafarer's Education to Employment

2

From Seafarer's Education to Employment

In terms of the Crewing and Manning Sector, education and training of seafarers play a vital role. Prior to their employment at sea, prospective seafarers have to be trained and be prepared for their career in this specific sector.

2.1 Structure of the Maritime Education and Training (MET) in the Philippines

Maritime Education and Training Institutions (METIs) are academic institutions and training centers that provide education and training to aspiring seafarers for careers in the maritime industry. Higher maritime education usually consists of four- to five-year college degree programs for either marine transportation or engineering. Most commonly, the students go through a four-year structure (3 - 1) which stipulates three years of academic study prior to onboard job training in the final year. An alternative approach is a 2 - 1 - 1 structure which schedules the onboard job training for the third year. After the one year job training, the students go back to school to finish their last year.⁶⁴

Maritime training, on the contrary, is composed of shorter courses that improve the competencies of seafarers. Topics such as the general operations on board, safety and crisis management, dangerous cargoes and drug abuse prevention are included in the courses.

The METIs are regulated by three organizations namely, the Maritime Industry Authority (MARINA), Commission on Higher Education (CHED), and Technical Education and Skills Development Authority (TESDA) (Figure 5). Furthermore, independent review centers contribute to the Maritime Education and Training sector but are not regulated by any governmental agency.

⁶⁴ Tuapin, G., Galvez A. et al. (2016).

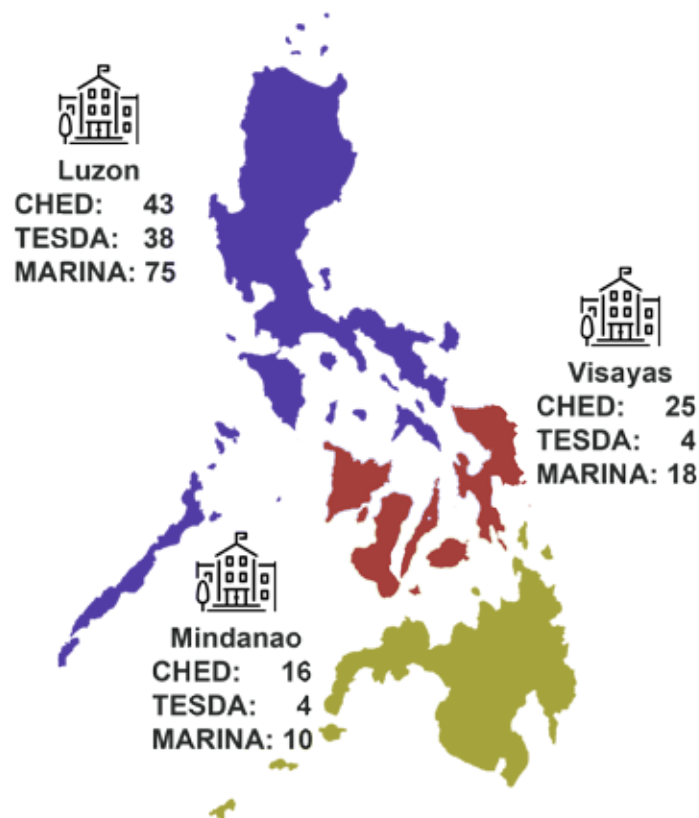
Figure 5: Maritime Education and Training Authorities

AUTHORITY	COMMISSION ON HIGHER EDUCATION (CHED)	TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY (TESDA)	MARITIME INDUSTRY AUTHORITY (MARINA)
			
Mandate	Mandated by the Office of the President to manage and develop the Philippine Higher Education System in partnership with other major higher education stakeholders.	Responsible for the technical education in the Philippines. Assures quality of skills development and provides direction, policies, programs and standards.	A governmental agency under the Philippine Department of Transportation and Communications, which specializes on the stimulation, regulation and promotion of the national maritime industry.
Number of METIs accredited as of 2014	83	48	103
Number of enrollees in 2014	167,840	6,717	No data
METIs' GDP contribution in 2014	PHP 8,808,065,686 / ~\$181.09 million USD	PHP 206,432,921 / ~\$4.24 million USD	PHP 2,658,142,210 / ~\$54.65 million USD ⁶⁵

As shown in the graphic below the majority of Maritime schools and Maritime Trainings institutions are located in Luzon (Figure 6).

65 Galvez A., Tuapin, G. et al. (2016).

Figure 6: Location of METIs



Source: Galvez A., Tuapin, G. et al. (2016).

In addition, maritime review centers have to be included as well, since they are considered part of the maritime industry and contribute to the Gross Domestic Product with their service. Review centers offer review programs for seafarers to assess their competencies in order to pass the licensure examination. Unlike maritime higher education and maritime training institutions, review centers are not regulated by any government agency. In the Philippines, six review centers are prominent with most of them also operating in the provinces. In 2014, the review centers contributed PHP 123,328,497 (~\$2.54 million USD) to the GDP.

Based on the research data, the total contribution of the institutions under the three government authorities and the independent review centers through tuition fees to the Philippine GDP accounted for 0.088% or PHP 11,795,969,314 (~\$242.89 million USD) in 2014.⁶⁶

Aside from the three mentioned Philippine government authorities regulating the national industry sector, the International Maritime Organization (IMO) based in London, UK, is the primary body for the maritime industry and has adopted regulations and standards on an international level. The majority of the formulated standards focused on the technical aspects of international shipping. But with an increasing awareness for the impact of human behavior in cases of failure and shipping accidents the IMO started initiatives to regulate the training of the crew members with regard to safety and professional competencies.⁶⁷ In 1975 the IMO adopted the International Convention on the Standards of Training, Certification and Watchkeeping (STCW) and maintains a 'white list' containing all the countries complying with the standard education and training practices of STCW 1978. The STCW was updated several times towards the most recent version STCW 2010 which includes a new set of amendments adopted in Manila (The Manila Amendments) and became effective in 2012.

⁶⁶ Galvez A., Tuapin, G. et al. (2016). Data sources for an accurate figure are limited.

⁶⁷ MARINA STCW Office (2016).

2.2 The Philippine Maritime Career and its Current Setting

The Philippines ranks top amongst the countries with the largest supply of seafarers which is driven by a number of factors. With a population of more than 100 million people growing yearly by approximately 1.5% and a median age of 24 years, the Philippines provides a young and massive workforce. Additionally, the Philippines can supply qualified crew for internationally-operating vessels as it was regarded as the third largest country in the world with the most number of people who can speak English, the language that is internationally recognized onboard and in Shipping. Furthermore, most maritime jobs offer an attractive remuneration compared to jobs on shore which is why many Filipinos choose employment at sea although it means being away from their homes and families. Particularly in provincial areas, male children are often encouraged by their parents to pursue a seafaring career. Later with a job abroad, they are able to raise the living standard of their families through remitting part of the income home.

Due to the geographical condition of the Philippines being an archipelagic state with approximately 7,100 islands, maritime activities such as transport and fishing have been part of the lives of many Filipinos. Thus, the tendency of pursuing a maritime career is higher compared to in countries that do not have such an extensive access to the sea.⁶⁸

Further to this, shipping companies are enhancing the employment conditions and the overall image of the industry to convince more people to pursue a career in seafaring. For instance, the following actions may be effective in motivating more young people to pursue a career in seafaring:

- Cutting the period spent at sea down to 4 - 6 consecutive months.
- Improving the living conditions of the crew on board through, for example, enhanced which are beyond the minimum requirements set by the standard.
- Increasing the compensation including further social benefits exceeding international norms such as family insurance.
- Strengthening the effective planning of seafarers career paths to ensure a better transition to an employment on shore.
- Enhancing the training centers with high-tech equipment and computer-based training (CBT) and simulation systems to achieve higher educational quality and practical relevance.⁶⁹

As mentioned in the previous chapter, the BIMCO manpower report disclosed that the global demand for highly educated seafarers such as officers cannot be served. In 2015, there was already a lack of officers accounting for 16,500 which is forecasted to increase up to 147,500 in 2025.⁷⁰

2.3 The Need for ‘‘CONTINUOUS’’ Education and Training

Competency and skills are among the main qualifications to maintain yourself as the top choice in the international labor market and the Philippines has already placed itself in that niche in terms of rating position. But what about the management level position? There are numerous factors explaining why the current excess demand of officers for the shipping companies could not be served by the Philippine maritime education sector.

One reason is the general modest behavior often associated to the Filipino culture. The job of an officer requires not only following instructions but also shouldering responsibility, decision making and leadership qualities. Especially in a multicultural environment, i.e. internationally-operating vessels, Filipinos often struggle to assert themselves in that position.⁷¹ CHED recognized

⁶⁸ Baylon, A., Santos V. (2011).

⁶⁹ Baylon, A., Santos V. (2011).

⁷⁰ BIMCO (2015).

⁷¹ Interview on Maritime Education with Tobias-Fesijo, F. (October, 2016).

that those skillsets are required by the shipping companies. As a result, they reviewed its standards for the bachelor degrees Marine Transportation and Marine Engineering and included competences from management level programs as part of the CHED Memorandum Order (CMO) in 2015.⁷²

A further factor is that some Filipino seafarers are not aware of the importance of certification demanded by the global shipping companies and avoid the necessary training because they consider its cost as too high and a loss of vacation time.

Furthermore, unnecessary costs occur through red tape, inefficient processes and the lack of mutual synergies of the numerous agencies involved. This was addressed through the One-Stop Service Center for Overseas Filipino Workers (OSSCO) that was recently opened in the main office of the Philippine Overseas Employment Administration. Overseas Filipino Workers are now able to access various services of the government concentrated in one spot which reduces transportation expenses and processing time.⁷³ The service offer covers for example matters regarding passport, social security, health insurance, training certificates, etc. Additionally, MARINA simplified its processes in 2014 by launching the Online Appointment System (OLAS) for seafarers applying for relevant documents.⁷⁴ With regard to streamlining the documentary processes, the government has also lengthened the validity of Seaman's Book from 5 years to 10 years and the same is expected to also be implemented on Philippine passports by 2017.⁷⁵

A key-factor for the maritime education sector are the Standards of Training, Certification and Watchkeeping. The importance for METIs to meet the STCW cannot be underestimated since the global demand for seafarers determined by the shipping companies is in compliance with its standards. However, a large number of Maritime Education and Training Institutions still fail to meet the minimum requirement of STCW 2010. Also, an audit carried out by the European-Maritime Safety Association (EMSA) detected that at least half of the total 93 Maritime Higher Education Institutions did not comply with European requirements. The fact that many METIs are substandard lowers the competitiveness of the Filipino seafarers especially with regard to the challenge of filling the lack of highly educated officers. Therefore, it is necessary that the regulating authorities assure the compliance of the Maritime Education and Training Institutions.

At this point it must be positively mentioned that consequent actions by CHED and MARINA can be observed: The governmental agencies terminated the accreditation of institutions not meeting STCW. As a result, in 2014, the number of enrollees under CHED accredited institutions dropped from 263,357 to 167,840.⁷⁶ In the most recent years, the authorities were able to improve the degree of implementation of STCW 2010.

The STCW office of MARINA stated that there are 14,542 students who completed the Bachelor of Science in Marine Transportation and 11,393 students the Bachelor of Science in Marine Engineering in the academic year 2015-2016. In total, this are almost 26,000 candidates for certification as operational-level officers. Moreover, out of 93,686 Filipino officers 68,811 have passed the mandatory Updating and Refresher course. Thus, as of 31 May 2016, a percentage of 73.45% are certificated and compliant with STCW 2010 Manila Amendments.⁷⁷

Another factor influencing the recognition of Filipino seafarers is the educational quality beyond the regulative requirements of STCW 2010. One component here is to improve the technological equipment of the seminar and training centers to supplement their offered academic training including expensive simulators and computer-based training systems.⁷⁸ There is also a big room

72 CHED (2015).

73 GMA online (2016).

74 WALLEM Maritime Services (2014).

75 MARINA CIRCULAR No. 2016-05, "Amendment to MARINA CIRCULAR No. 2009-10 (Revised Rules on the Issuance of Enhanced Seafarers's Identification and Record's Book [Seaman's Book]).

76 Galvez A., Tuapin, G. et al. (2016).

77 MARINA STCW Office (2016).

78 Baylon, A., Santos V. (2011).

for trainer upgrading because of lack of access to sophisticated methods particularly on soft-skills trainings. If the Philippine Maritime Industry is geared to increasing its supply on officers and to promoting the ratings who are qualified for officer's position, it is necessary to focus on soft-skills trainings and people management and leadership skills.⁷⁹

To achieve a better quality of the maritime education and training institutions further financing is required. Investments can be attracted through a tight linkage of the METIs, shipping companies and the manning agencies. Since the shipping companies faces challenges to meet their demand for officers, they are encouraged to support the maritime education and training sector through investments as well as the exchange of information on their expectations towards the education of Filipino seafarers.⁸⁰ The new CHED curriculum for maritime courses presents an opportunity for MHEIs to seek funding from various entities and organizations that support maritime training and education for upgrading their facilities and teaching equipment. For seasoned and highly competent maritime professionals who wish to begin a new career after their life onboard or wish to be productive while on vacation, the higher level of standard in the maritime curriculum could lead them to more teaching opportunities in MHEIs and METIs.

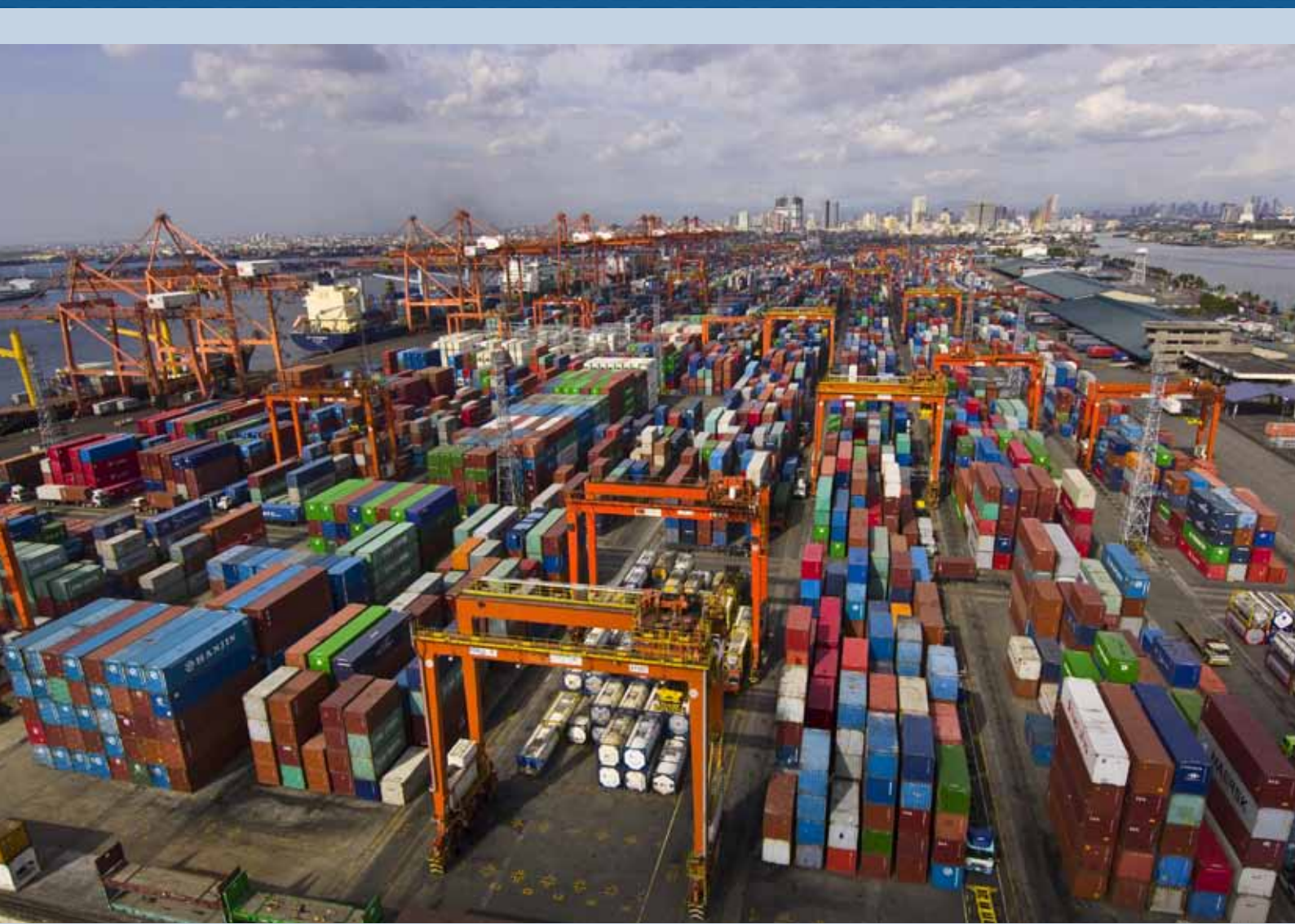
In conclusion, the maritime education and training sector can be evaluated as an important and promising contributor to the growth of the maritime industry in the Philippines and capacity building of the seafarers. The country has a huge human capital matching the general requirements of the maritime labor market which still holds a great potential due to the growing number of vacant officer positions on international vessels. To benefit from that, the Philippines, which is already among the biggest provider of seafarers in the world, has to promote its seafarers further and demonstrate to the shipping companies that it does not only stand for cheap labor costs but also a strong educational sector supplying highly educated aspirants for a maritime career. Therefore, it is necessary that the stakeholders of the MET sector increase their cooperation and streamline their processes to become more competitive and create an attractive investment climate. Investment may come in the form of training upgrades and facilities, and adaptation to new technologies and innovation. Moreover, the regulating government agencies have to continue its ongoing measures of ensuring that the schools comply with STCW 2010 as standards are expected to rise with the application of new technologies onboard. If this should be the case, the maritime education and training sector in the Philippines can be expected to flourish further.⁸¹

⁷⁹ Interview Tobias-Fesijo, F. (October, 2016).

⁸⁰ Baylon, A., Santos V. (2011).

⁸¹ Galvez A., Tuapin, G. et al. (2016).





3 Port Operations and Services

3

Port Operations and Services

Ports can be considered as nodes that connect land and maritime transport. The efficiency of a port is essential for economic growth as it lowers the logistical costs and contributes to higher passenger convenience. In the area of the maritime transport, port operations are essential, as they create trade between different trade partners.⁸² The direct economic impact of the port operations and services can be verified by measuring the BOC collection. In 2015, the direct impact of the port operations and services was around 366 billion PHP.⁸³

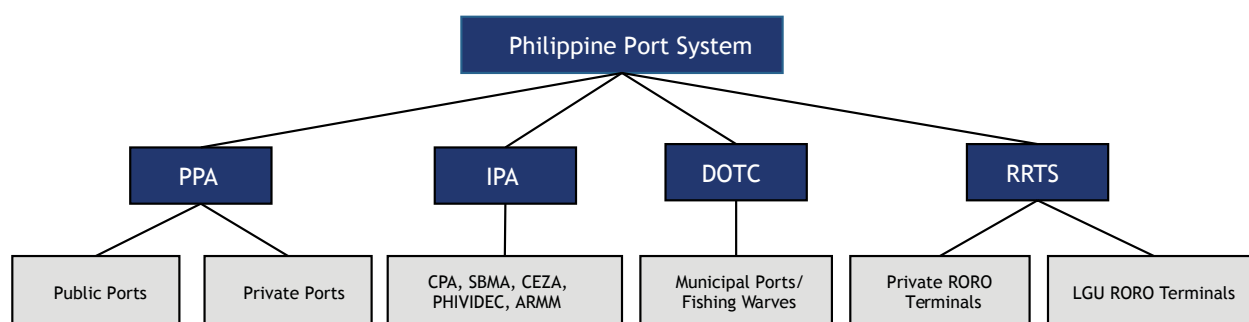
This chapter will give insights on the dynamics of port operations by describing the port system of the Philippines, the handled cargo, as well as the international volume of the ports. Similar to the previous chapters the challenges and opportunities of the port sector will be discussed.

3.1 Port Infrastructure System

The port system of the Philippines can be sub-divided into the following categories:

- 1) The Philippine Ports Authority (PPA) system of public and private ports,
- 2) Ports under Independent Port Authorities (IPA),
- 3) Municipal ports to Local Government Units (LGUs),
- 4) Road Roll-on and Roll off Terminal System (RRTS) of private and LGU (Figure 7).

Figure 7: The Philippine Port System.



Source: Basilio, E. et al. (2005).

The development, control, management and operation of the port system in the Philippines is predominantly conducted by the PPA, a government-owned and -controlled organization. The PPA was established in 1974 and is attached to the DOTC, today the DOT.

⁸² Basilio, E. et al. (2005).

⁸³ Lozano, C., Cuevas, A. (2016).

The port system of the PPA consists of five Port District Offices (PDOs): two in Luzon, one in Visayas and two in Mindanao. PDOs are in charge of the administration of the districts and were founded to enable easier controlling and operating of the ports.⁸⁴ Each PDO consists of smaller geographical subordinate groups referred to as Port Management Offices (PMOs).⁸⁵ These supervise and operate public and private ports, wherein private ports are either for non-commercial or commercial use.⁸⁶

The Manila International Container Terminal (MICT) and the South Harbor are the biggest public commercial ports in Manila.⁸⁷ Together with the North Harbor, these ports form the core of the Philippine Port System.⁸⁸ To provide better services and to ensure more competitiveness, the MICT and the South Harbor have been privatized. In 1988, the ICTSI was awarded with the terminal operation of the MICT.⁸⁹ Nearly a decade later, the management and operation of the South Harbor was contracted to the private company ATI.⁹⁰

Although the MICT and the South Harbor are under operation of private companies, the infrastructure is still owned by the PPA. Therefore, these ports are considered as landlord ports.⁹¹ The operations of the North Harbor have been transferred to Manila North Harbor Ports, Inc., of which Harbor Center Port Terminal, Inc. is the major share-holder.⁹²

With the purpose of decentralizing the power of the PPA, the Independent Ports Authorities (IPAs) have been founded. Although, the IPAs are authorized to determine their own rates, they usually take a cue from the PPA. In total, there are six IPAs. These include the SBMA, the Cebu Port Authority (CPA), the Cagayan Economic Zone Authority (CEZA), the Phividec Industrial Authority (PIA), the Autonomous Region of Muslim Mindanao (ARMM) and the Bases Conversion Development Authority (BCDA).⁹³

Aside from the mentioned ports, there are ports under Local Government Units (LGUs) that were initially constructed and developed by the former DOTC and later were handed over to LGUs.⁹⁴ These are small landing stages or feeder ports. Under the agreement of the PPA and the Philippines Fisheries and Development Authority (PDFA), fishing ports handle few commercial cargo.⁹⁵

The Road-RoRo Terminal System (RRTS) is the fourth category of the port infrastructure. The system was launched in 2003 with the purpose to parallel the PPA port system. The RRTS is defined as a network of Ro-Ro ferry terminals linked by Ro-Ro vessels. According to Executive Order 170, Ro-Ro shipping policies should a) lead to lower costs of inter-island transportation, b) enhance tourism, transportation, and commerce, c) facilitate agro-fisheries modernization and food security programs, and 4) promote private sector participation in constructing and operating Ro-Ro facilities.⁹⁶

3.2 Performance and revenue of the PPA Ports

To capture the dynamics of port activities, the sub-committee of the port sector considered 25 Port Management Offices (PMOs) and, in addition, the MICT. Besides the revenues and the investments of the PPA, the cargo volume of both containerized and break-bulk of 2015 have been evaluated.⁹⁷

84 Basilio, E. et al. (2005).

85 PPA (2007).

86 Basilio, E. et al. (2005).

87 Catif (2012).

88 MICT (2016a).

89 MICT (2016b).

90 ATI (2016).

91 Basilio, E. et al. (2005).

92 Catif (2012).

93 Basilio, E. et al. (2005).

94 Catif (2012).

95 Basilio, E. et al. (2005).

96 MICT (2016b).

97 Lozano, C., Cuevas, A. (2016).

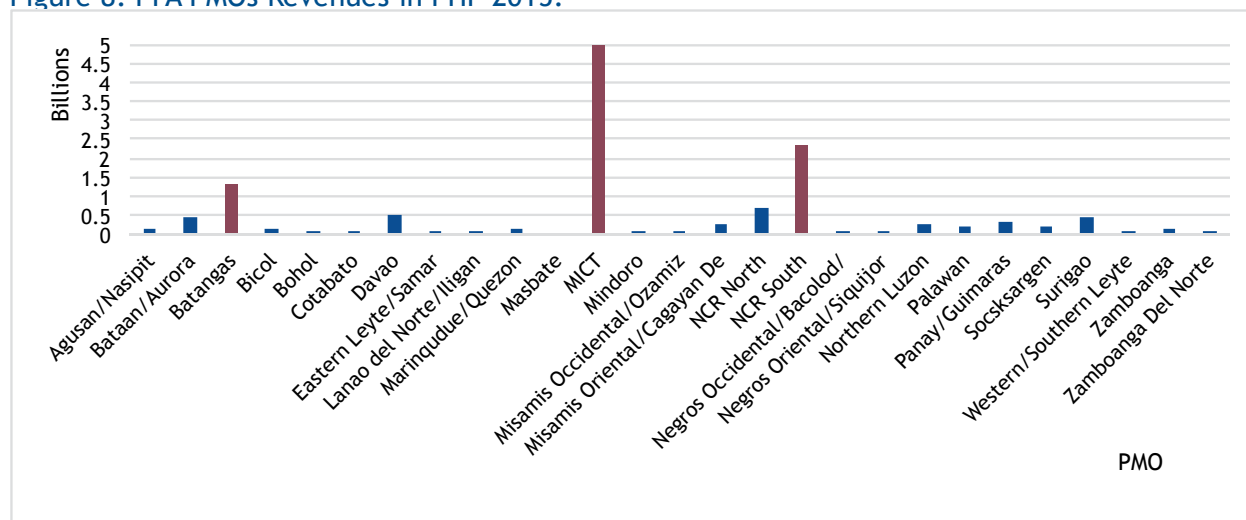
3.2.1 PPA Revenue

Although the PPA is a governmental organization, the authority is financially independent from the government. The PPA does not invest in private ports but obtains a share of port dues.⁹⁸ The revenue of the PPA comes from the following sections:

- 1) Port Dues
- 2) Berthing
- 3) Anchorage
- 4) Usage
- 5) Lay-Up
- 6) Wharfage - Import, Export, Domestic
- 7) Storage
- 8) Pilotage
- 9) Arrastre/Stevedoring
- 10) RORO fee
- 11) VTMS fee (Vessel Traffic Monitoring System)
- 12) Other Income/ Fees
- 13) Fixed/Variable Fees

In 2015, the PPA achieved a total revenue of approximately 13.19 billion PHP. Considering the revenue per PMO, the MICT achieved the highest revenue with 4.9 billion PHP. This sum corresponded to circa 37.84% of the total sum. MICT was followed - with a wide margin- by NCR South, which achieved a revenue of 2.4 billion PHP, representing approximately a share of 17.82%. The PMO Batangas' revenue was 1.3 billion PHP or approximately a share of 10.01%. The revenues of the remaining PMOs were all lower than 7 million PHP (Figure 8).⁹⁹

Figure 8: PPA PMOs Revenues in PHP 2015.



Source: Lozano, C., Cuevas, A. (2016).

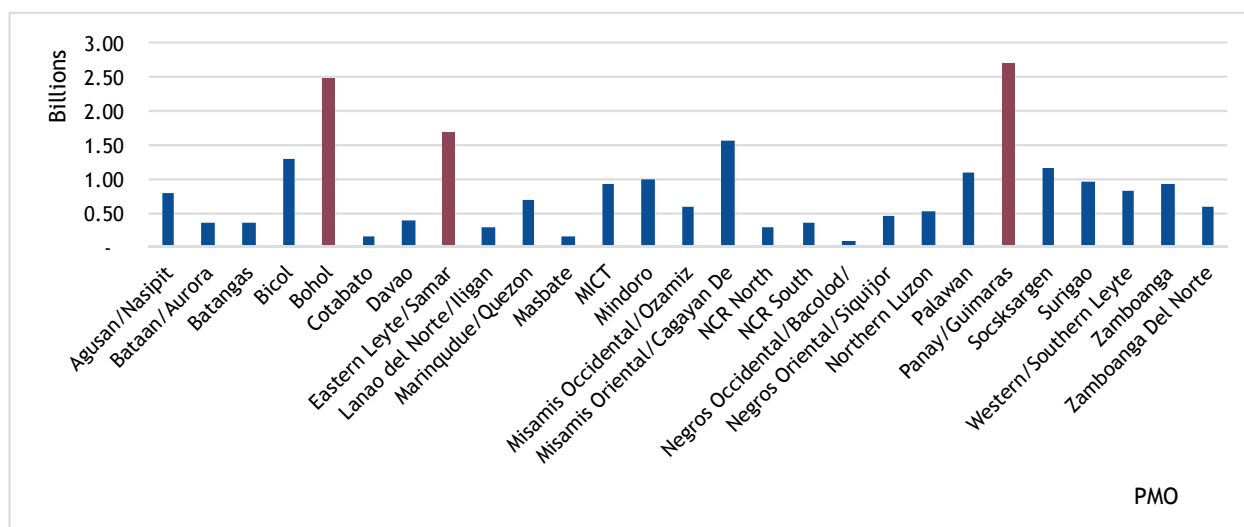
The revenues of the PPA are to be compared with the investments. In 2015, the total investments were 22.5 billion PHP. The investments, same with the revenues, showed significant differences among the different PMO. The highest investments of the PPA with a volume of 2.7 billion PHP were made in the PMO Panay/Guimaras, followed by the PMO Bohol (2.5 billion PHP). Likewise, the PPA invested a relatively high sum in the PMO Eastern Samar/Leyte with 1.8 billion PHP (Figure 9).¹⁰⁰

⁹⁸ Basilio, E. et al. (2005).

⁹⁹ Lozano, C., Cuevas, A. (2016).

¹⁰⁰ Lozano, C., Cuevas, A. (2016).

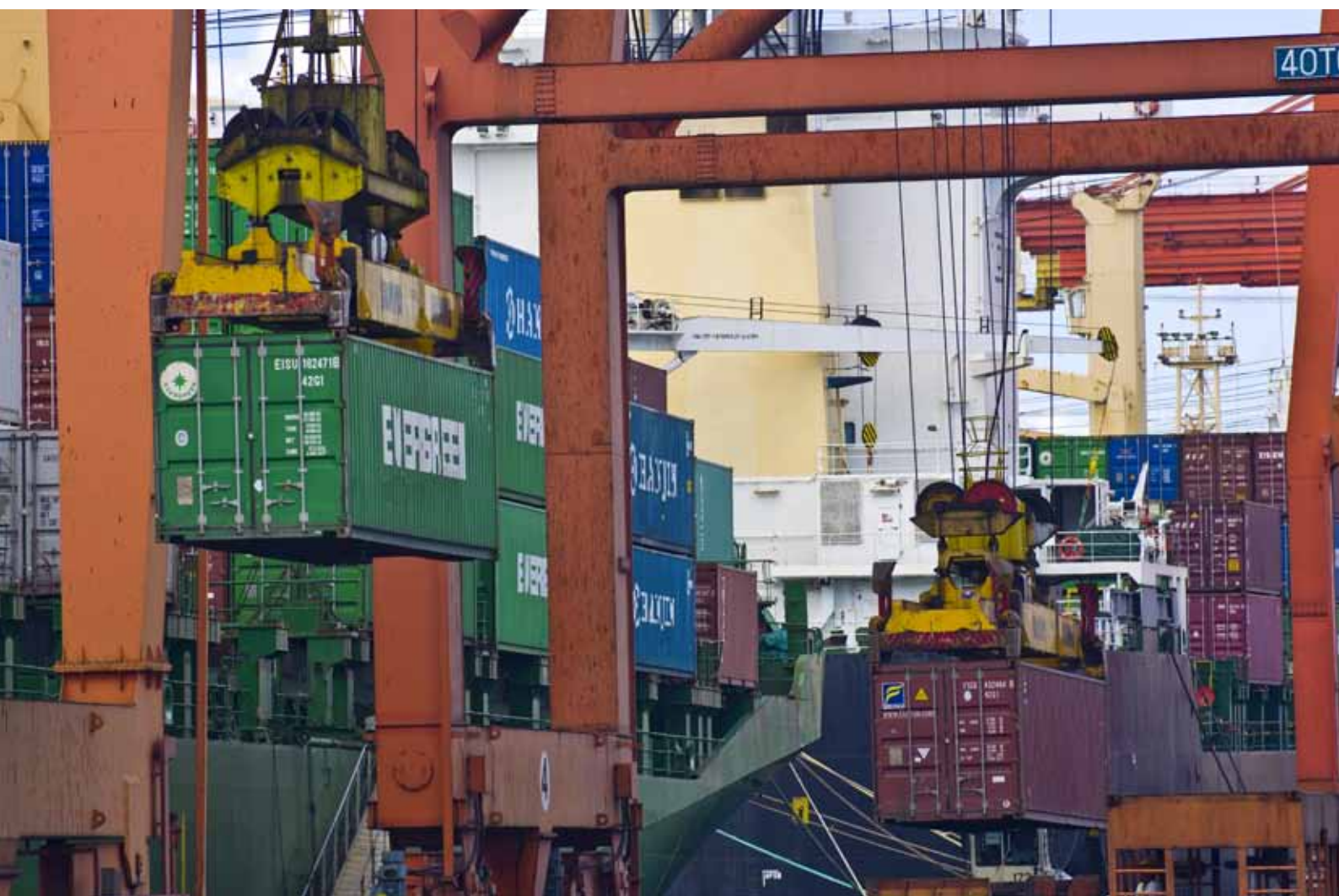
Figure 9: Investments per PMO in PHP 2015.



Source: Lozano, C., Cuevas, A. (2016).

3.2.2 Cargo volume

In 2015, the combined cargo volume including break-bulk and containerized cargo for the mentioned ports and the MICT amounted to 218.8 million Metric Tons (M.M.T). Considering the cargo volume per PMO, the highest volume of cargo combined was achieved by the PMO Surigao with 30.5 M.M.T. The volume corresponded to a share of 14% of the total volume. The major industry of the PMO Surigao is mining. Nickel Asia Corporation (NAC) is the Philippine's largest producer of lateritic nickel and has contributed mainly to that high volume of combined break-bulk and containerized cargo.

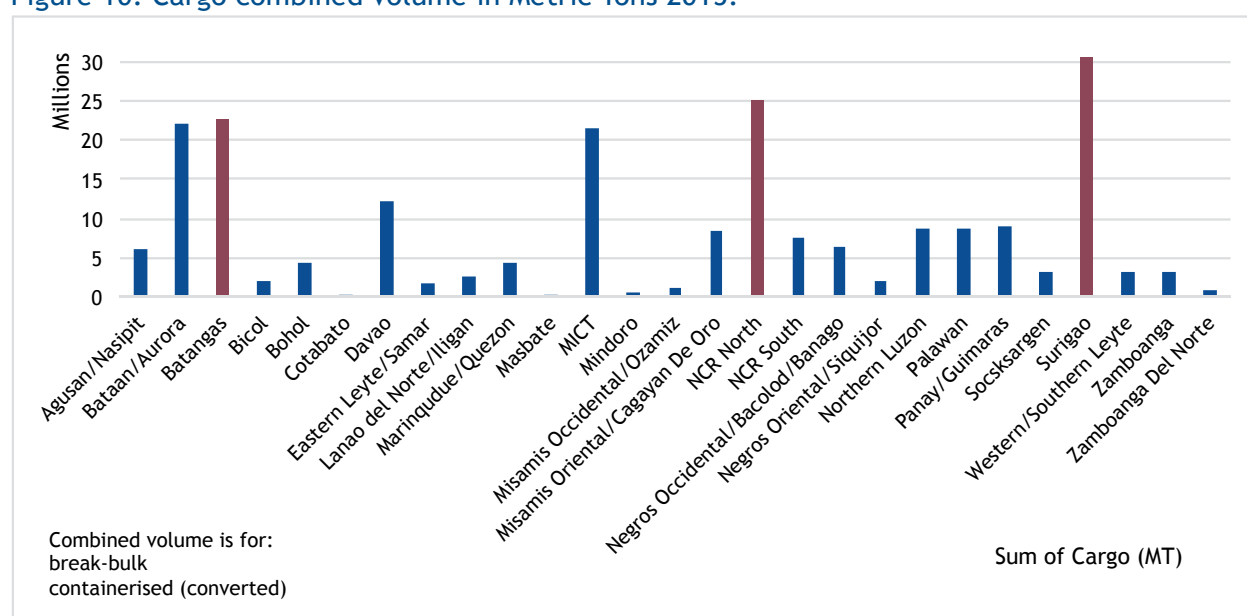


The PMO Surigao was followed by the PMO NCR North, which achieved a cargo combined volume of 25.0 M.M.T. This volume was a share of 11.4%. Under the supervision of the PMO North is the Harbor Center Port Terminal, Inc. (HCPTI), which is the most important private commercial port. HCPTI is handling domestic vessels shipping transporting containerized as well as non-containerized cargoes. Likewise, HCPTI is authorized in handling foreign vessels transporting non-containerized cargoes. The major industry of the PMO NCR North is milling and bulk.¹⁰¹

Figure 10 shows also that the PMO Batangas with a volume of 22.6 M.M.T, with a share of 10.3%, occupied the third place. Shipping, power and petroleum are considered as the major industries of the PMO Batangas. The JG Summit Petrochemical Corporation, the largest manufacturer of polyolefins in the Philippines, has an important role.

In the same year, high volumes were achieved by the PMO Bataan/Aurora and the PMO Davao. The major industries of the PMO Bataan/Aurora are power, petroleum and milling. One top private company supervised by the PMO Bataan/Aurora is Petron Corporation. As for PMO Davao, the major industries are coconut, petroleum, and shipping. The United Coconut Chemicals, Inc., has contributed mainly to the relatively high volume.¹⁰²

Figure 10: Cargo combined volume in Metric Tons 2015.



Source: Lozano, C., Cuevas, A. (2016).

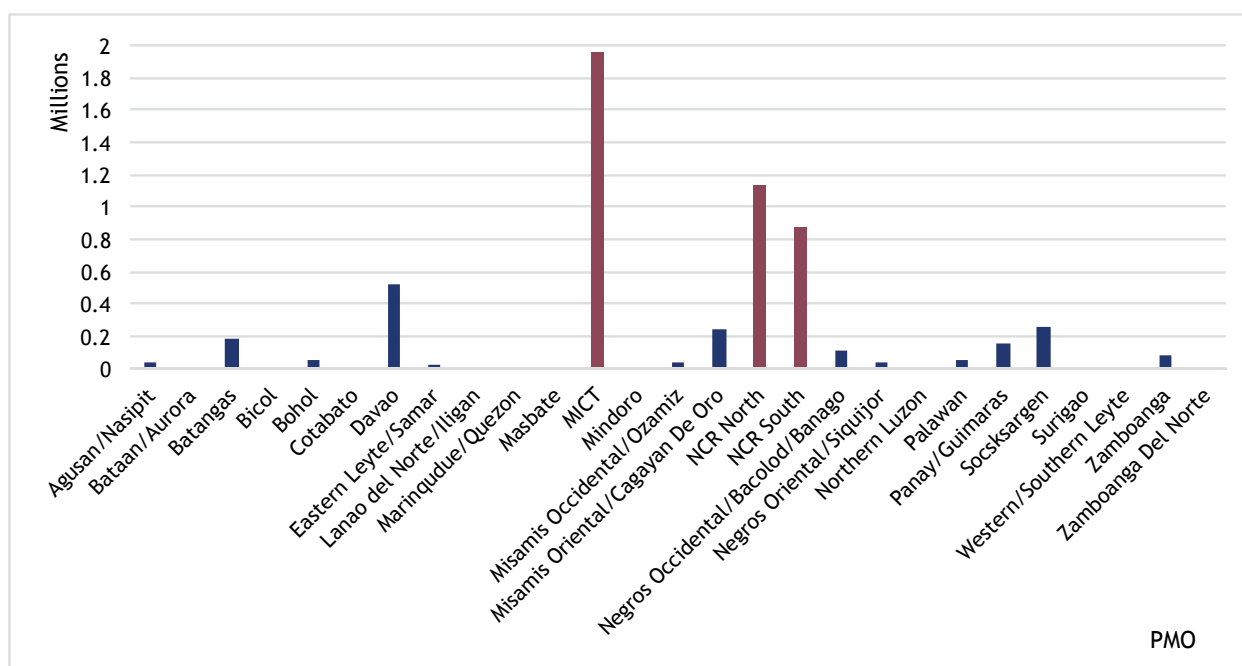
3.2.3 Containerized volume

The port of Manila plays a vital role in the economy since the majority of container traffic is handled there. In 2015, the total containerized volume was 5.9 million Twenty-foot Equivalent Unit (TEU). The highest volume of approximately 2.0 million TEU was handled by MICT, the most modern container port. This corresponded to 33.9% of the total containerized volume. Since ICTSI was contracted in June 1988 with the operation and management of MICT, its annual capacity has increased fivefold. The container handling fleet was expanded to make it the most modern container terminal in the Philippines. Further, the manual control system was changed to an integrated real-time IT Terminal control system. In terms of containerized volume, MICT was followed by North Harbor with 1.1 million TEU, representing a volume of 11.4%. The third place was taken by South Harbor with a volume of 876,422 TEU, representing 10.3% (Figure 11).

¹⁰¹ Lozano, C., Cuevas, A. (2016).

¹⁰² JG Summit Petrochemical Corporation (2016).

Figure 11: Containerized volume in TEU 2015.



Source: Lozano, C., Cuevas, A. (2016).

3.2.4 Philippine International Ports Volume 2015

Millions of tons of cargoes were transferred through ports all over the Philippines in 2015. A portion of this volume was serviced at private ports (ports that are operated by a private company, or ran by private companies). The remaining volume was handled by government ports (base ports, terminal ports and other government ports).¹⁰³ However, only a few ports in the Philippines contribute mainly to the international trade.

In terms of international trade, there are four vital ports in Luzon:

- 1) Subic Bay International Terminal Corporation (SBITC),
- 2) the Manila International Container Terminal (MICT),
- 3) the Asian Terminals, Inc. (ATI),
- 4) and the Batangas Container Terminal (BCT).¹⁰⁴

Whereas SBITC and MICT are operated by the ICTSI, ATI-SH and BCT are managed and developed by ATI. In the center of the Philippine archipelago, in the Visayan region, the Cebu International Port (CIP) is based. The port is under the supervision of the Cebu Port Authority (CPA) and is one of the major ports of the Philippines.¹⁰⁵ Located in Mindanao are the South Cotabato Integrated Port Services, Inc. (SCIPSI) and the Davao International Container Terminal (DICT). Equally important for international trade are the Davao Integrated Port Services & Stevedoring Corporation (DIPSSCOR) and the Mindanao International Container Terminal Services, Inc. (MICTSI). Except for DICT, these ports are operated by ICTSI. The following Figure 12 shows the capacity of these ports and their foreign volume in 2015.

¹⁰³ PPA (2005).

¹⁰⁴ Lozano, C., Cuevas, A. (2016).

¹⁰⁵ CPA (2016).

Figure 12: Ports Comparative.

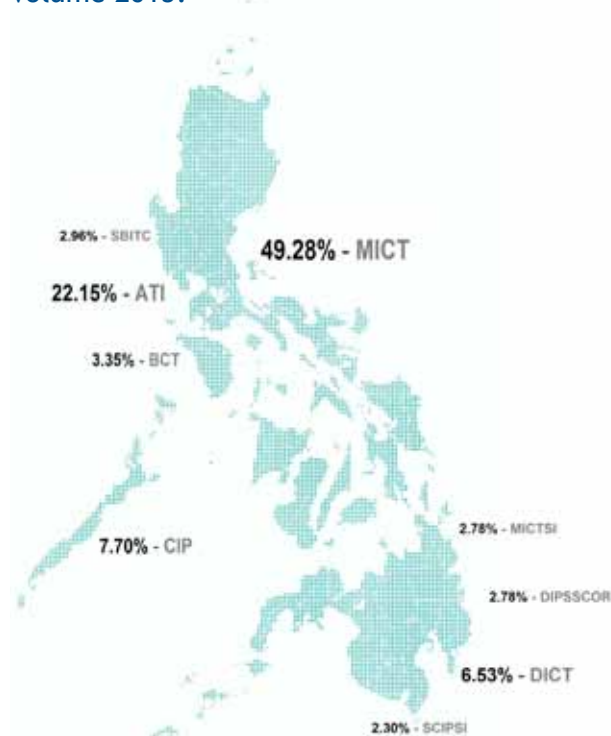
		Luzon				VISAYAS	MINDANAO			
		MICT	SBITCA	TI-SH	BCT	CIPS	CIPSIDI	CTD	IPSSCOR	MICTSI
Berth	No. of Berths ⁶		24		24		4*	25	*2	
	Berth Lengths ¹	700m	560m	975m45	0m	500m but only 300m can be accommodated	851m	250m	1,093m	300m
Draught	Alongside (MLLW)	14.5-16m	13m	12m	13m	8.5m	10m	15m	10.6m	13m
	Channel	13m	Deep Water > 20m	12m	27,4m	12.19m		15m	11.0m	
Crane	No. of Quay Cranes	1348		24		02		02		
	Outreach ³	5-50m	37m	35.5-42m	37m	38m		45m		37m
	Lift Height	32.3m32	.5	30m	30m31	m		37m		41m
Capacity	Annual	2.75M TEUs	600,000 TEUs	1.2M TEUs (Container Terminal) 1.0M MT (General Cargo)	300,000 TEUs	450,000 TEUs	275,000 TEUs	345,000 TEUs	594,116 TEUs	224,999 TEUs
	Daily	57,075 TEUs	16,500 TEUs	24,591 TEUs	9,518 TEUs	6,066 TEUs	2,250TEUs	6,800 TEUs	5,697TEUs	6,972 TEUs
2015 TEU Volume (Foreign)		1,953,349.00	117,475.00	877,995.50	132,957.75	305,021.00	90,991.00	258,852.00	116,904.75	100,172.00

*Containerd
** Vessels cranes

ICTSI Ports
ATI Ports
Cebu International Port
Davao Int. Container Terminal

Source: Lozano, C., Cuevas, A. (2016).

Figure 13: Philippine International Ports Volume 2015.



Source: Lozano, C., Cuevas, A. (2016).

disruptions of the entire supply chain, and hence negatively affects the competitiveness of the ports.¹⁰⁷

To address the surge of trucks and the congestion of the roads, ICTSI and ATI-SH implemented an electronic booking system for trucks called TABS.¹⁰⁸ Through TABS, queues at the ports are reduced since the trucks pick up and drop off cargo according to the booked slot schedule. In addition, the number of trucks during peak hours is reduced. The off-peak hours are utilized and the truck utilization can be maximized.¹⁰⁹

¹⁰⁶ Lozano, C., Cuevas, A. (2016).

¹⁰⁷ Schröder, K., Atty Cruz, M. (2016).

¹⁰⁸ ICTSI (2015a).

¹⁰⁹ 1-stop (2016).

In 2015, the MICT made up approximately 50% of the total foreign cargo volume. This is followed by the ATI-SH which contributes approximately 23% of the total volume. The CIP made up approximately 8.0%. Likewise important was the DICT which achieved approximately 6.5% of the total international cargo volume. Compared to the other ports, the MICTSI achieved the smallest part with approximately 2.78% (Figure 13).¹⁰⁶

3.3 Opportunities and Challenges

The operations of the international ports undergo continuous optimization processes. Additionally, the newest technologies and solutions are used. As a consequence, the international ports are highly competitive and up to international standards. However, the port operations are negatively impacted by the shortcomings of the road infrastructure. The existing lack of access roads to the ports in Manila is exacerbated by traffic congestions, as well as by imposed truck bans. This leads to

Moreover, with the aim of reducing the container traffic of the Manila road network, the MRAIL, Inc., the railway subsidiary of Manila Electric Co. (Meralco), in collaboration with ICTSI, announced in the middle of 2016 to revitalize old railways for the transport of cargo. This initially included the restoration of the route between Calamba and the port of Manila, whose use was discontinued in 2003. The investments are to cost a total of 10 billion PHP. A decrease between 200 and 600 Container trucks per day is expected.¹¹⁰

Furthermore, in March 2016, the Ro-Ro system was expanded by including Chassis Ro-Ro (Cha-Ro) to reduce the transport costs for cargoes. In contrast to the pure Ro-Ro modes, the container-mounted chassis is not connected to the prime mover. As a result the prime mover, an expensive equipment, does not need to travel with the chassis mounted container onto/from the Ro-Ro vessels anymore. The logistic transport costs are expected to drop by 15-20%.¹¹¹ In addition, the PPA announced in the middle of 2016 that they will expand the operations of RoRo facilities to improve the inter-island connectivity. This has huge potential to ensure the competitiveness of the port sector.¹¹²

Additionally, the government has started to focus more on the elimination of the road infrastructure shortcomings. For 2017 the budget department announced an allocation of 860 billion PHP for infrastructure. Of these, around 355 billion PHP will be used to fix road networks, railways as well as systems of the seaport and airport. In addition, the government plans to roll out more Public-Private-Partnership (PPP) infrastructure projects.¹¹³ In line with the expected higher investments in the infrastructure and the planned infrastructure projects the construction sector is expected to further rise. This offers market-entry potentials for companies from the building trade as the demand for high-quality building equipment, port machinery and measuring tools will further increase.

Besides the shortcomings of the road infrastructure, the port performance is burdened through outdated processes of the BOC. The BOC is identified as one of the entities that pose challenges for the industry, specifically, on their changes in directives.¹¹⁴ To enable efficient port operations and services the administrative port and custom processes have to be automated and simplified. Moreover, the processes conducted by the BOC regarding overstaying delivery have to be reconsidered to avoid unnecessary complications and costs.

The growing international container volume will inevitably lead to an increasing importance of Subic Port, since Manila's capacities will reach its limit at some point. A sudden shift of the international container traffic from Manila to Subic, however, would not bring any improvement due to current limited capacities to handle such volumes. Long-term infrastructural improvement through decentralization is needed to capacitate alternative port systems. Entire regions or areas should be upgraded in order to improve locational factors: Better accessibility with road networks, affordable electricity, schools and training opportunities shall attract more manufacturing industries and labor. Economic zones from PEZA, for example, can support such developments using beneficial incentives for investors.¹¹⁵

To handle the increase of imports and exports, the government counts on more private port operators and more private investments. One player in this context is the PPA, which promotes the privatization of ports managed by the state.¹¹⁶ The PPA offers various investment opportunities like the Build-Operate-and-Transfer (BOT) scheme, a joint venture or the lease of port real estate properties.¹¹⁷

110 GTAI (2016).

111 ICTSI (2015b).

112 Mira R. (2015).

113 Philstar (2016a).

114 Interview with Cuevas, A., ICTSI (October 2016).

115 Interview with Lozano, C., Cuevas, A., ICTSI (October 2016).

116 GTAI (2015).

117 PPA (2016).

Additionally, the port operators ICTSI and ATI have started to invest in the expansion of their port capacity. In 2012, ICTSI opened the MICT Terminal's Berth 6, increasing the terminal's capacity to 2.5 million TEUs.¹¹⁸ Further, with the completion of Berth 7, MICT's capacity was increased to 2.75 million TEUs. The construction of two further berths is planned. ATI is planning to extend their port capacity until 2016. In August 2014, the terminal operator announced to invest approximately 6 billion PHP in the capacity extension of the Manila South Port and the port in Batangas, wherein the major part will be directed to the Manila South Harbor.¹¹⁹

Aside from ICTSI and ATI, the SBMA has announced their expansion plans. By investing 10 - 11 billion PHP, the existing handling capacity shall grow from 600,000 TEU to 1.2 M TEU in the next two to three years.¹²⁰ Furthermore, in 2016, in the province of Bataan, a new dry bulk terminal, the Seasia Nectar Port Services, Inc., has opened. This enables companies to transport their products directly to Manila as well as outside the country. As a result, the Freeport Area of Bataan (FAB) will be more attractive for investors.¹²¹

However, most provincial ports do not have the required infrastructure to handle the increasing volume. The infrastructure of these ports has to be modernized and extended. In this context, the modernization of the Davao Sasa port has been launched as the first PPP-Project.¹²² Under the Aquino administration the winning private partner will finance the construction and modernization of the existing port. The winner will also be awarded to operate and maintain the port for 30 years.¹²³ As the project was rolled out, the estimated costs have been 19 billion PHP. However, according to Transportation Undersecretary, Judan, the modernization of the Davao Sasa Port was initially estimated to cost only 4 billion PHP. Due to the bigger value, the scope of the deal was extended. The PPA is reevaluating the project to double check if a realization on the initial plan with estimated costs of 4 billion PHP is possible. With the implementation of the project, more efficient operations can be expected.¹²⁴

Due to the increasing cargo volume, the demand of efficient port operations and services will rise. This development will not only offer plenty of business opportunities for the mentioned construction sector, but also for smart logistics companies that provide transport solutions and efficient transport management systems.

118 ICTSI (2013).

119 GTAI (2014).

120 GTAI (2015).

121 Manila Bulletin (2016a).

122 GTAI (2015).

123 Business Inquirer (2016).

124 Philstar (2016b).





4 Liner Services

International Cargo Transport Operations and Affiliated Services

4

Liner Services

International Cargo Transport Operations and Affiliated Services

This chapter discusses liner shipping, which is defined as the service of transporting cargo between predetermined ports at regular routes on a fixed schedule, and its affiliated services. Due to the improved development of the domestic and international shipping, the overall growth performance of 6.1% in 2014 exceeded the growth of 2013 and was nearly the same as the GDP. This was due to an increase of the import-export cargo throughput by 6.31% from 2013 to 2014.¹²⁵

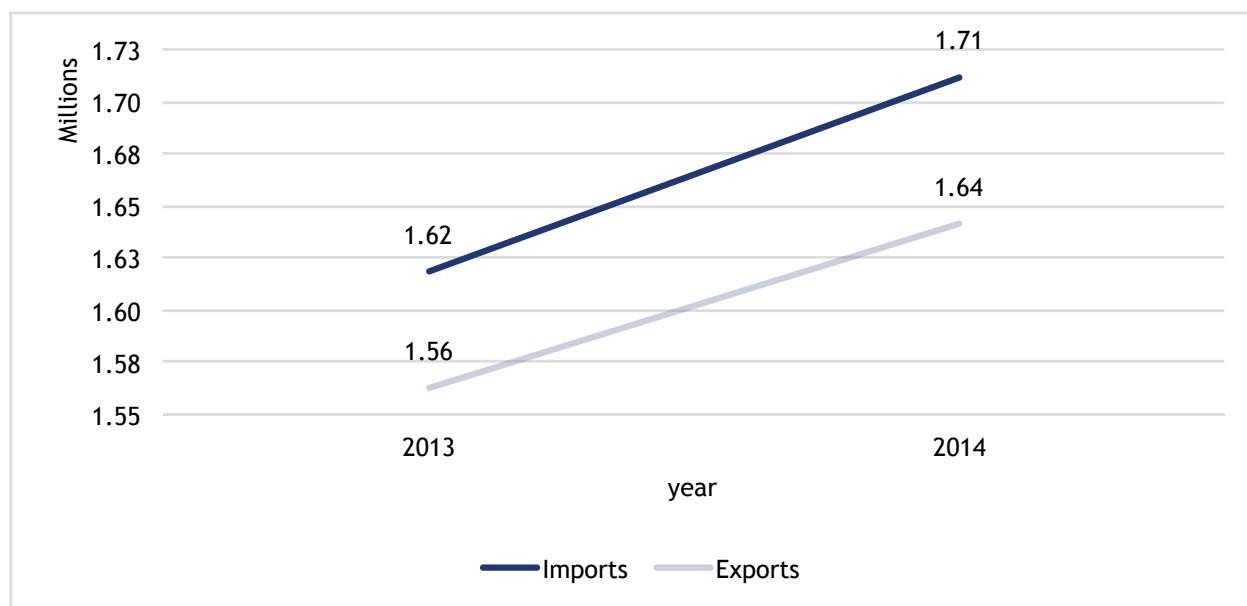
4.1 Container Traffic

From 2013 to 2014, the international container traffic increased significantly by 286,699 TEU or equivalent to 5.47%. In this period, the imports grew by 5.78% from 1.61 million TEU in 2013 to 1.7 million TEU in 2014. Exports on the other hand, both laden and empty, improved by 5.05% from 1.5 million TEU to 1.6 million TEU (Figure 14).



¹²⁵ AISL, Schröder, K., Atty Cruz, M. (2016).

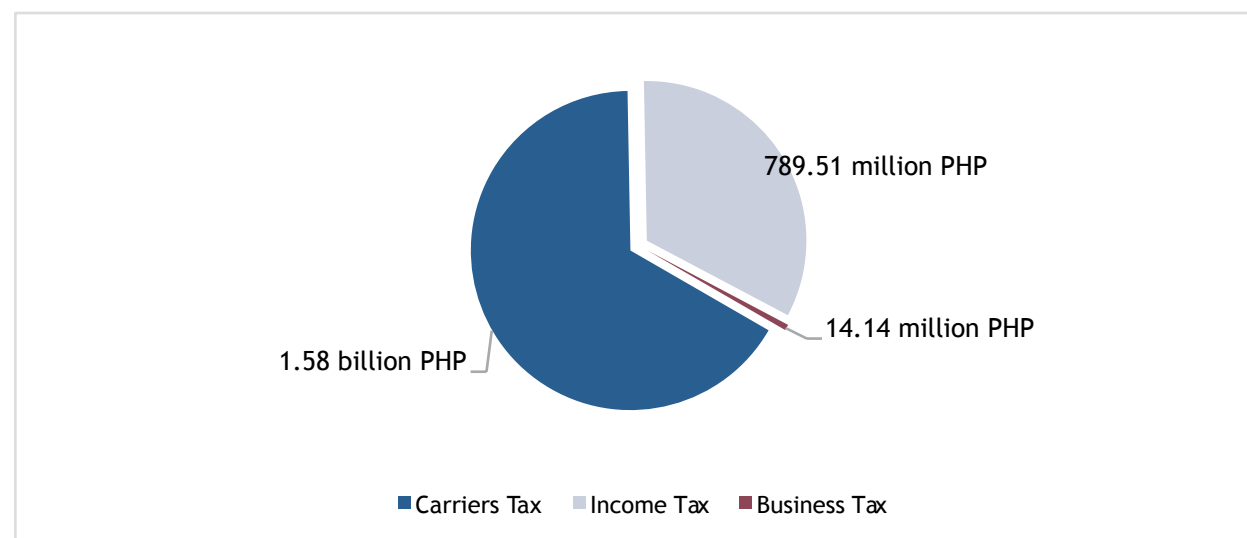
Figure 14: International Container Traffic in TEU (2013-2014).



Source: AISL, Schröder, K., Atty Cruz, M. (2016).

In 2014, foreign carriers carrying containerized export cargo from the Philippines paid a total of 2.4 billion PHP in taxes to the national and local government, in which the Carrier Tax constituted the biggest source of taxes (approx. 66.4%), followed by the Income Tax (approx. 33%) and the Business Tax (approx. 0.6%) (Figure 15).

Figure 15: Taxes 2014: Containerized export cargo.



Source: AISL, Schröder, K., Atty Cruz, M. (2016).

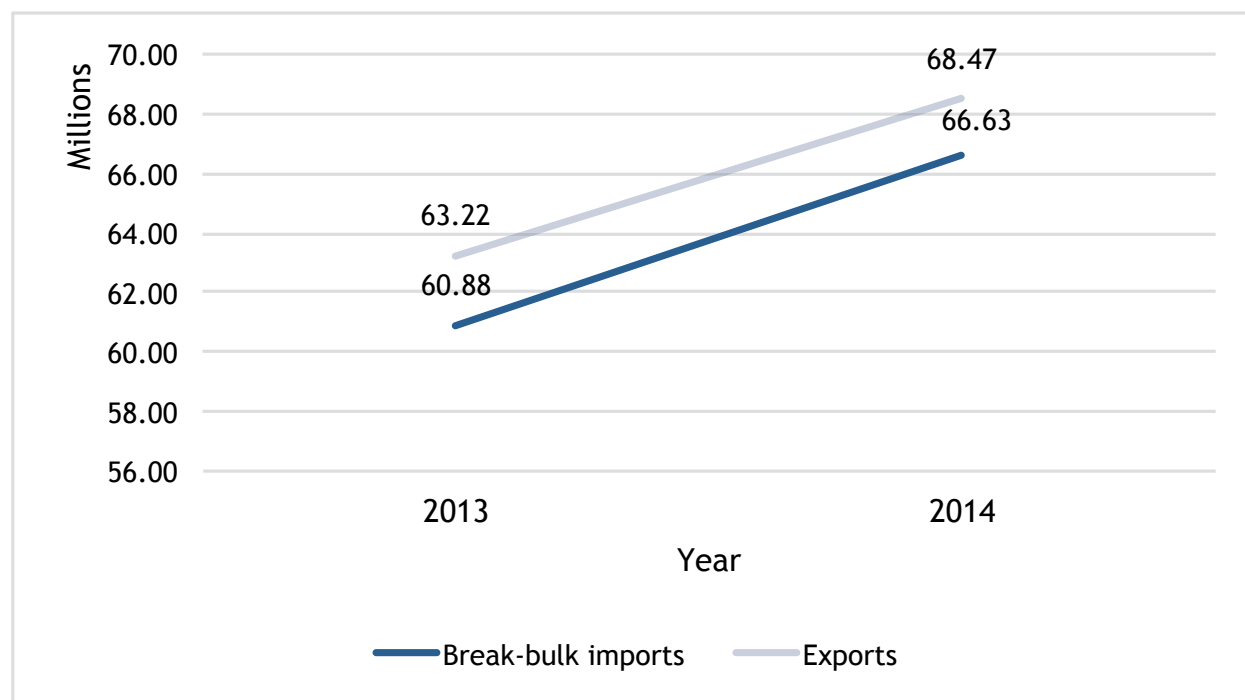
4.2 Break-Bulk

The break-bulk traffic likewise reported a sharp growth from 2013 to 2014. Both imports and exports improved. The total break-bulk imports recorded an increase of 9.45% from approximately 60.9 million Metric Tons (M.M.T)¹²⁶ in 2013 to around 66.6 M.M.T in 2014. Exports, on the other hand, grew by 8.30% (Figure 16).¹²⁷

¹²⁶ Metric Tons: unit of mass equal to 1,000 kilograms.

¹²⁷ AISL, Schröder, K., Atty Cruz, M. (2016).

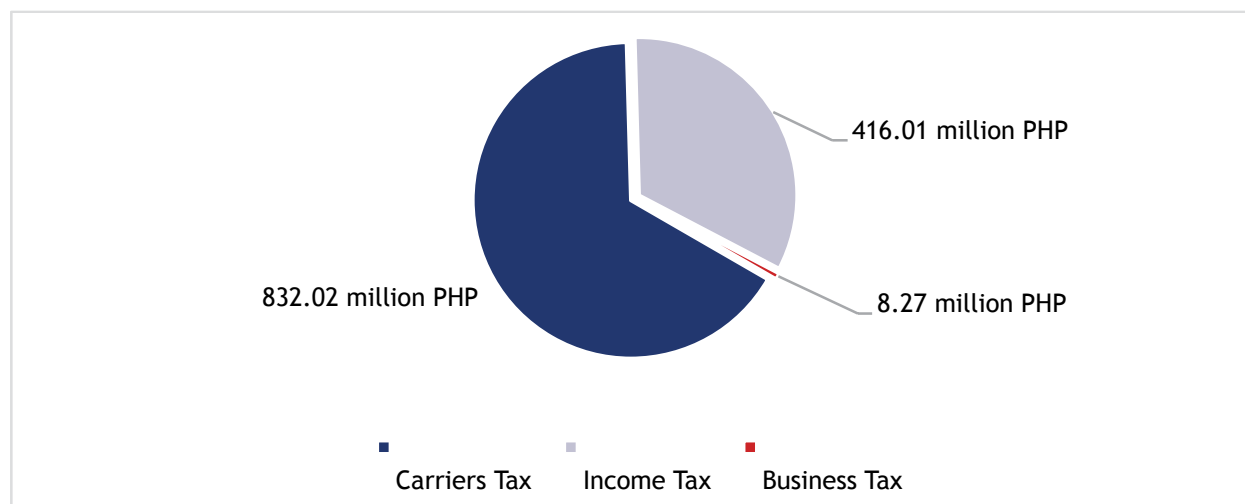
Figure 16: Break-bulk exports and imports (2013-2014).



Source: AISL, Schröder, K., Atty Cruz, M. (2016).

In 2014, break-bulk carriers carrying exports from the Philippines paid a total of 1.3 billion PHP in taxes to the national and local government. Carrier Tax amounted to 832 million PHP, followed by Income Tax with 416 million PHP, and Business Tax with 8.3 million PHP (Figure 17).¹²⁸

Figure 17: Taxes 2014: break-bulk export.



Source: AISL, Schröder, K., Atty Cruz, M. (2016).

4.3 Affiliated industry partners and services

In liner operations, there are affiliated activities that involves the transport of goods from the liner vessels until the delivery of freight to the regional ports and vice versa. This also applies to tug boats, which push and pull vessels into the harbor or rivers.

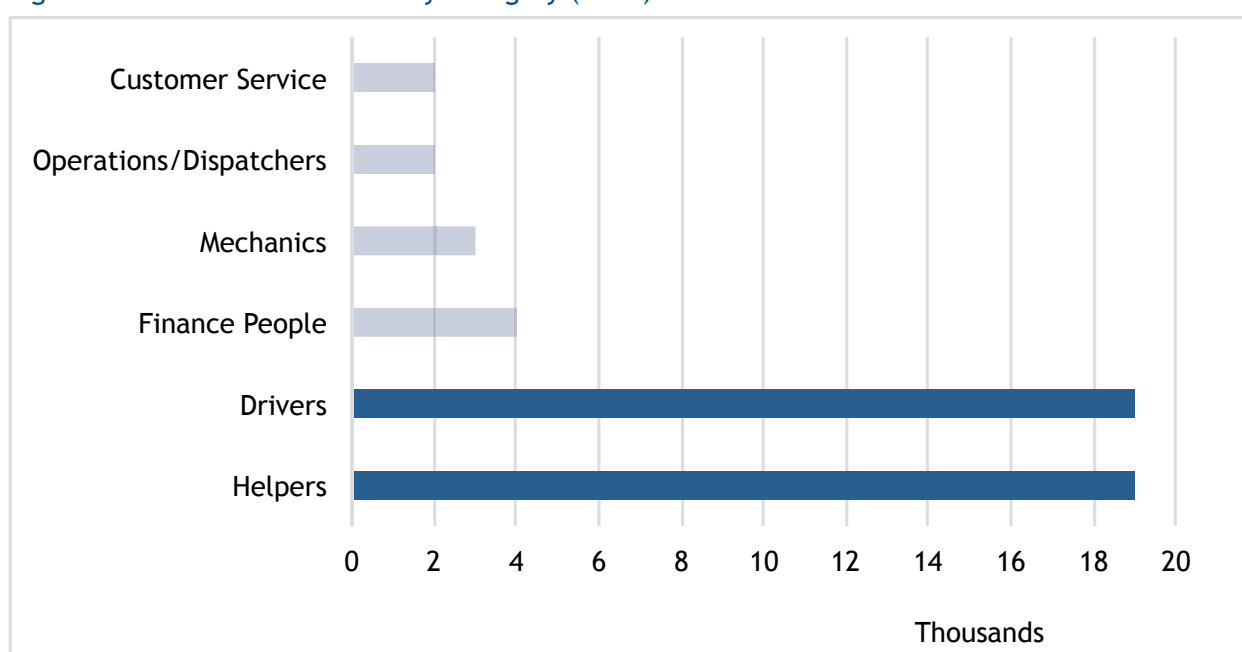
¹²⁸ AISL, Schröder, K., Atty Cruz, M. (2016).

4.3.1 The trucking sector

Associated with the increasing demand of international and domestic container traffic, the Philippine trucking industry continues to increase its number of trucks and strives to improve their equipment. In 2014, the trucking industry consisted of approximately 1000 trucking/logistics companies, which had an inventory of around 22,000 trucks and over 40,000 chassis and trailers. Most of the truck operators that are part of a truck organization or association worked before as shipping company executives, freight forwarders, customs brokers, CY operators, or in chassis-leasing companies, while the minority operated previously in small enterprises or sole-proprietorship businesses. Usually, truck operators prefer to have regular customers with whom they sign long-term service contracts.¹²⁹

In 2014, the trucking industry employed approximately 49,000 workers. The vast majority of them worked as drivers and helpers. The minority was employed in operations/dispatching and in customer service (Figure 18).

Figure 18: Number of workers by category (2014).



Source: AISL, Schröder, K., Atty Cruz, M. (2016).

Considering the annual income per work category and the corresponding number of workers, the drivers and helpers earned the highest share of income with approximately 4.5 billion PHP and 2.9 billion PHP, respectively. Due to the relatively small number of workers in the sectors of Customer Service and Operations/Dispatchers, the estimated annual income was relatively low with 528.0 M PHP in both cases.

Based on the annual income of the subgroups, the total annual income amounted to 10.6 billion PHP in 2014. With a tax rate of 15%, the workers in the trucking industry servicing both international and domestic container traffic paid a total income tax of 1.6 billion PHP.¹³⁰

4.3.2 Trailer Trucks

Trailer trucks are vehicles consisting of both a tractor and a trailer. In 2014, there were around 18,000 trailer trucks, earning an average daily revenue of 14,500 PHP or an average annual revenue of 81.4 billion PHP. In the same year, operators of trailer trucks paid a total of approximately 4.5 billion PHP in taxes to the government.

¹²⁹ Schröder, K., Atty Cruz, M. (2016).

¹³⁰ AISL, Schröder, K., Atty Cruz, M. (2016).



4.3.3 Tug Boats

Another affiliated industry that caters to international container and break-bulk vessels is the operations of tug boats. These are small and powerful boats which pull and push ships into harbors or rivers.¹³¹ In 2014, a total of 78 tug boats assisted 11,587 liner and tramp vessels throughout the Philippines and employed 758 people. In that year, tug boat operators paid income tax in the total amount of 123 million PHP.¹³²

4.4 Opportunities and challenges

Same with port operations, one main challenge that the international shipping industry and the affiliated trucking sector has to face is the current state of the road infrastructure. From the beginning of the year 2000, the economy of Metro Manila rose by almost 10% annually and its population is continually booming. The day time population then was around 13 million and it grew to 16 million a decade later. Despite this growth, spending in infrastructure was marginal. According to the World Bank, it was less than 1% of the GDP annually. Hence, the major roads are heavily overloaded. The worsened congestion results in long commute times and high productivity losses.¹³³

The imposed truck ban in the City of Manila, which was supposed to ease the traffic situation in Metro Manila, banned trucks from 5-10 AM and from 5-9 PM. Trucks transporting empty containers were even prohibited to use the city streets from 5 AM to 9 PM.¹³⁴ Due to the limited transfer of containers during the day, the productivity of trucks decreased to one to two trips per day. To compensate these losses, trucking operators increased the trucking rates significantly. Contrary to its aim, the congestion problem worsened during the truck ban, as trucks used less efficient routes.

¹³¹ Merriam Webster (2016).

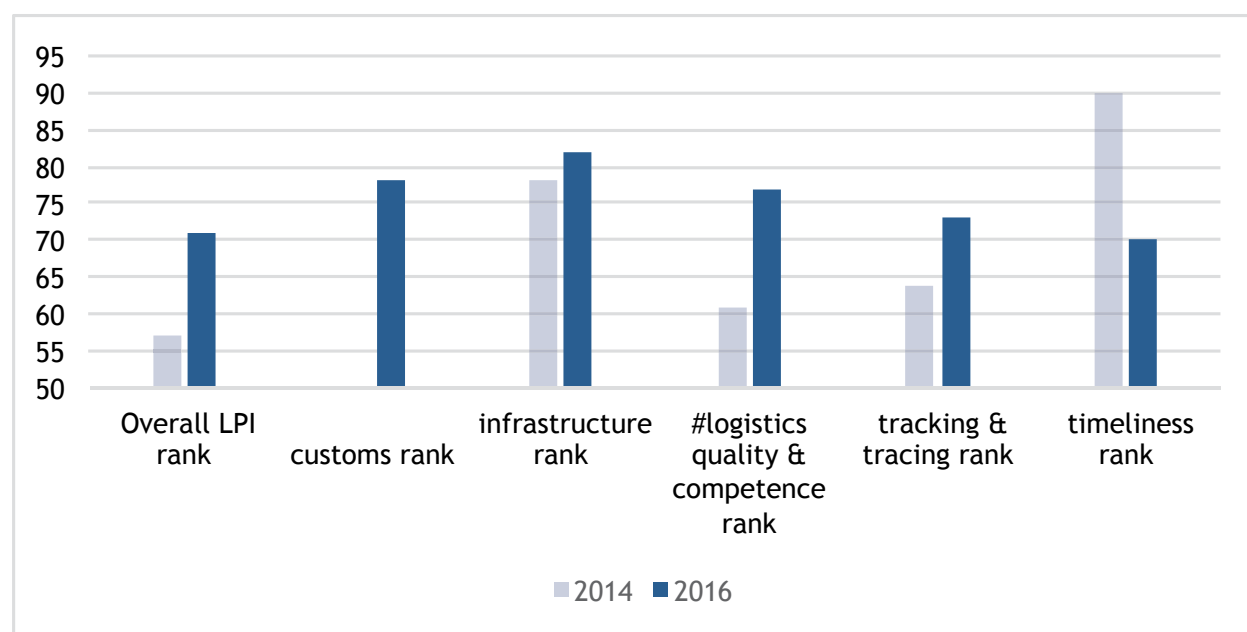
¹³² AISL, Schröder, K., Atty Cruz, M. (2016).

¹³³ World Bank Data (2015).

¹³⁴ World Bank Data (2015).

The Logistics Performance Index (LPI) established by the World Bank to measure and compare the logistics performance of 160 countries demonstrates the comparably poor logistic performance of the Philippines as well as its development. The LPI is a benchmark tool that includes key criteria of logistics performance. From 2014 to 2016, the ranking of the Philippines slipped from 57th to 71st.¹³⁵ Except for timeliness of shipments, the Philippines' score dropped in all criteria. In terms of customs services, the Philippines plunged from 31st to 78th place. Considering the quality of trade- and transport-related infrastructure, the Philippines fell from 78th to 82nd. The country's ranking in track and trace abilities dropped from 64th to 73rd and in the logistics quality and competence, it declined from 61st to 77th. The negative positioning of the Philippines as well as the deterioration of the LPI in the last two years emphasize the pressing need for an improvement in infrastructure (Figure 19).¹³⁶

Figure 19: LPI Ranking Philippines.



Source: World Bank (2016).

However, according to Norman Adriano, General Secretary of the Supply Chain Management Association of the Philippines (SCMAP) and Pepito Dino, Vice President for External Affairs of the Confederation of Truckers Association of the Philippines (CTAP), both the logistic sector and the trucking industry are expected to improve in 2016 compared to the previous years. The reasons for this are the continued decline of fuel prices and the improvement of the country's economy.¹³⁷ Furthermore, a higher demand for trucking services could be expected due the constant rise of imports and exports. The latest evaluations of the laden container volume show that the import volume from January to July 2016 was around 1.2 million TEU. Compared to the previous year this equals an increase of approximately 14.8%. The laden export volume from the beginning of 2016 to July 2016 was around 469,506, representing an increase of 1.45% from 2015.¹³⁸

To address the concerns of the infrastructure, the National Economic and Development Authority (NEDA) accepted the reinstitution of a Three Year Rolling Infrastructure Program (TRIP) in the National Expenditure Plan (NEP) in October 2014. This program includes the fostering of the best possible use of public resources for the infrastructure development by assuring the fund

¹³⁵ World Bank (2016).

¹³⁶ Philstar (2016c).

¹³⁷ PortCalls (2016a).

¹³⁸ Data provided by AISL (2016).

allocation for well-developed and readily-implementable projects for three years. TRIP should ensure that programs which already have been launched receive funds from the government. Hence, TRIP should guarantee the connection between the governmental programming and the budgeting functions. The program is a version of the Comprehensive and Integrated Infrastructure Program (CIIP), which comprises all governmental infrastructure programs. However, in contrast to CIIP, TRIP concentrates on urgent infrastructural issues that have to be undertaken in a period of three years. TRIP can be considered as a step into the right direction, by addressing shortcomings of the infrastructure and including elapsed projects.¹³⁹

Furthermore, as mentioned in the previous chapter, the new administration has promised higher infrastructure expenditure. The public infrastructure spending from 2017 to 2022 will be 7% of the Philippines' GDP. In addition, NEDA is planning to tender in 17 PPP-Plans in the same year, wherein projects of the transport infrastructure are at the forefront.¹⁴⁰

Aside from the inadequate infrastructure, the competitiveness of the international shipping industry is affected by the current tax situation. According to the international shipping community, the tax environment is too harsh and not in line with the World Trade Organization (WTO) principle on non-discrimination.¹⁴¹ In 2013, the Philippine government passed Republic Act. No. 10378, "an act recognizing the reciprocity among nations as basis for the grant of income tax exemption to international carriers"¹⁴², excluding international carriers from paying the 3% common carriers tax imposed on passengers but regrettably not on cargo, as well as from the 12% VAT for transporting passengers. Republic Act. No. 10378 was passed to strengthen the tourism industry by maintaining flight and shipping operations. However, these benefits only apply to passengers of international air and sea carriers. For cargoes on international carrier, the 2.5% Gross Philippine Billing Tax and 3% Common Carrier Tax are still applicable.¹⁴³ Hence, the Philippines is one of the very few countries, imposing the common carriers tax. While foreign vessels are only subjected to 3% common carrier tax, domestic shipping lines have to pay corporate income taxes and 12% VAT on fuel and generator. Consequently, foreign ships enjoy benefits which are not applicable for domestic vessels.¹⁴⁴ In line with this, a lifting of the cabotage would bear the danger that domestic shipping companies may prefer to register with other countries as this would exempt them from paying income taxes on fuel imposed on domestic vessels. To create a level playing field for foreign and local vessels the current tax structure should be reviewed. More precisely, the taxes for transport contractors and common carriers of cargoes need to be revised.¹⁴⁵

Many sea carriers are troubled with the unnecessary costs of doing business, especially in areas where processes are done manually. The BOC, for example, requires that the submission of cargo manifest has to be done electronically and in hard copies.¹⁴⁶ Furthermore, some outdated customs procedures are still being used by customs personnel which could result in corruption.¹⁴⁷ To address the operational processes, there is a need to conduct a faster processing of the BOC operations. Further, manual processes need to be removed to avoid additional costs. In this context, it is inevitable that actions enhancing the use of digital and information technology in customs offices nationwide should be further developed.¹⁴⁸

139 GOV (2016c).

140 GTAI (2016).

141 AISL, Schröder, K., Atty Cruz, M. (2016).

142 GOV (2013).

143 PortCalls (2013).

144 DTI (2016).

145 DTI (2016).

146 PortCalls (2016b).

147 Philippine Canadian Inquirer (2015).

148 DTI (2016), AISL, Schröder, K., Atty Cruz, M. (2016).



5 Shipbuilding, Shipyards and Engineering

5

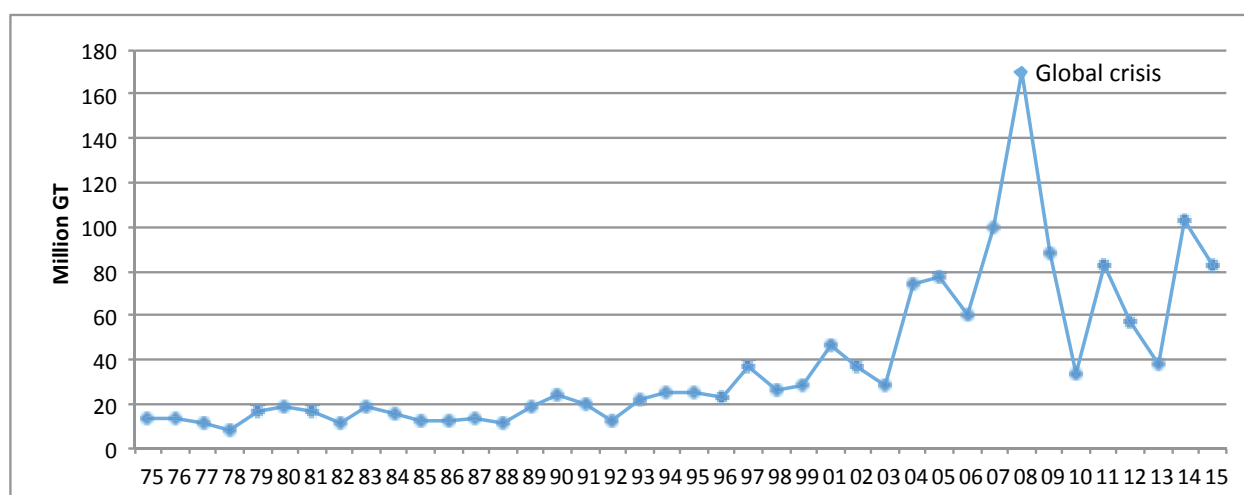
Shipbuilding, Shipyards and Engineering

The Shipbuilding and Ship Repair (SBSR) industry is responsible for the construction and maintenance of watercrafts. Shipbuilding covers the process chain from the construction to the outfitting to the launching of maritime vessels while the ship repair industry targets already existing ships with services such as restoration, upgrading, conversion and reconditioning.

5.1 Global situation

The global shipping and shipbuilding industry was booming in the last decades due to growing intercontinental trade as part of globalization. However, this was disrupted with the onset of the global economic and financial crisis from 2008 and as a result, volume of new ship orders dwindled from 169.6 million gross tonnages (GT) in 2008 to a low of 33.6 million in 2010. The consequences are the large excess of supplies and significant spare capacities resulting in a price deterioration which, in turn, puts pressure on the shipping and shipbuilding companies in Asia. On a global scale, new orders decreased from 103.2 million GT in 2013 to 82.6 million GT in 2014.¹⁴⁹

Figure 20: World new ship orders in terms of million GT from 1975-2014.



Source: SAJ (2015).

149 Capt. Lehmann, R. (2016).



Due to the declining number of orders and eroding profit margins, the maritime technology industry is reducing capacities. A country that illustrates this point is Japan, where the number of workers at the shipyards dropped from 54,000 to 44,000 between 2009 and 2014.¹⁵⁰

This imbalance of supply and demand was tackled at the 2014 meeting of the annual shipbuilding summit “JECKU”, where the executives from the major shipbuilding companies from Japan, Europe, China, South Korea and the US came together in Paris on the 6th of November. In his speech, Chairman Dave Iwamoto called for a wise planning of capacity building to avoid an exacerbation of excess supply. He also advises that investments should be used to improve the quality of shipbuilding instead of expanding the quantity. Additionally, he posits that the innovation and development of new technologies, which focus on the improvement of energy efficiency of vessels, would stimulate the demand for ships.

Studies support this by hypothesizing that shipyards which can adapt to market trends and differentiate their quality and product mix have a higher chance to recover from the crisis. However, the demand for traditional orders such as dry bulk carriers have crashed to the lowest level in the past 20 years.¹⁵¹

5.2 Situation in the Philippines

Being an archipelagic country, the maritime industry is traditionally significant for the Philippines. The shipbuilding and ship repair sector in the country is crucial as it complements the maritime transport/shipping sector through its capacity and capability for repairs and dry docking to both international and domestic ships.

In 2010, the Philippines became the fourth largest shipbuilding nation in terms of new building completion volume, after China, South Korea and Japan. This development can be traced to the increased construction volume of shipyards established in the Philippines. Factors such as cheap labor costs and the favorable location in the Western Pacific Ocean attracted many foreign companies to transfer their shipbuilding resources locally through establishing shipyards and construct world-class vessels for export to global markets. The three major companies present in the country are Japan’s Tsuneishi with a yard in Cebu, South Korea’s Hanjin Heavy Industries and Construction in Subic, and Singapore’s Keppel in Subic and Batangas. The ships built in the

¹⁵⁰ Capt. Lehmann, R. (2016).

¹⁵¹ Clarkson (2015).

Philippines are predominantly for large tonnage capacities like bulk carriers, container ships and passenger ferries.

The SBSR industry has had a long presence in the Philippines, but it focuses primarily on small ships and ‘bancas’ for the domestic fleet. Only 116 out of 557 licensed entities operate their ship building and repair using a shipyard, while the other 441 entities are afloat ship repairers or boat builders. Most of the 116 shipyards have limited capacity and thus, only ten could be used for notable SBSR service in a bigger scale and 15 for medium-sized ships. Tsuneishi Heavy Industries, Inc. and FBMA Marine Inc. are the main companies that supply the most for the export market.

Through the establishment of foreign shipbuilders in the Philippines, the country’s shipbuilding industry commenced business for the international market and today, shipyards produce more output for export than for domestic use. Most productions are mainly large tonnage capacities like bulk carriers, containerships and big passenger ferries. By 2009, the generated export volume accounted for 98% of the total turnover and was expected to grow even more. The export turnover is predominantly attributed to the few foreign owned shipyards as shown in Table 2 below.

Table 2: Major ship building projects in the Philippines

	Hanjin	Keppel	Tsuneishi	Herma
Logo				
Capacity	18 Vessels/year 2,489,700 DWT	8 Vessels and 16 tugboats/year (up to 480,000 DWT per facility)	Can build up to 250,000 DWT vessel	6 vessels/year
Location	Subic	Batangas	Cebu	Bataan
Project cost	79.6 billion PHP	1.5 billion PHP	12 billion PHP	215 billion PHP
Employees	19,750	1,520	8,800	290

Source: GOV (2016c).

According to Meneleo G. Carlos III, Chairman of the Shipyard Association of the Philippines, the shipbuilding industry employed 46,000 workers and paid in total \$500 million USD in tax to the Philippine government in 2015. As of that date, the cumulative investments in the Philippine shipbuilding industry accounted for \$2.4 billion USD.

5.3 Opportunities and Challenges

A large part of the ship yards serving the local market face pressure from the customer side, the ship owners, who have high bargaining power. The ship owners can push them to accept very low prices since the survival of the ship yards is often dependent on a successful business deal, and the owners could award the contract to another yard. They agree on prices which make it impossible for the ship yards to cover the cost of complying with standards regarding Health, Safety and Environment (HSE). As a result they see no other alternative than to carry out their operations in a substandard environment. The poor enforcement of standards by regulatory authorities makes the violation of the standards and irregular practices common within the industry possible. Therefore, it is even more difficult for the SBSR sector to move forward, while the environment and the health of the workers suffer from the low standards.¹⁵²

¹⁵² Capt. Lehmann, R. (2016).

Another set of issues of many shipyards is poor management, lacking appropriate business planning and administration. Instead of following a long-term strategy, the yards operate on a day to day basis waiting for the customers to call. To address order fluctuations, the management of many shipyards cooperate with third-party subcontractors that often supply more than 50% of the workforce. Although this form of temporary employment means more flexibility, there is no interest to invest in skilled and loyal human capital in the long-term. As a consequence, these yards are not well-functioning and quality as well as completion times of the projects suffer. Thus, many potential ship buyers source second hand vessels locally or from abroad instead, and the demand for newly-built ships declines even more and worsens the situation of the sector.

Furthermore, the SBSR sector is challenged through high costs of doing business caused by infrastructural problems such as:

- Underdeveloped and congested roads, causing constant delays within the supply chains
- Pervasive ‘red tape’ and bureaucracy of government agencies, complicating business in many cases and prolonging processes unnecessarily
- Expensive importation of most of the input materials for shipbuilding, as the upstream supply chain does not exist domestically
- Unreliable supply of electricity and high prices, with 18.2 USc/kWh for industrial supply, ranking among the highest in Asia in 2012. This is due to the fact that the Philippine government does not subsidize power companies unlike other ASEAN countries¹⁵³

However, those problems can be tackled and do not change the huge potential that the Philippines has. To overcome the challenges, the stakeholders of the SBSR industry have to join forces and draw up plans with the aim to improve quality, compliance with HSE standards and productivity of the sector. Several initiatives have been implemented in observance of aforementioned recommendations. Case in point would be the launch of the Shipyard Association of the Philippines on June 17, 2015, which took place at the SMX Convention Center in Pasay, Metro Manila. The aim is to organize the heads and representatives of the relevant stakeholders to give the SBSR industry a common voice and address the needs of the shipyards.¹⁵⁴

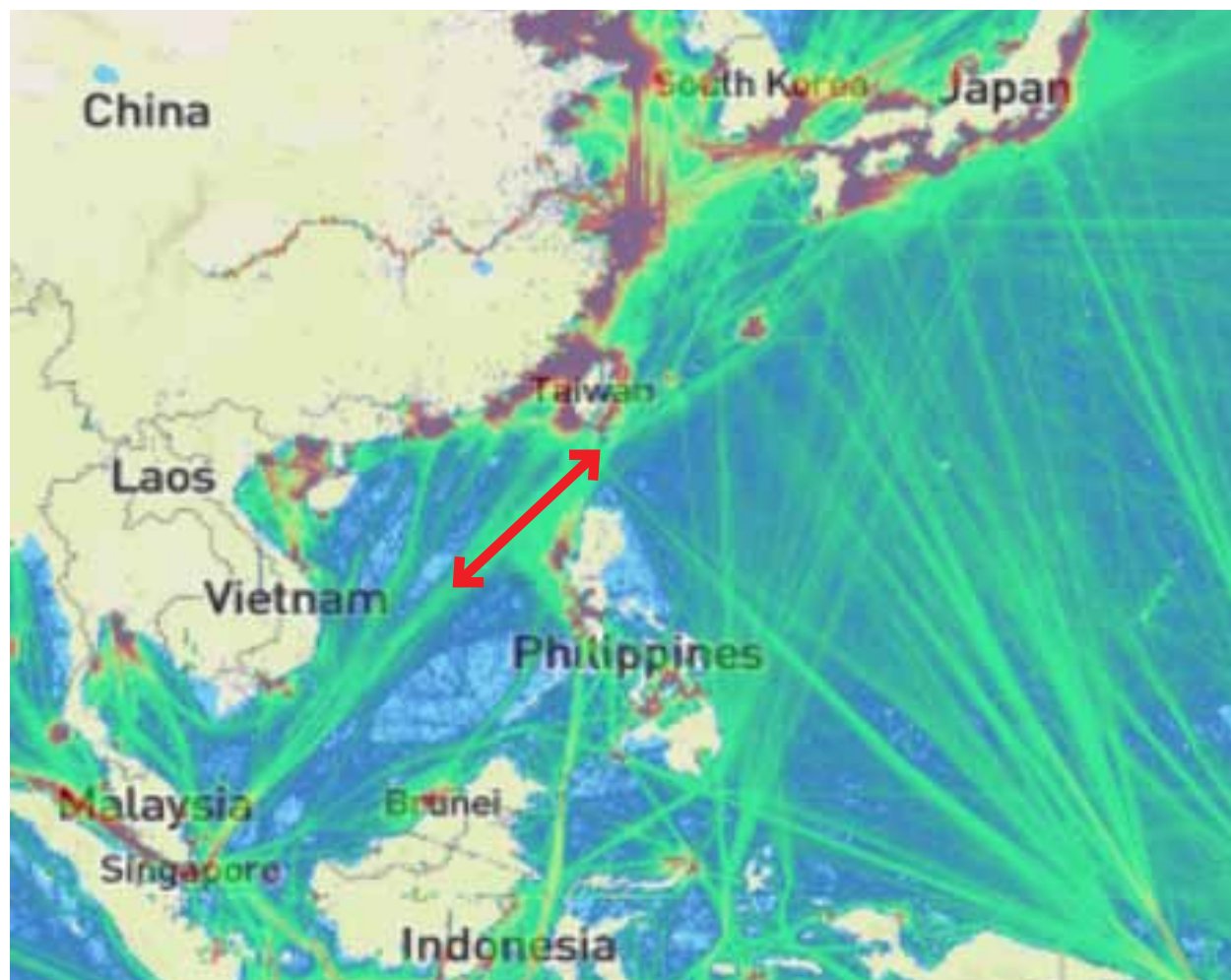


¹⁵³ Enerdata (2014).

¹⁵⁴ Capt. Lehmann, R. (2016).

Even though the Philippine SBSR industry faces great challenges, it still has advantageous factors such as the geographical character and location of the archipelago with abundant deep water spaces for shipyard development. With its position in the western Pacific Ocean, it is located near a main shipping route connecting major trade ports of Northeast Asia with those in Southeast Asia, as seen in the density map below.

Figure 21: Density map of maritime traffic in the Southeast China Sea in August 2016.



Source: Marine Vessel Traffic (2016).

Because of its geographical advantage and a qualified pool of workers who have knowledge and experience in shipbuilding, the Philippines has the potential to be a regional hub for ship repair and dry-docking of oceangoing ships. Due to the talent of Filipino workers to easily acquire the required skills, demanded manpower can be sourced on-site. In addition, Filipino workers are often skilled for ship-yard related jobs like welding, pipe fitting, molding etc. With the help of comprehensive trainings, such a pool could become a basic asset of the industry and the manpower could be deployed from local shipyards, as well as to foreign-based shipyards. In relation to this, METIs can influence the further development by providing required training.¹⁵⁵

The relatively low labor costs in the Philippines, as shown in table 3, is another benefit for potential investors.

¹⁵⁵ Capt. Lehmann, R. (2016).

Table 3: Manpower benchmark labor costs.

Category	2010	%	Jobs	Monthly salary in PHP
Managerial Personnel	2,370	6		25,000-60,000
Administrative Personnel	4,294	11		10,000-18,000
Technical Personnel	5,096	13	Architects and Engineers, Electricians	16,000-35,000
Skilled / Semi-skilled Workers	27,688	70	Welders, Crane Operators, Steel Cutters, Outfiller Painters, etc.	12,000-25,000
Total	39,448	100		

Source: GOV (2016c).

Another driver of the industry is the support of the government to strengthen shipyard operations through facilitations such as exemptions from import duties and taxes, income tax holidays and accelerated asset depreciation. Attractive liberalization and investment promotion programs show the effort of the government to develop the sector and attract more players both locally and from abroad. The general economic growth situation supports the mentioned opportunities: Global trade volume grew by 2.8% in the year 2015 and the Philippine economy had a GDP growth of 5.8%.¹⁵⁶

As a result, maritime transport should increase simultaneously and lead to a higher demand for new ships and ship repair. If the sector manages to solve the infrastructural obstacles and attract further investments into the quality of the shipyards, it can ensure its role in world shipbuilding and its significance for the Philippine GDP and employment. One step into the right direction might be a joint action plan developed by government and SHAP to strengthen the underlying conditions for the SBSR industry to exploit its full potential.



¹⁵⁶ World Bank Data (2016).



6 Tourism Maritime Facilities

6

Tourism Maritime Facilities

Based on its tropical biodiversity, abundance of natural endowments and the polite and friendly people of the Philippines rank among the most attractive destinations in Southeast Asia. In 2015, the tourism industry of the Philippines recorded a total of 5.3 million arrivals. In comparison with the previous year, this represents a growth of 10.9%. The tourism and travel sector is an essential pillar of the Philippine economy, as it makes a substantial contribution to the GDP. According to the World Travel & Tourism Council (WTTC), the travel and tourism industry generated around 533.0 billion PHP in 2014 and directly accounted for approximately 4.2% of the Philippines' GDP. In the same year, the travel and tourism sector provided 1.26 million jobs, representing 3.3% of total employment. Since a large part of travel and tourism are by sea, the maritime tourism has an essential influence on the competitiveness of the tourism industry.¹⁵⁷

This chapter provides an insight into the maritime tourism industry by evaluating the data provided by 2GO Travel, the market leader in the field of passenger transportation in the Philippines. With a passenger market share of 93% in 2014, the company covers nearly the whole market and hence, the provided data can be considered as representative of the maritime tourism industry.

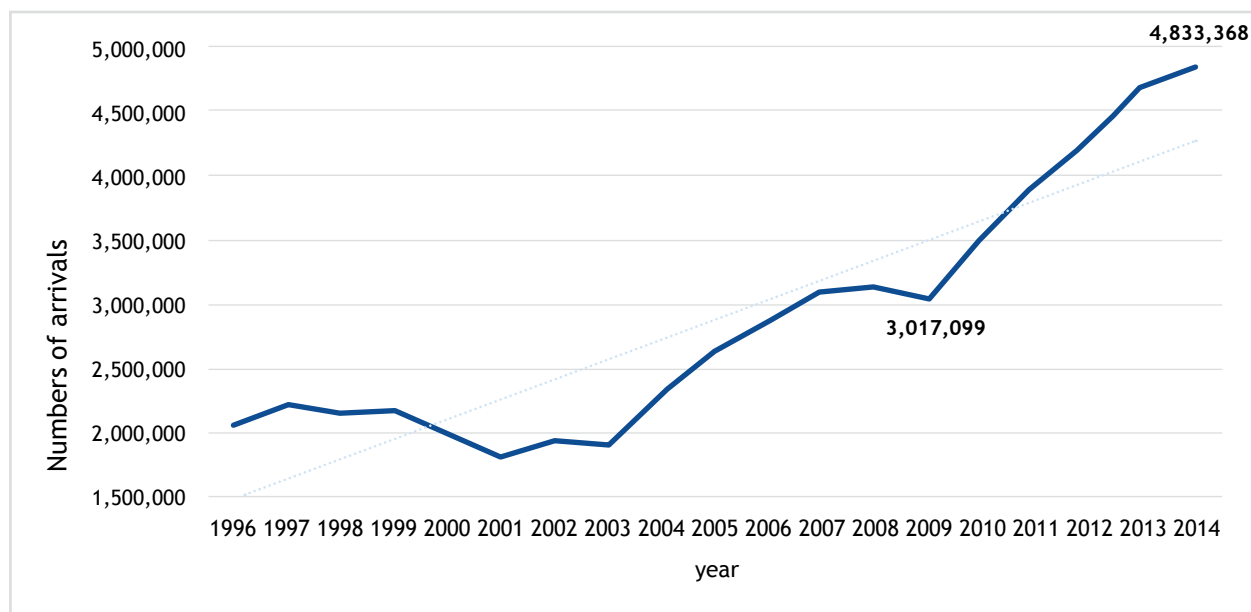
6.1 Tourism Arrivals

With just 2 million foreign tourists arriving in the Philippines in 1996 and an interim low of 1.8 M in 2001, Philippine tourism has been booming since 2010. From 2009 to 2014 foreign tourism has shown an average growth of almost 10%. While just 3 million foreign tourists arrived in the Philippines in 2009, the number has steadily increased and reached 4.8 million in 2014 (Figure 22).¹⁵⁸

¹⁵⁷ Marina (2013).

¹⁵⁸ Department of Tourism (2015).

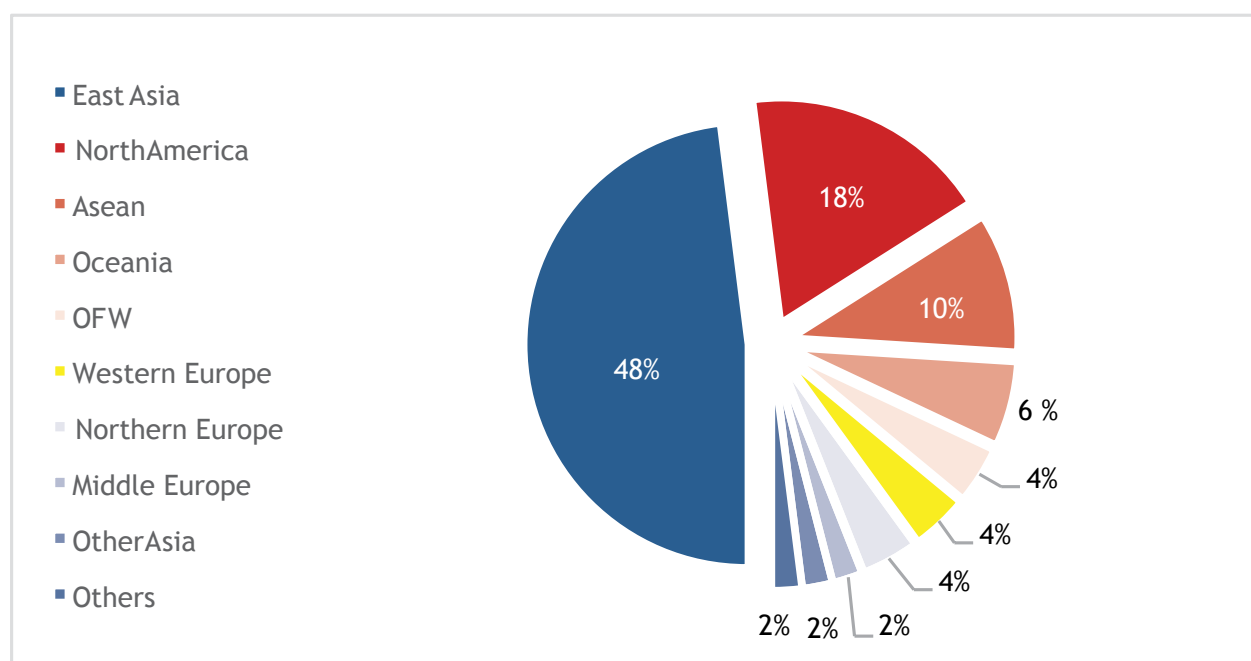
Figure 22: Tourism arrivals from 1996 to 2014.



Source: Philippine Statistics Authority (2016).

In terms of the foreign tourists' origins, it can be stated that almost half of all foreign tourists entering the Philippines in 2014 originated from East Asia. North America constituted the second largest group with 18%. Visitors from ASEAN were also in the top three with 10%. The remaining 26% arrived from Oceania (6%), Northern and Western Europe (4% each), the Middle East (2%) and from other Asian countries not included in ASEAN or East Asia. Overseas Filipino Workers constitute to an additional 4% of foreign tourists (Figure 23).¹⁵⁹

Figure 23: Foreign Tourists by Origin (2014).



Source: Philippine Statistics Authority (2016).

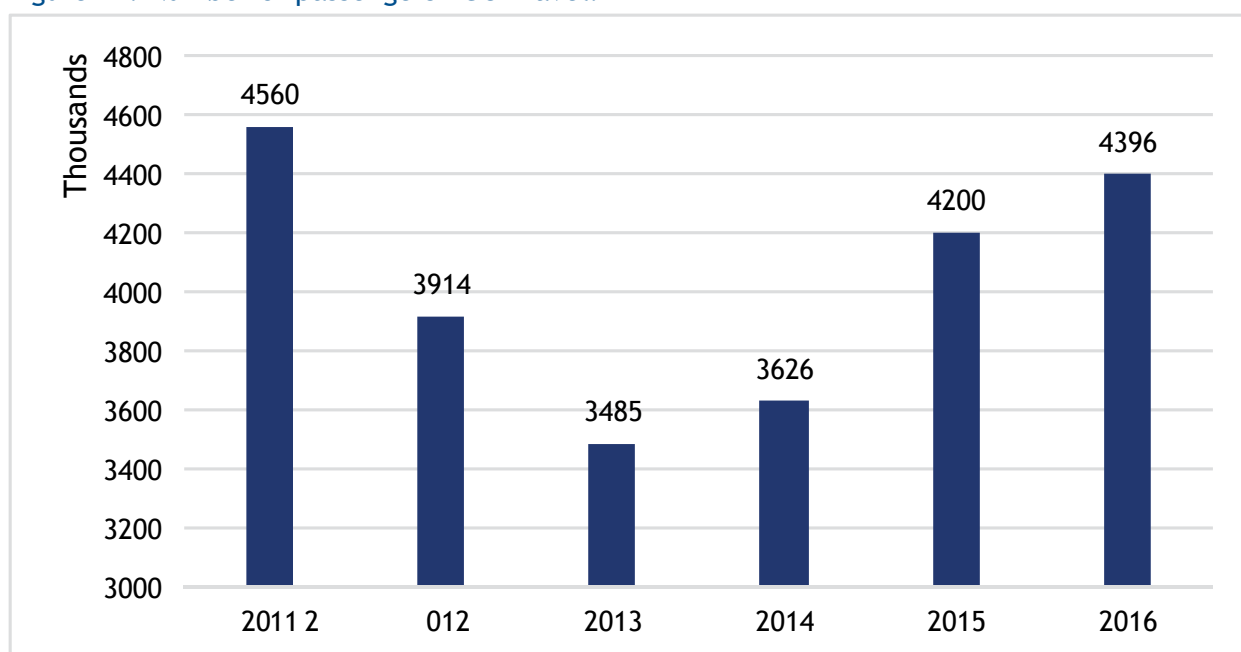
¹⁵⁹ Philippine Statistics Authority (2016).

With regards to tourism revenue, domestic travelers play a far greater role than foreign visitors. In 2014, the number of domestic travelers exceeded the number of foreign visitors by far. In this year, the Philippines had a total number of 10.29 million tourists, of which 4.83 million came from abroad, while 5.46 million were domestic travelers.¹⁶⁰ Due to this, domestic travelers contribute significantly to tourism related revenues. While the inbound expenditure, including foreign visitors and Filipinos permanently residing abroad, was at 276.9 billion PHP in 2014, the domestic tourism expenditure amounted to 1,404 billion PHP in the same year. From 2014 to 2015, the inbound expenditure rose by 10.7% to 306.0 billion PHP. The domestic tourism expenditure on the other hand increased by 26.1% to 1,770 billion PHP in 2015. This represents 18% of the household final consumption expenditure in 2015.¹⁶¹

6.2 Maritime Tourism based on 2GO Travel

In order to stay competitive in the long term 2GO Travel started to retire old vessels in 2011 to invest millions in the acquisition of new ships with a higher capacity. While 2GO Travel operated 19 vessels in 2011 and 2012, there were only 17 in 2013, and 14 from 2014 onwards. This led to a decrease in the total number of passenger from 2011 to 2013. Since 2013, the total number of passengers transported has steadily increased, reaching an estimated 4.4 M in 2016 (Figure 24).

Figure 24: Number of passengers 2GO Travel.



Source: Tagud, S. (2016).

The extension of the capacity is demonstrated by the increasing average number of passengers transported per vessel since 2011. While the total number of passengers was the highest in 2011, the average number of passenger transported per vessel increased from 240,000 in 2011 to an estimated average number of 314,000 passengers in 2016.¹⁶²

In 2014, the 2GO travel market share was at 93%. The company earned 2.5 billion PHP through its passengers. Based on 12% VAT the entire passenger transport sector paid approximately 322 million PHP in taxes. The cargo market share instead was 35%. Through freight the company earned 5.0 billion PHP. For the entire cargo market this comes to a total of approximately 1.7 billion PHP in value added taxes.

¹⁶⁰ Department of Tourism (2015).

¹⁶¹ Philippine Statistics Authority (2016).

¹⁶² Tagud, S. (2016).

From other services, 2GO earned 245 million PHP, equivalent to 29.4 million PHP 2GO value added taxes. With a tax rate of 12% for all three sectors combined, 2GO Travel paid a total of more than 934 million PHP in taxes.¹⁶³

6.3 Opportunities and challenges

The Philippines has all the natural pre-conditions to become a maritime tourism paradise. To make full use of these natural advantages, certain fields will have to improve. Certainly, the inadequate infrastructure poses to be a key issue for the maritime industry as a whole, tourism being no exception. Further critical factors in the growth of maritime tourism include the lack of proper port facilities to support bigger-capacity vessels, and the substandard passenger terminal facilities.

Another factor is the negative perception on safety in the ports and, more specifically, the negative perception on shipping companies in general. This view is partly caused by media hypes focusing on maritime accidents. Furthermore, outdated and inflexible rules and regulations contribute to problems in the maritime sector. For example, it can take up to 21 working days to relocate a travel route because of bad weather or slow business. Similarly, schedules cannot be adjusted easily when delays occur, as acquiring an official permission for a new schedule is time-consuming. At the core of these issues are lengthy, inflexible and inefficient bureaucratic processes which have an adverse effect on the growth of maritime tourism.

Therefore, political institutions have to implement more flexible rules and regulations which will allow sea-travel providers to have more reliable guidelines when, for example, switching travel routes. Rules and regulations need to be reliable and consistent while leaving companies enough space to operate freely.

A promising field for future growth in maritime tourism in the Philippines is the business with short distance vessels. The industry is expecting an expansion on short routes, especially in areas where air traffic is not an auspicious business. Furthermore, it can be expected that with the increasing privatization of existing ports, these will be developed in order to support bigger-capacity vessels.¹⁶⁴



¹⁶³ Tagud, S. (2016).

¹⁶⁴ Interview with Tagud, S., Alnuna, R., Fontz, N., 2GO Travel (June, 2016).

Conclusion

The Maritime Industry in the Philippines is a major driver for the national economy. In addition to the strategic position of the Philippines, the archipelago not only provides a large pool of qualified and technical skilled seafarers but also offers a high level of experience in the maritime field. The insights gained in this study confirm that the maritime industry makes a significant contribution to the GDP in terms of jobs, remittances and taxes.

Furthermore, the study revealed that the maritime industry offers several business and investment possibilities. Especially the construction sector has high potential. The development of the road infrastructure, the expansion and modernization of some port capacities offer investment opportunities as well as market entry potential for port machinery and heavy equipment. Likewise, due to the need to continuously develop technologies to create efficient and smooth operations, the demand for logistics solutions is expected to increase which will eventually lower the logistics costs. Especially companies offering smart and modern logistics solutions have potential to grow within the market. More diversification is required to stay competitive.

Moreover, it can be expected that with the increase of international import and export cargo the demand of transport will rise. This promises increasing sales for the trucking industry. In addition, the engineering can profit from the growth prospects since new technologies must continuously be developed to cope with the increasing cargo and stay competitive in the long-term.

The BPO-Industry benefits from the maritime industry as well, since the high amount of non-core back office processes which can be outsourced resulting in lower costs. In addition, the Philippines possesses the necessary talent and knowledge which is needed to perform said processes. Filipino seafarers are highly demanded globally as they have excellent English skills, are highly motivated and easily learn new tasks.

The maritime committee of GPCCI has made great efforts to gain the needed information and data to examine the contribution of the maritime industry to the national economy. However, the access to updated information and actual data is limited, which made the research difficult. One of the reasons is the lack of transparency caused by the high number of independent entities with different responsibilities existing in the sector. To create more transparency, facilitate communication and generate easier access to information, bureaucratic processes have to be streamlined and simplified. To achieve this an overriding government body should manage the entire maritime sector. It is further suggested to have a maritime secretary as a central point of contact for all maritime issues. In this context, MARINA was frequently suggested.

Abbreviations

AISL	Association of International Shipping Lines, Inc.	MICT	Manila International Container Terminal
ARMM	Autonomous Region of Muslim Mindanao	MICTSI	Mindanao International Container Terminal Services, Inc.
ASEAN	Association of Southeast Asian Nations	MMT	M Metric Tons
ATI	Asian Terminals, Inc.	NAC	Nickel Asia Corporation
BCDA	Bases Conversion Development Authority	NCC	National Computer Center
BCT	Batangas Container Terminal	NCI	National Computer Institute
BDO	Banco de Oro	NEDA	National Economic and Development Authority
BIMCO	Baltic and International Maritime Council	NEP	National Expenditure Plan
BOC	Bureau of Customs	NTTI	National Telecommunications Training Institute
BPI	Bank of the Philippine Islands	OLAS	Online Appointment System
CATIF	Center for the Advancement Trade Integration and Facilitation	OSSCO	One-Stop Service Center for Overseas Filipino Workers
CBA	Collective Bargaining Agreement	PCA	Permanent Court of Arbitration in The Hague
CBT	Computer-Based Training	PDFA	Philippines Fisheries and Development Authority
CEZA	Cagayan Economic Zone Authority	PDO	Port District Office
CHED	Commission on Higher Education	PMO	Port Management Office
CIIP	Comprehensive and Integrated Infrastructure Program	PHP	Philippine Pesos(s)
CIP	Cebu International Port	PIA	Phividec Industrial Authority
CMO	CHED Memorandum Order	PNB	Philippine National Bank
CPA	Cebu Port Authority	POEA	Philippine Overseas Employment Administration
CSO	Customs Special Order	PPA	Philippine Ports Authority
CTAP	Confederation of Truckers Association of the Philippines	PPE	Protective Personal Equipment
DICT	Department of Information and Communications Technology	RA	Republic Act
DICT	Davao International Container Terminal	RCBC	Rizal Commercial Banking Corporation
DIPSSCOR	Davao Integrated Port Services & Stevedoring Corporation	RRTS	Road Roll-on and Roll-off Terminal System
DOTC	Department of Transportation and Communication	SAJ	The Shipbuilders' Association of Japan
EEZ	Exclusive Economic Zone	SBITC	Subic Bay International Terminal Corporation
EMSA	European-Maritime Safety Association	SBMA	Subic Bay Metropolitan Authority
FAB	Freeport Area of Bataan	SCIPSI	South Cotabato Integrated Port Services, Inc.
GDP	Gross Domestic Product	SCMAP	Supply Chain Management Association of the Philippines
GTAI	German Trade and Invest	SHAP	Shipyards Association of the Philippines
GT	Gross Tonnages	SOLAS	Safety of Life at SEA
HCPTI	Harbor Center Port Terminal, Inc.	SRC	Seafarers Registration Certificate
HSE	Health, Safety and Environment	STCW	Standards of Training, Certification and Watchkeeping
ICT	Information and Communications Technology	TABS	Terminal Appointment Booking System
ICTO	Information and Communications Technology Office	TELOF	Telecommunications Office
ICTSI	International Container Terminal Services, Inc.	TESDA	Technical Education and Skills Development Authority
IMO	International Maritime Organization	TEU	Twenty-foot Equivalent Unit
IPA	Independent Ports Authority	TRIP	Three Year Rolling Infrastructure Program
LGU	Local Government Unit	UNCLOS	United Nations Convention on the Law of the Sea
LPI	Logistics Performance Index	VAT	Value-Added Tax
MARINA	Maritime Industry Authority	VGM	Verified Gross Mass
METI	Maritime Education and Training Institutions	WTO	World Trade Organization
MHEI	Maritime Higher Education Institution	WTTC	World Travel & Tourism Council

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