Government Strategies in the Water Transport Sector: A Closer Look at Philippine Ports

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Infrastructure is central to a country's development:

1. It increases mobility of goods and services within and outside of the country
2. It facilitates trade and tourism
3. It links markets and economies together
4. It allows exchange of knowledge and technology

The water transport sector takes a much larger role to an archipelagic country like the Philippines:

- 99.9 percent of goods are being traded through water (Philippine Statistic Authority 2021)

Seaports are the main infrastructure in the water transport sector, and they are regarded as economic catalysts in areas where they are located as well as in peripheral areas near the port.

Contribution of ports to economic development:

- Offers the cheapest way of transportation (Berköz and Tekba 1999).
- Serve as the most convenient location for import and export activities (Fujita and Mori 1996).
- Seaports act as assembly points and linkage to other transport systems such as road or railway transport (Cong et al. 2020).
- Ports not only act as enabler of trade, but also offer value-added activities as port infrastructure boosts domestic employment and facilitates innovation, research, and development (Merk 2013).

STATE OF WATER TRANSPORT INFRASTRUCTURE IN THE PHILIPPINES

Role of water transport sector

Table 1. Domestic trade by mode of transfer, 2019

	Quantity	Value
Philippines	**25,890,077**	**834,717,767**
Water	**25,859,005**	**833,474,631**
in percent	*99.9*	*99.9*
Air	**31,072**	**1,243,136**
in percent	*0.1*	*0.1*

Source: Philippine Statistics Authority

Note: Quantity in tons. Value in thousand pesos.

- Water is heavily utilized as the primary mode of transfer for domestic products.

Table 2. Domestic Trade by Water per Commodity Classification

	2019	
	Quantity	Value
Philippines	**25,890,077**	**834,717,767**
Water	**25,859,005**	**833,474,631**
in percent	*99.9*	*99.9*
Food and live animals	6,176,703	183,901,217
Beverages and tobacco	595,498	38,784,771
Crude materials, inedible, except fuels	1,496,367	14,450,151
Mineral fuels, lubricants and related materials	3,948,213	50,995,821
Animal and vegetable oils, fats and waxes	127,952	5,553,942
Chemical and related products, N.E.C.	1,640,789	57,760,027
Manufactured goods classified chiefly by material	5,495,413	121,305,555
Machinery and transport equipment	2,532,143	269,962,929
Miscellaneous manufactured articles	945,419	42,345,687
Commodities and transactions N.E.C.	2,900,508	48,414,531

Source: Philippine Statistics Authority

Note: Quantity in tons. Value in thousand pesos.

- Top 3 traded commodities are machinery and transport equipment, food and live animals and manufactured goods.

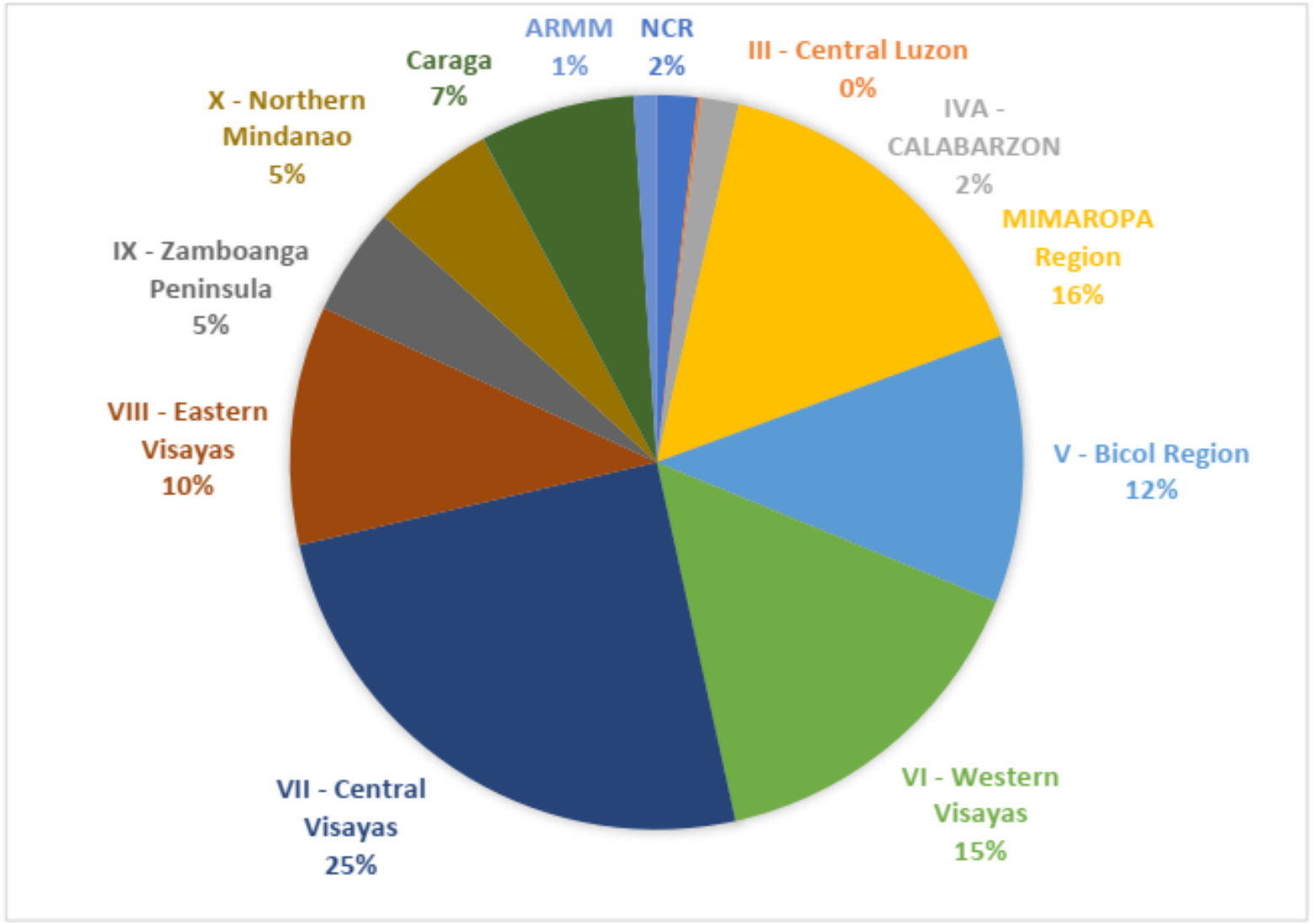
Table 3. Quantity and Value of Domestic Trade by Water per Region, 2019

Region	Quantity (in tons)	Value (in thousand pesos)
Philippines	**25,890,077**	**834,717,767**
Trade in water (domestic)	**25,859,005**	**833,474,631**
NCR	4,218,017	267,463,381
CAR	-	-
I - Ilocos Region	-	-
II - Cagayan Valley	-	-
III - Central Luzon	3,847,506	35,863,443
IVA - CALABARZON	4,581	130,510
MIMAROPA	873,271	13,703,908
V - Bicol Region	2,679,990	36,018,286
VI - Western Visayas	2,037,834	91,708,289
VII - Central Visayas	4,731,151	149,150,235
VIII - Eastern Visayas	1,283,915	112,535,073
IX - Zamboanga Peninsula	212,547	12,168,021
X - Northern Mindanao	4,506,204	61,875,020
XI - Davao Region	405,760	15,234,093
XII - SOCCSKSARGEN	253,841	10,137,824
CARAGA	678,220	23,321,545
ARMM	126,168	4,165,004

Source: Philippine Statistics Authority
Note: "-" means no transaction for CAR and Regions I and II

- Water trade activities are high in Central Visayas, Northern Mindanao, National Capital Region and Central Luzon.

Figure 1. Regions of origin of domestic travelers, 2019



Source: Philippine Statistics Authority

- Water transfer is also a popular mode of travelling domestically; 76M domestic passengers in 2018.

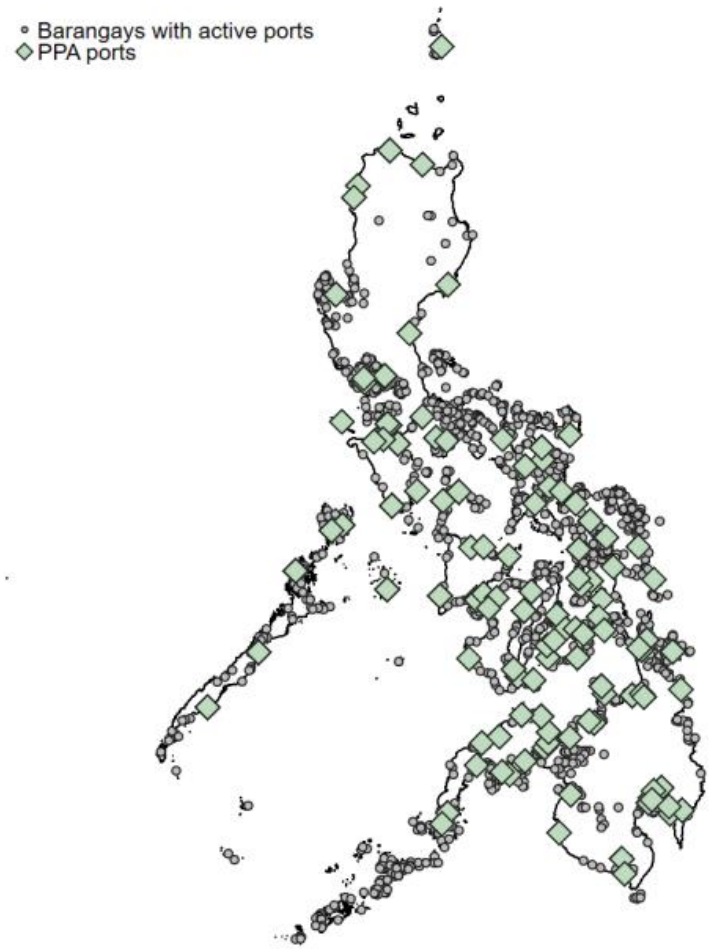
Seaports inventory

Table 5. Philippine ports by classification and operation status

	1994	1999	2015[a]
TOTAL	**1,312**	**1,592**	**1,886**
Fishing	427	462	-
Feeder	168	224	-
Commercial, Private	408	539	-
Commercial, Public	309	367	-
Operational	**1,230**	**1,459**	-
Fishing	397	421	-
Feeder	162	215	-
Commercial, Private	372	480	-
Commercial, Public	299	343	-
Non-operational	**82**	**133**	-
Fishing	30	41	-
Feeder	6	9	-
Commercial, Private	36	59	-
Commercial, Public	10	24	-

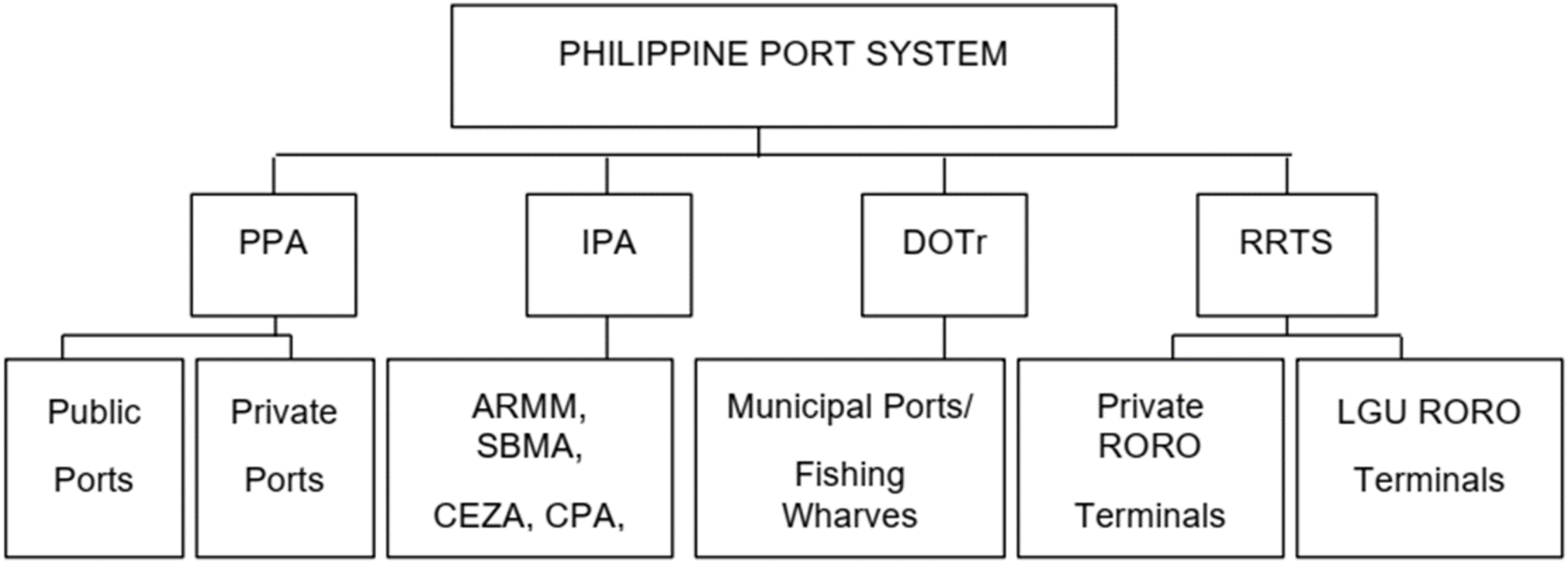
Source: 2000 Quinquennial Inventory of Ports
Note: "a" - based on Census 2015

Figure 3. Map of active ports in the Philippines, 2015



Source of basic data: Census 2015 and PPA

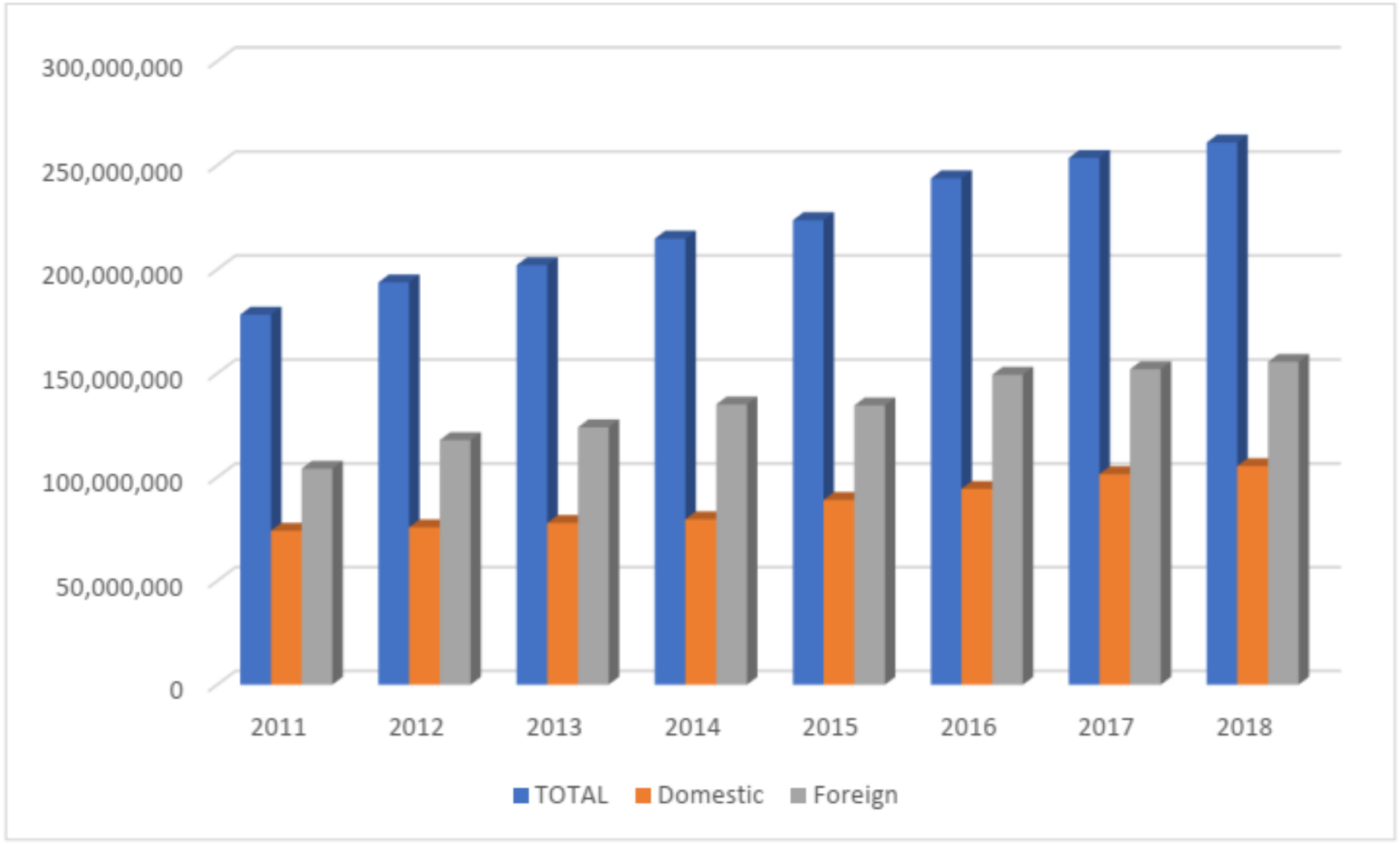
Figure 2. The Philippine Port System



Source: Llanto, Basilio and Basilio (2005)

Domestic utilization

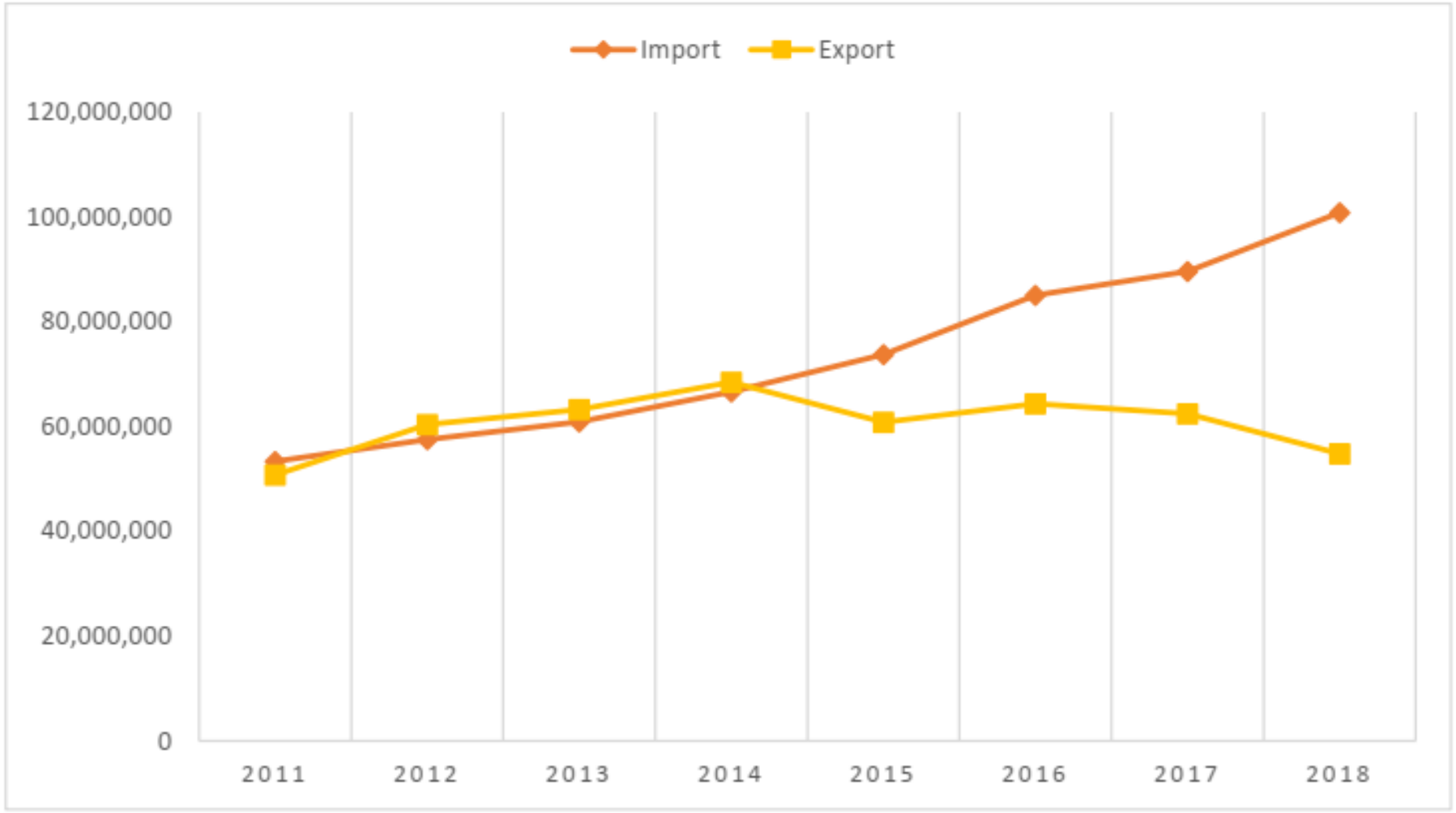
Figure 4. Philippine cargo throughput (in metric tons), 2011-2018



Source: Philippine Statistical Yearbook 2019

- In recent years, our ports have seen a general increase in total cargo throughput.

Figure 6. Foreign cargo throughput (in metric tons), 2011-2018



Source: Philippine Statistical Yearbook 2019

- International import volume has increased while the volume of international exports has decreased since 2014.

Table 7. Philippine exports and share of top 5 ports in 2017 (F.O.B. value in US dollars)

Ports	Exports	
	Value	Percent
TOTAL	**68,712,897**	**100.00**
Luzon	**55,823,945**	**81.24**
*Ninoy Aquino International Airport**	32,458,012	47.24
Manila International Container Port	13,078,358	19.03
Manila (South Harbor)	2,169,349	3.16
Subic Area Free Port, SBMA, Olongapo City	1,800,477	2.62
Clark Special Economic Zone, Pampanga	1,523,231	2.22
Visayas	**6,862,331**	**9.99**
Cebu City, Cebu	2,833,504	4.12
Mactan Export Processing Zone, Lapu-Lapu City	1,889,689	2.75
Isabel, Leyte	704,455	1.03
*Cebu International Airport**	681,611	0.99
Iloilo City, Iloilo	343,312	0.50
Mindanao	**6,026,622**	**8.77**
Davao City, Davao del Sur	2,189,718	3.19
General Santos City, South Cotabato	1,126,885	1.64
Bislig, Surigao del Sur	789,174	1.15
Cagayan de Oro City, Misamis Oriental	554,901	0.81
Ozamis City, Misamis Occidental	490,146	0.71
Butuan City, Agusan del Norte	178,428	0.26

Source: Philippine Statistical Yearbook 2019

Note: * pertains to airports

- The Manila International Container Port (MICT) receives 19 percent of the country's exports (in terms of value).

Table 8. Philippine imports and share of top five ports in 2017 (F.O.B. value in US dollars

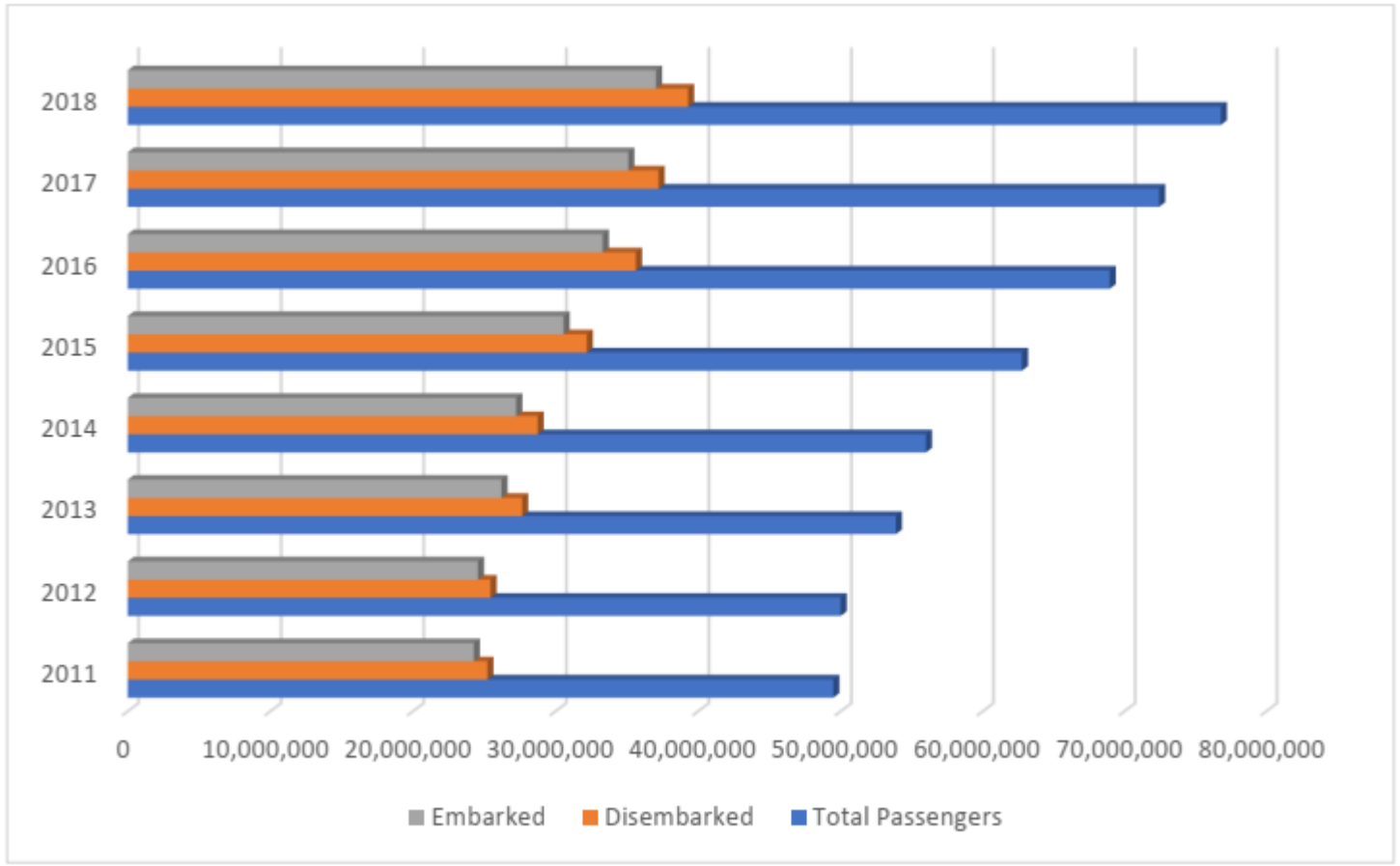
Ports	Imports	
	Value	Percent
TOTAL	**96,093,235**	**100.00**
Luzon	**83,936,127**	**87.35**
Manila International Container Port	28,590,360	29.75
*Ninoy Aquino International Airport**	23,799,740	24.77
Manila (South Harbor)	8,102,050	8.43
Subic Area Free Port, SBMA, Olongapo City	2,281,207	2.37
Clark Airbase	1,118,203	1.16
Visayas	**6,932,465**	**7.21**
Cebu City, Cebu	3,548,029	3.69
SEPZ, Isabel, Leyte	1,303,080	1.36
Mactan Export Processing Zone, Lapu-Lapu City	280,062	0.29
Isabel, Leyte	101,447	0.11
Iloilo City, Iloilo	84,023	0.09
Mindanao	**5,224,643**	**5.44**
Davao City, Davao del Sur	2,039,699	2.12
Cagayan de Oro City, Misamis Oriental	848,148	0.88
Dadiangas, Gen. Santos City, South Cotabato	587,294	0.61
General Santos City, South Cotabato	587,294	0.61
Iligan City, Lanao del Norte	127,423	0.13

Source: Philippine Statistical Yearbook 2019

Note: * pertains to airports

- The ports of Manila South Harbor, Subic Area Free Port and the Clark Airbase serve as important gateways for imports as they are for exports.

Figure 7. Passenger traffic via water transport, 2011-2018



Source: Philippine Statistical Yearbook 2019

- Port utilization has increased over the years as indicated by the increase in passenger traffic.

Figure 8. Number of domestic seaports vs domestic passenger traffic

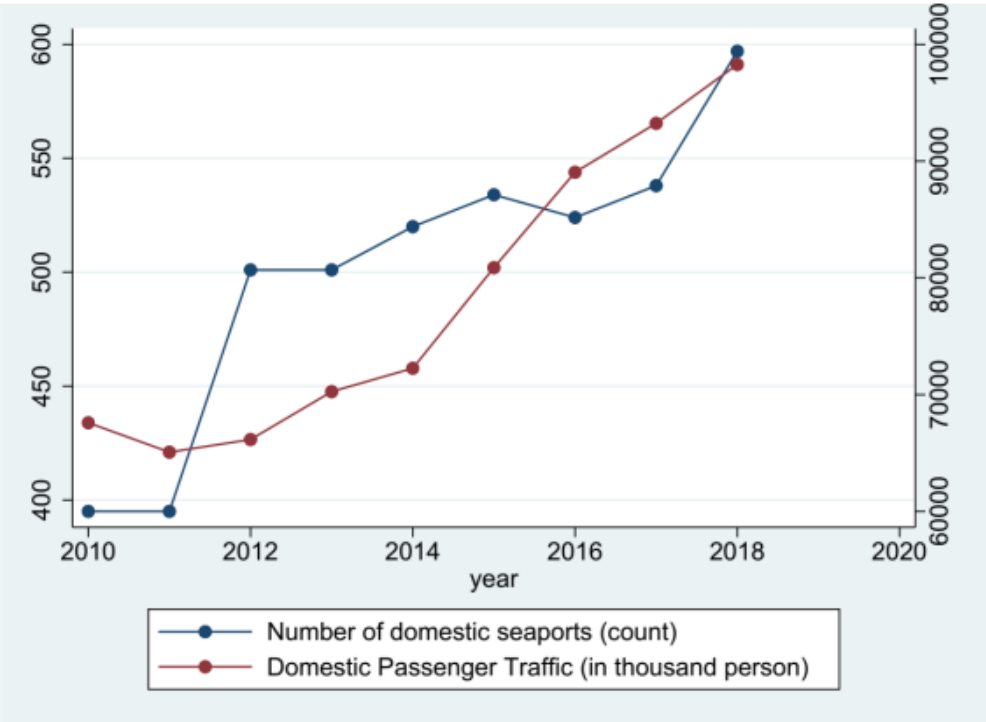
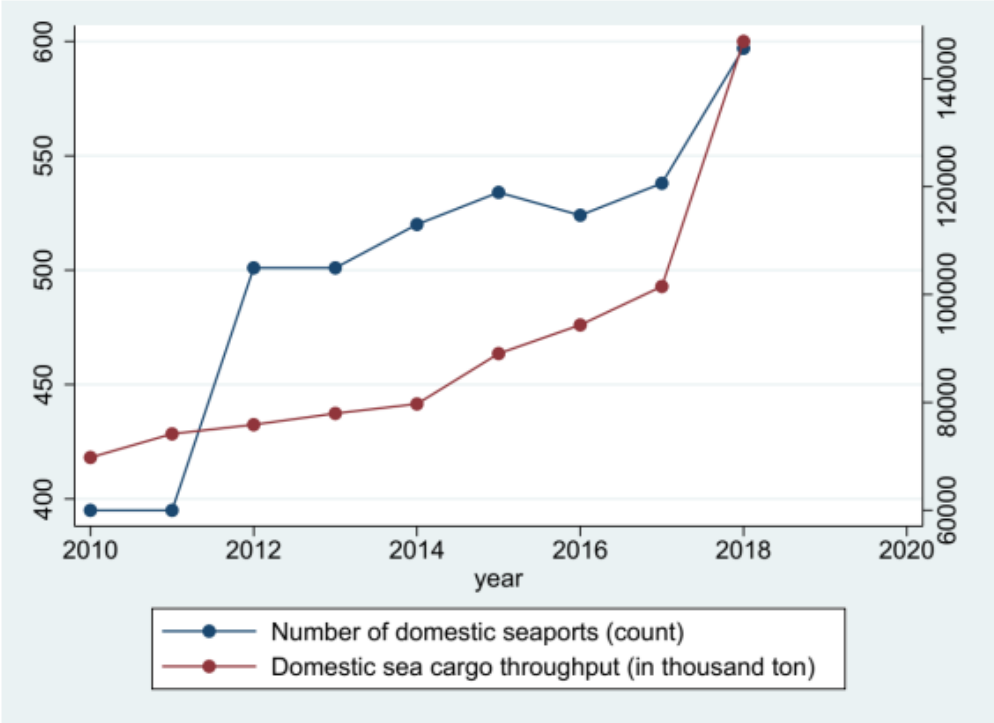


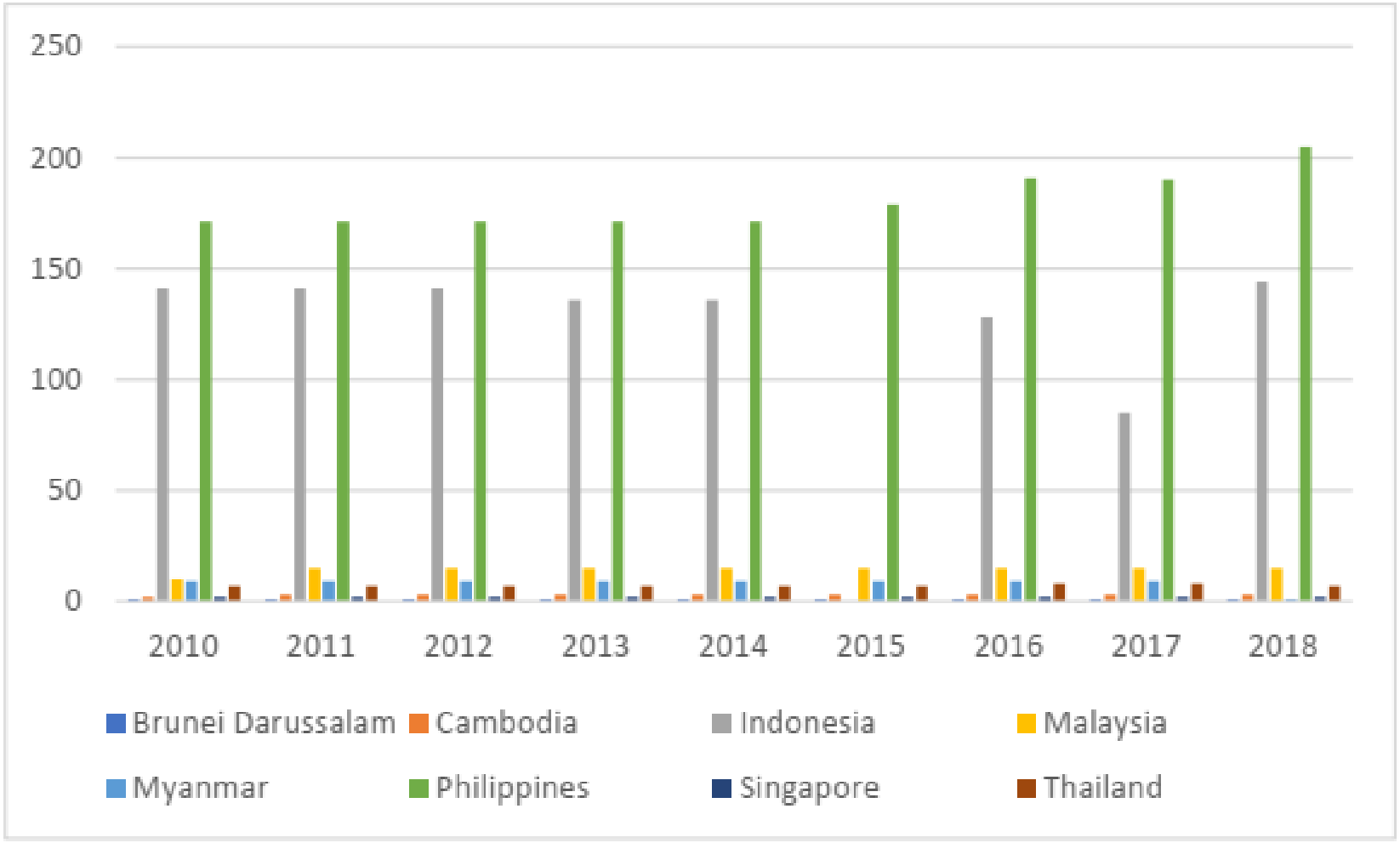
Figure 9. Number of domestic seaports vs domestic cargo throughput



❖The higher demand for domestic cargo and passenger traffic was complimented by an increase in the number of domestic ports.

International comparison

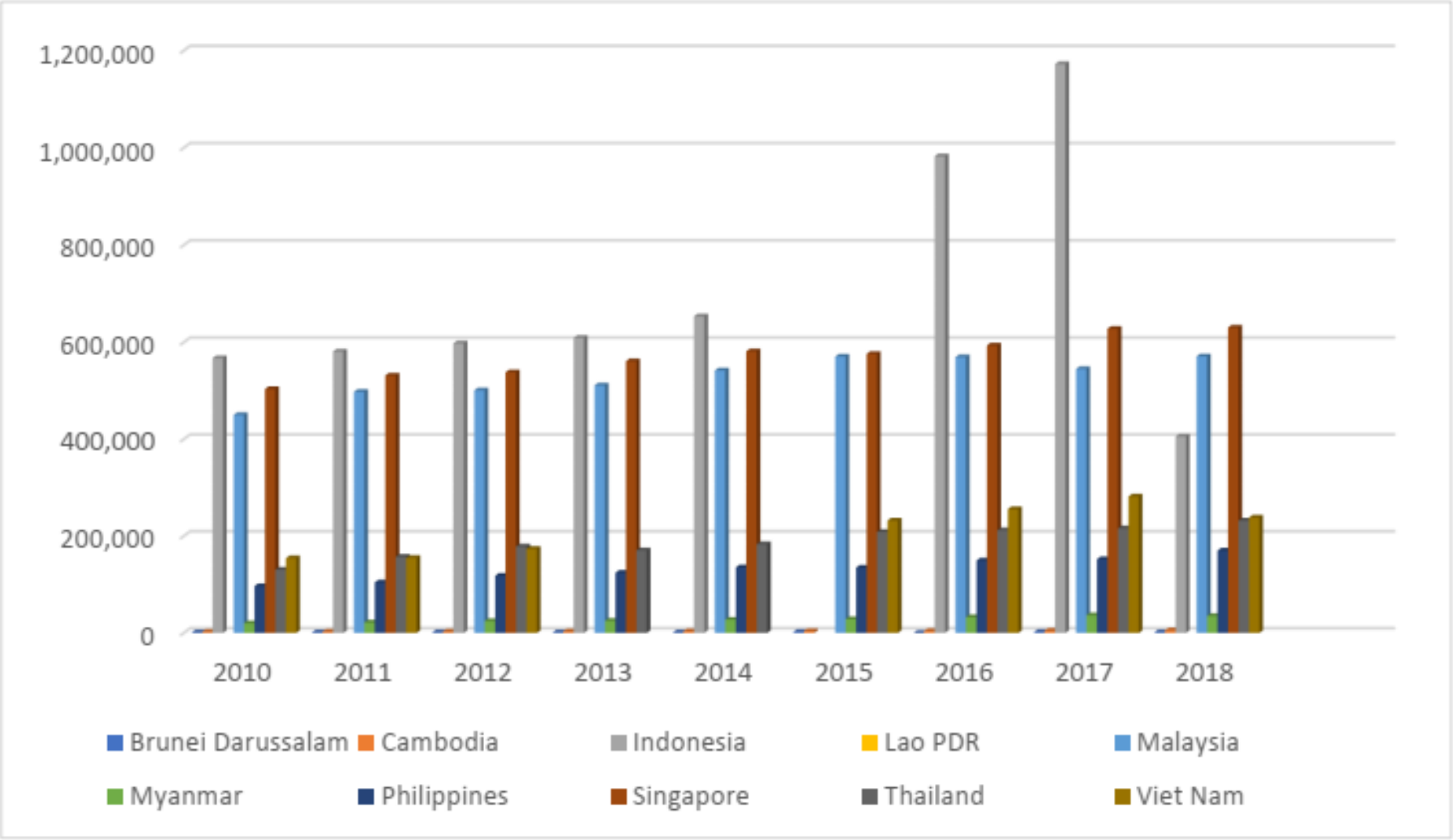
Figure 10. Number of international ports, select ASEAN countries



Source: ASEAN Secretariat, ASEANstats

❖The Philippines has more international seaports than most ASEAN countries.

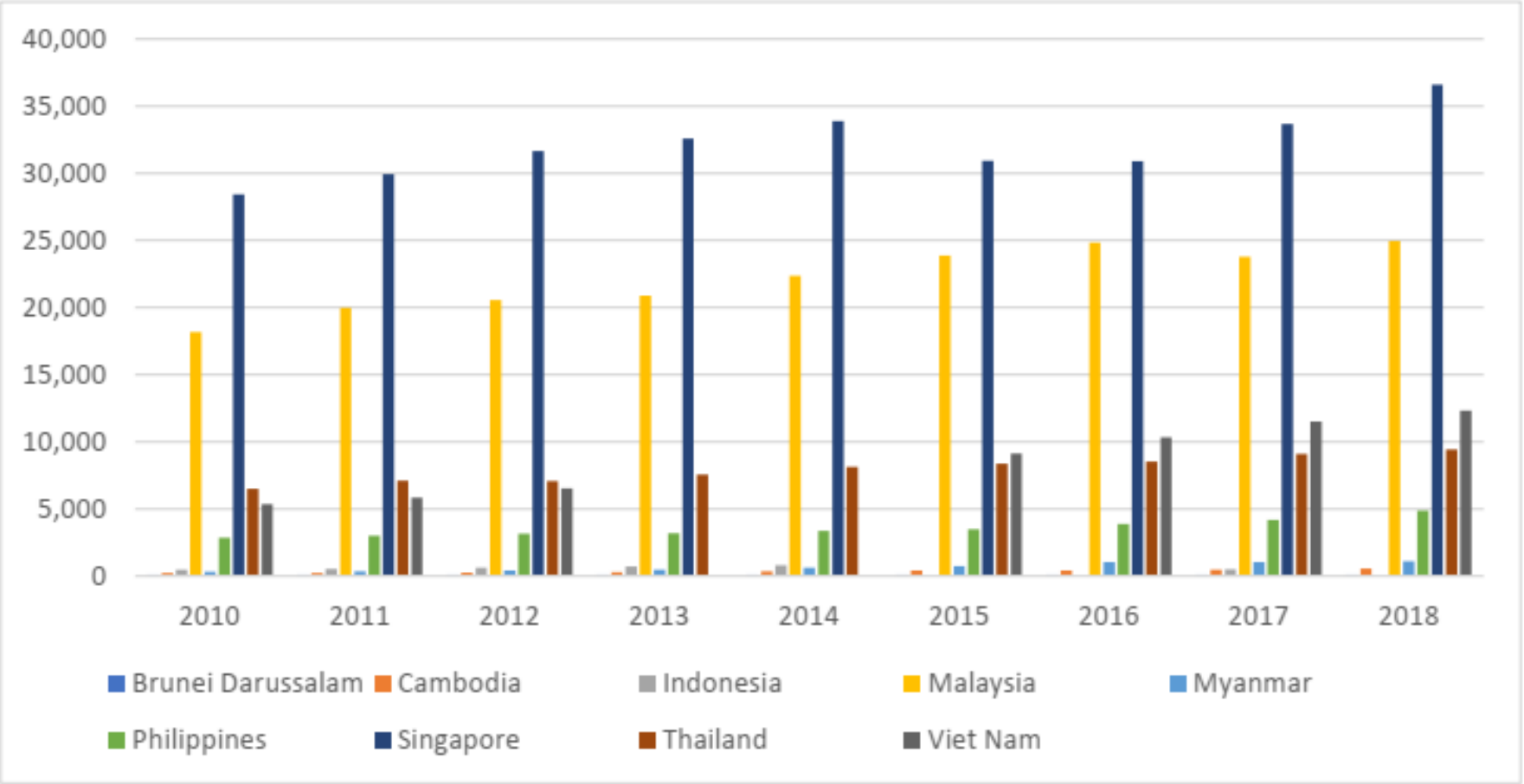
Figure 11. International sea cargo throughput, select ASEAN countries (in thousand ton)



Source: ASEAN Secretariat, ASEANstats

- The Philippines appears to be trailing behind other ASEAN countries in terms of volume of international cargo and international shipping container

Figure 12. International sea container throughput, select ASEAN countries (in Thousand TEUs)



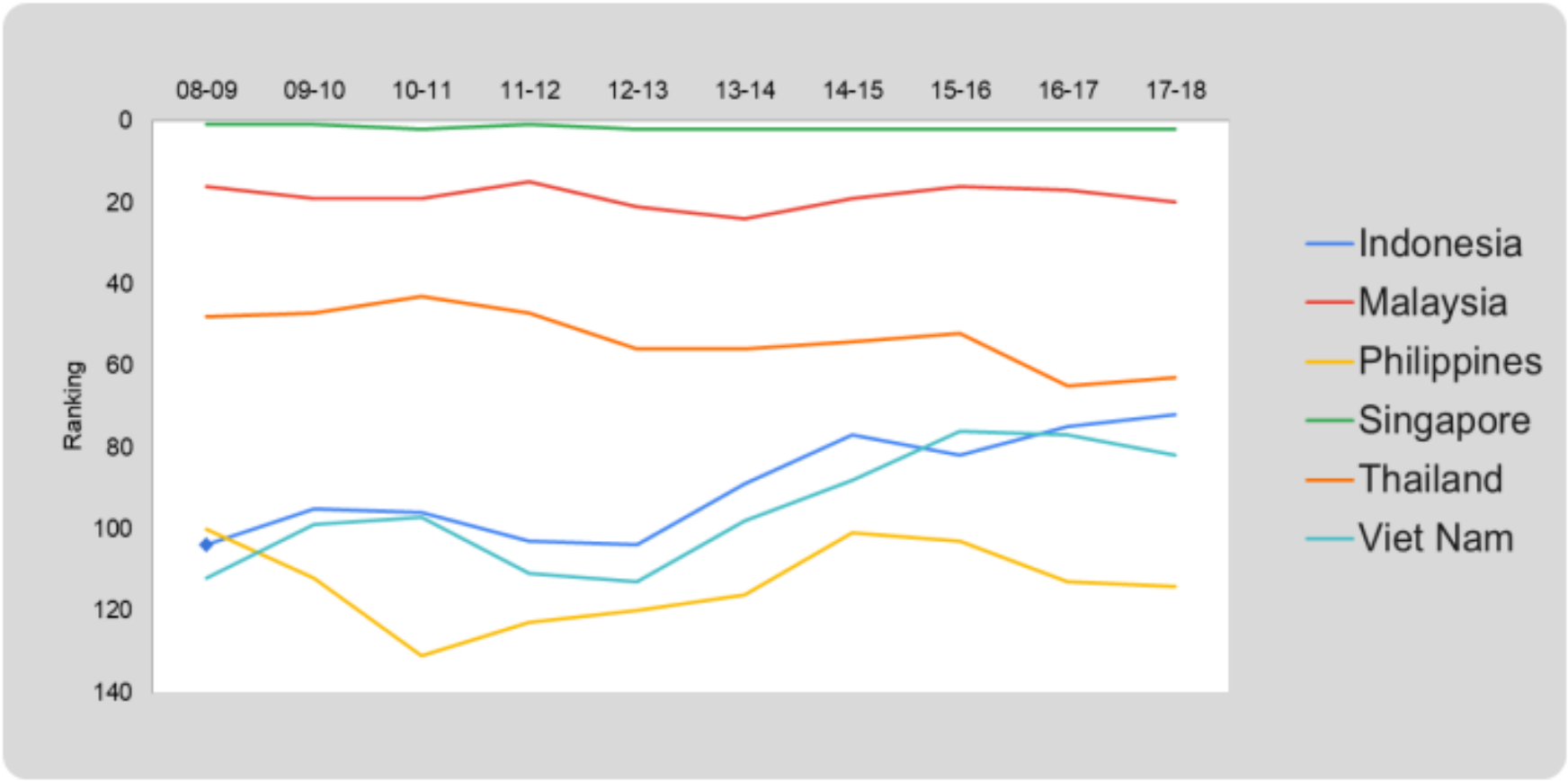
Source: ASEAN Secretariat, ASEANstats

Table 10. Port Performance Indicators for ASEAN countries, 2018

Country	Median time in port (days)	Ave. age of vessels	Ave. size (GT) of vessels	Max. size (GT) of vessels	Ave. cargo carrying capacity (dwt) per vessel	Max. cargo carrying capacity (dwt) of vessels	Ave. container carrying capacity (TEU) per container ship	Max. container carrying capacity (TEU) of container ships
Brunei	1.0	14	20,401	72,684	30,421	74,999	1,354	2,174
Cambodia	0.9	14	13,580	115,875	9,579	46,732	1,517	2,174
Indonesia	1.2	20	7,670	172,000	16,098	300,542	1,509	14,855
Malaysia	1.0	14	28,611	236,583	32,706	441,561	3,706	23,756
Myanmar	2.0	15	15,653	165,511	25,133	321,300	1,318	2,806
Philippines	*1.0*	*20*	*8,179*	*199,631*	*11,997*	*400,000*	*1,858*	*6,622*
Singapore	0.7	11	25,755	236,583	18,889	323,183	5,228	23,964
Thailand	0.7	17	12,482	228,741	11,431	321,225	2,177	23,656
Viet Nam	1.1	14	16,002	194,849	14,024	187,882	1,966	18,400

Source: UNCTAD

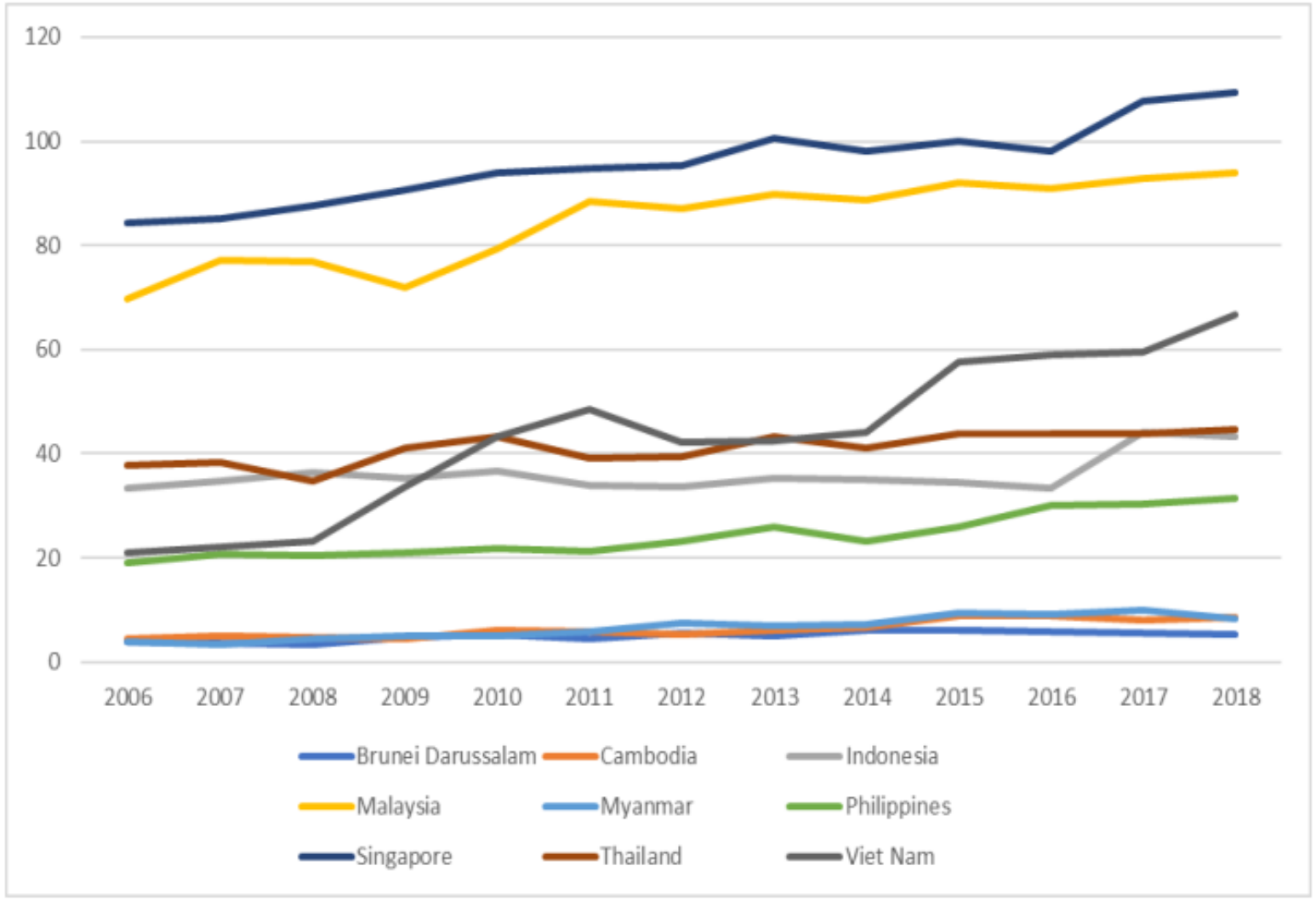
Figure 13. Quality of Ports Rankings ASEAN 6



Source: World Economic Forum

❖Perceived quality of ports in the Philippines is low.

Figure 14. Liner shipping connectivity index



Source: UNCTAD, Division on Technology and Logistics
Note: Data is for Q4 of each year.

❖Port connectivity to global liner shipping networks is also weak.

ISSUES AND CHALLENGES

1) *Seaports are sufficient in quantity, but most are underdeveloped and have inadequate equipment.*

- The quantity of seaport infrastructure fares well with other countries but the quality, capacity and service delivery need much improvement (World Bank 2009).
- Infrastructure development in Asia is more focused on quantity rather than quality; quality however, has better impact on economic growth through improved productivity and efficiency (Ismail and Mahyideen 2015).
- The Philippine government is financially constrained; hence, the strategy to turn to the private sector for support (Llanto et al. 2005).
- The Philippines continue to lag behind other ASEAN countries in terms of port development (Baek and Kim 2018).

- Government-operated seaports outside of Manila need major upgrades as they usually lack cargo-handling equipment needed for an efficient supply chain –based on interviews in preparation of the Philippine Multimodal Transportation and Logistics Industry Roadmap by the Institute for Development and Econometric Analysis (2016)
- Limited cargo base and inadequate port infrastructure are part of the factors affecting high logistics cost in the country (MARINA 2016).
- The absence of proper port infrastructure as one of the reasons for the high export cost in the Philippines (Ho et al. 2018).

2) *Congestion in major ports*

- Congestion remains a problem in Manila port; the World Shipping Council lists Manila as one of the top 50 busiest ports in the world based on 2019 data.
- The increasing cargo and passenger traffic in the Greater Capital Region is further straining the already-congested port of Manila and is also affecting nearby road networks (JICA 2013).
- Mismanagement of shipping containers as well as the lack of depot areas further exacerbates the congestion problem in Manila port (Patalinghug et al. 2016).
- Initiatives to address the cargo traffic situation in the port of Manila includes the development of Batangas and Subic ports but majority of shippers and shipping lines still prefer to use Manila port because of reliable shipping schedule and efficient cargo processes.

3) Conflicting role of government agencies

- Conflicting roles as operator, developer and regulator is unfavorable for the growth of the sector; there is a need to provide checks against influence of operational interests in the formulation of policy and regulations (World Bank 2009)
- Impacts port competition and drives rates upwards (Llanto et al. 2005)
- Revisit the functions granted to Ports Authority (Llanto et al. 2005, World Bank 2009, Patalinghug et al. 2016, Baek and Kim 2018, Ho et al. 2018, Tongzon 2018)
- Give the development and operation functions to the private sector (Llanto et al. 2005)
- Turn over the development of less economically viable ports on LGU land, to the LGUs (Ho et al. 2018)

- Establish a separate entity to regulate ports (Tongzon 2018).
- Instead of collecting fees, lease port facilities to terminal operators to induce competition and encourage them to improve port services (Baek and Kim 2018)

3) Lack of nationwide coordination in port planning.

- The main challenge is that there is no institutional anchoring for overall integrated planning for multi-modal transport (World Bank 2009).
- The inefficiency of the national port network as well as the imbalance of port investment, can be attributed to the lack of nationwide coordination in port planning; port development bodies manage ports independently (Baek and Kim 2018).
- There is also a need to strengthen data reporting to be used for effective national port system planning.

GOVERNMENT STRATEGIES

Infrastructure investment was not a priority in the Philippines for many years.

- allocation for public infrastructure less than 2% of GDP (1993-2010)
- slightly increased to 3% of GDP (2011-2016)
- still below World Bank's recommended level for developing countries: 4.5% of GDP

1978 to 1982	The focus was on the construction of national and regional seaports and trunk lines and the establishment of ferry services to serve these links.
1984 to 1987	Efforts were shifted to the development of regional fishing port complexes to support the fishing sector
1987 to 1992	The priority was on the improvement and rehabilitation of the feeder port system, which facilitates access between markets and rural areas. Rehabilitation and minor improvements were done to smaller ports, light houses and fishing ports.
1992 to 1998	Maintenance of existing infrastructure took precedence over building new ones.
1998 to 2000	The restructuring of port institutions was the most urgent concern. Responsibilities such as planning, management of ports, and commercial decision-making were transferred to Port Management Offices and Port District Offices, in preparation for privatization.
2001 to 2004	Several ports included in the roll-on/roll-off (RORO) network were rehabilitated and modernized during this period.
2004 to 2010	The focus was on development of more RORO ports and highways connecting them.
2011 to 2016	Target was to increase public spending to around 5 percent of the country's gross domestic product (GDP), through PPP approach. The National Transport Policy (NTP) was likewise developed during this time, which is a long-term comprehensive policy that is designed to guide all-sub-sectors as well as players (i.e., passengers, shippers, service providers, other stakeholders) in the transportation sector.
2017 to 2022	Improve port facilities, including the expansion of the RORO network; continue to find ways to maximize the utilization of existing ports and upgrade port capacities. One of the measures being explored is the development of a freight rail service between Clark and Subic; enhance the Cavite Gateway Terminal to provide a direct link between Manila and Batangas port.

POLICY DEVELOPMENTS

Important legislative agenda listed in updated PDP 2017-2022:

- enactment of the National Transport Policy
- enactment of a law establishing independent regulatory bodies for the railway and maritime transport sectors
- enactment of a law establishing an independent body for transport safety and security.

Legislative Agenda	Related bill(s)	Status
Enactment of the National Transport Policy	• HB 2222 • HB 315	Both are pending with the committee on transportation since 2013. In the meantime, the NEDA Board adopted the NTP on September 2017 and its IRR was approved in December 2018.
Enactment of a law establishing independent regulatory bodies for the railway and maritime transport sectors	• The Philippine Ports Corporation (PHILPORTS) Act HB 4317 aims to separate the regulatory and commercial function of the Philippine Ports Authority by creating a separate agency called the Philippine Ports Corporation. PHILPORTS shall retain the development and management functions of the PPA while the regulatory functions of the PPA shall be transferred to MARINA.	• HB 4317 was filed on September 2019 and is currently pending with the committee on Government Reorganization.
Enactment of a law establishing an independent body for transport safety and security.	• Senate Bill (SB) 1077 aims to create a National Transportation Safety Board, attached to the Office of the President, to ensure the safety of people and goods through cost-effective measures that will prevent accidents involving any mode of transport.	• HB 9030 and SB 1077 has been passed in June 2022 and is currently pending for a bicameral conference.

SUMMARY AND CONCLUSION

- Water transport infrastructure has an undeniably crucial role in facilitating a balanced growth within the Philippine economy.
- As shown by data and discussed in previous studies, most ports in the country are small and have insufficient equipment and facilities.
- There also exists an imbalance in the usage of ports; partly driven by the unevenness in the capacity and capability of ports.
- The conflicting roles of government agencies and the lack of coordination in port planning have contributed to the low quality of services and inefficient functioning of ports.

- Little attention has been given to providing a conductive institutional environment to allow ports to compete and operate efficiently.
- There is an urgent need to pass the law adopting the National Transport Policy to ensure coordinated planning and efficient functioning of the whole transport system.